अखिल भारतीय तकनीकी शिक्षा परिषद्
All India Council for Technical Education

INFORMATION BROCHURE FOR QUALITY IMPROVEMENT PROGRAMME ADMISSION: 2023

Programme Covered:

- **Master Programme (M.E./ M. Tech.) for the Year 2023**
- **Ph.D. Programme (Advance Admission: 2023-24, Final Admission: 2024-25)**

Principal Coordinator for QIP Admission 2023-24:

Dr. Debjani Chakraborty,

Associate Dean Outreach (CE&T/IOE),

Professor, Department of Mathematics

Indian Institute of Technology (IIT) Kharagpur- 721302 (W.B.)

Email: adeanoutr@iitkgp.ac.in | Phone: +91 3222 283638(O).

IMPORTANT DATES

Srl. No.	Activity	Date
1.	Link open for Online Application	22nd February 2023
2.	Last date for submitting Online Application	25th March 2023
3.	Result (Tentative)	3rd Week of June 2023

1. ABOUT AICTE QUALITY IMPROVEMENT PROGRAMME (QIP) SCHEME

The Government of India launched the Quality improvement Programme in the year 1970. One of the main objectives of the programme is to upgrade the expertise and capabilities of the faculty members of the degree and diploma level institutions in the country. The programme is implemented and monitored by All India Council for Technical Education (AICTE). In "Quality Improvement Programme" only sponsored teachers are eligible for admission to both Master & Doctoral Degree Programme with the aim to enable the teachers to acquire Master & Doctoral degrees and imbibe in them a culture of research and better teaching educational capabilities by exposing them to the environment of the institutes of study. The detail of scheme guideline is available at AICTE website at **https://www.aicte-india.org.**

2. MINIMUM ELIGIBILITY CRITERIA:

The eligibility for admission under QIP scheme are as follows: -

(i) For Master's Degree Programme:

Full time regular/ permanent faculty members of AICTE approved Polytechnic (Diploma) institutes having

(a) One year teaching experience at polytechnic level.

(b) A Bachelor's degree in the appropriate branch.

(ii) For Ph.D. Programme in Engineering/Management:

Full time regular/ permanent faculty members of AICTE approved Degree Level institutes having

(a) Three year teaching experience at graduate level institutes.

(b) A Master degree in the appropriate branch.

Note: In addition to the above minimum eligibility, criteria of respective QIP centre/ Institute to be fulfilled for admission to Master/ Ph.D. programme.

3. PROCEDURE FOR ADMISSION:

The admission under AICTE QIP scheme for the year 2023 will be carried out over various stages. The details mentioned below:

Stage- I

The Faculty Members of AICTE approved Institutions will be required to fill a detailed application form within the stipulated date as mentioned in the brochure through online mode at https://qip.aicte-india.org. The application will first be screened for the minimum eligibility criteria as mentioned in clause 2 above.

Stage- II

The application of only those who qualify the minimum eligibility criteria, will be forwarded to the QIP centre/ institute by the Principal Coordinator, as per preference of the applicant. Subsequently, the respective QIP centres will shortlist the candidates for the interview/test based upon fulfilling the department wise eligibility criterion and other norms of the institute. The shortlisted applicants will be informed by E- mail by the concerned QIP centre (s)/ Department for Interview/test.

Stage-III

Based on the performance & recommendation of the QIP Institute, the final merit list will be prepared by the National QIP Coordination Committee (NQCC). The admission offer letter to the finally selected candidates will be issued by the concerned QIP centre/ Department of the institute.

4. APPLICATION FEE AND IMPORTANT DATES:

(a) **Application Fee (Non- refundable): -**

- General/ OBC Candidate: Rs. 1700/-
- SC/ ST/ PwD/ Female Candidate: Rs. 850/-

(b) **Important Dates:**

Srl. No.	Activity	Date
1	Link open for Online Application	22nd February 2023
2	Last date for submitting Online Application	25th March 2023
3	Result (Tentative)	3rd Week of June 2023

5. HOW TO APPLY:

Interested candidates may apply online at https://qip.aicte-india.org. The notification of the advertisement and the link are also available at AICTE official website at https://www.aicte-india.org.

6. GENERAL INFORMATION:

(a) While applying for the programme, candidate will have option to select to maximum five (05) QIP Institutes/departments in order of preference (1 to 5) to pursue the programme.

(b) Candidate will be notified through registered email/ QIP admission portal for any discrepancy in the application form. The discrepancy has to be rectified within 7 days from

the date of receipt of the mail, otherwise the application shall be automatically rejected. No request will be entertained in this matter subsequently.

(c) Candidates are advised to see their email regularly and login QIP admission portal from time to time for information related to various aspects related to QIP admission.

(d) All candidates are advised to see the detailed eligibility criteria as given in the Annexure-2. Ineligible applications will be outrightly rejected.

(e) Application Fee once paid will not be refunded under any circumstances.

(f) Shortlisted candidates for Interview/test will be informed by the QIP Institute/ Department through E-mail only. The date and time of interview/test will be mentioned in the mail or in the subsequent mail. If any candidate missed the interview/test for QIP admission due to non-reading of the email, no request will be entertained subsequently.

(g) Finally selected candidate will be informed by E-mail/ updation in QIP portal and the admission offer letter will be issued by the concerned QIP Institute.

(h) If a candidate is selected for more than one (01) QIP Institute, he or she has to lock his/her preference within given timeline, as will be mentioned in the E Mail.

(i) The waitlisted candidates will climb up in the final list in case any finally selected candidate opts out and does not join the Institute. The concerned QIP institute will issue offer letter for admission in such cases.

7. DOCUMENTS TO BE UPLOADED

(i) Photo - Allowed format : jpeg/png, Maximum Size : 2 MB

(ii) Signature - Allowed format : jpeg/png, Maximum Size : 2 MB

(iii) Aadhaar Card - Allowed format : pdf, Maximum Size : 2 MB

(iv) Experience Certificate - Single pdf of current as well as previous experiences
Allowed format : pdf, Maximum Size : 10 MB

(v) 10^{th} Marksheet - Allowed format : pdf, Maximum Size : 2 MB

(vi) 10^{th} Certificate - Allowed format : pdf, Maximum Size : 2 MB

(vii) 12^{th} Marksheet - Allowed format : pdf, Maximum Size : 2 MB

(viii) 12^{th} Certificate - Allowed format : pdf, Maximum Size : 2 MB

(ix) Bachelors Marksheet (Consolidated) - Allowed format : pdf, Maximum Size : 2 MB

(x) Bachelors Degree - Allowed format : pdf, Maximum Size : 2 MB

(xi) Masters Marksheet (Compulsory only for Ph.D Applicants) -Allowed format : pdf, Maximum Size : 2 MB

(xii) Masters Degree (Compulsory only for Ph.D Applicants)

Allowed format : pdf, Maximum Size : 2 MB

(xiii) GATE Certificate (if any)- Allowed format : pdf, Maximum Size : 2 MB

(xiv) NET UGC/CSIR (if any)- Certificate- Allowed format : pdf, Maximum Size : 2 MB

(xv) JRF UGC/CSIR (if any) - Certificate- Allowed format : pdf, Maximum Size : 2 MB

(xvi) Category Certificate Mandatory for SC/ST/OBC/EWS

Allowed format: pdf, Maximum Size : 2 MB

(xvii) Non Objection Certificate NOC - Allowed format: pdf, Maximum Size: 2 MB

8. Query:

(i) For technical query related to the admission portal : itfdc@aicte-india.org ; Phone: 011-29581524, 011-29581303, 011-29581307.

(ii) For payment gateway related query: cep_off@adm.iitkgp.ac.in; Phone: 91-3222-282033/283788.

(iii) For admission related query Eligibility, Specialisation etc.: Respective QIP Centre **(Annexure- 1 & Annexure- 2).**

9. DETAILS OF PRINCIPAL COORDINATOR FOR QIP ADMISSION 2023:

Dr. Debjani Chakraborty,

Associate Dean Outreach (CE&T/IOE)

Professor, Department of Mathematics

Indian Institute of Technology (IIT) Kharagpur- 721302 (W.B.)

Email: adeanoutr@iitkgp.ac.in | Phone: +91 3222 283638(O).

10. ANNEXURES:

(i) **Annexure 1**: Details of the QIP Centres for Admission 2023-24.

(ii) **Annexure 2**: QIP Centre and course wise eligibility.


INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR
1951
योगः कर्मसु कौशलम्
भारतीय प्रौद्योगिकी संस्थान दिल्ली
INDIAN INSTITUTE OF TECHNOLOGY DELHI
भारतीय प्रौद्योगिकी संस्थान गुवाहाटी
Indian Institute of Technology Guwahati
INDIAN INSTITUTE OF TECHNOLOGY (B.H.U.) VARANASI
EDUCATION IS CHARACTER
भारतीय प्रौद्योगिकी संस्थान रुड़की
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE
Indian Institute of Technology Mandi
INDIAN INSTITUTE OF SCIENCE
भारतीय विज्ञान संस्थान
भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad
भारतीय प्रौद्योगिकी संस्थान कानपुर
INDIAN INSTITUTE OF TECHNOLOGY KANPUR
भारतीय प्रौद्योगिकी संस्थान पटना
INDIAN INSTITUTE OF TECHNOLOGY PATNA
भारतीय प्रौद्योगिकी संस्थान मुंबई
INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
ज्ञानम् परमम् ध्येयम्
INDIAN INSTITUTE OF TECHNOLOGY MADRAS
सिद्धिर्भवति कर्मजा
भारतीय प्रौद्योगिकी संस्थान इंदौर
IIT Indore
Indian Institute of Technology Indore
॥ ज्ञानम् सर्वजनहिताय ॥
2008
भारतीय प्रौद्योगिकी संस्थान भुवनेश्वर
INDIAN INSTITUTE OF TECHNOLOGY BHUBANESWAR
INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD
भारतीय प्रौद्योगिकी संस्थान (भारतीय खनि विद्यापीठ) धनबाद
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उत्तिष्ठत जाग्रत प्राप्य वरान्निबोधत
भारतीय प्रौद्योगिकी संस्थान रोपड़
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INDIAN INSTITUTE OF TECHNOLOGY PALAKKAD
॥ सा विद्या या विमुक्तये ॥
भारतीय प्रौद्योगिकी संस्थान धारवाड
Indian Institute of Technology Dharwad
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NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR INDIA
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नित्यं यतु शुभोदयम्
SARDAR VALLABHBHAI NATIONAL INSTITUTE OF TECHNOLOGY
SURAT
विघ्नेन बारंबार न स्यात् ॥
राष्ट्रीय प्रौद्योगिकी संस्थान मणिपुर
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NATIONAL INSTITUTE OF TECHNOLOGY HAMIRPUR (H.P.)
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DURGAPUR
उद्योगः पुरुषस्य लक्षणम्
NATIONAL INSTITUTE OF TECHNOLOGY AGARTALA
LEAD ME FROM DARKNESS TO LIGHT
NATIONAL INSTITUTE OF TECHNOLOGY
SRINAGAR
KASHMIR
MOTILAL NEHRU NATIONAL INSTITUTE OF TECHNOLOGY
ALLAHABAD (INDIA)
सिद्धिर्भवति कर्मजा
VISVESVARAYA NATIONAL INSTITUTE OF TECHNOLOGY
NAGPUR
योगः कर्मसु कौशलम्
DR. B.R. AMBEDKAR NATIONAL INSTITUTE OF TECHNOLOGY
JALANDHAR
सरस्वती नमस्तुभ्यं
NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA
IIM BODH GAYA
सब्बे भद्राणि पस्सन्तु
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IIM NAGPUR
IIM
SHILLONG
IIM SIRMAUR
KNOWLEDGE . LEADERSHIP
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विज्ञानं यज्ञं तनुते
UNIVERSITY OF HYDERABAD
सा विद्या या विमुक्तये
Rajiv Gandhi Institute of Petroleum Technology, Jais, Amethi
विधारत्नम् महद्धनम्
SANT LONGOWAL INSTITUTE OF ENGG. & TECH.
योगः कर्मसु कौशलम्
S.R.M. INSTITUTE OF SCIENCE AND TECHNOLOGY
LEARN · LEAP · LEAD
COLLEGE OF TECHNOLOGY & ENGINEERING
UDAIPUR
COLLEGE OF ENGINEERING
OSMANIA UNIVERSITY
LUCEAT LUX VESTRA
हरकोर्ट बटलर प्राविधिक विश्वविद्यालय
H.B.T.U.
KANPUR
TECHNOLOGICAL UNIVERSITY
PUDUCHERRY
FORTIFYING WITH WISDOM
VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY, ODISHA, BURLA
सिद्धिर्भवति कर्मजा
ANNA UNIVERSITY
PROGRESS THROUGH KNOWLEDGE
UNIVERSITY OF SCIENCE AND TECHNOLOGY, MURTHAL
DEENBANDHU CHHOTU RAM
2006
DELTECH
DELHI
TECHNOLOGICAL UNIVERSITY

Annexure-1					
S. No.	**Unique ID**	**Institute Name**	**No. of Ph.D. courses in offer**	**No. of Master courses in offer**	**Email ID of QIP Coordinators**
1	QIP0001	Indian Institute of Technology (IIT), Hyderabad	10	9	fic.qip@iith.ac.in
2	QIP0002	National Institute of Technology (NIT), Warangal	13	8	dean_acad@nitw.ac.in
3	QIP0003	Indian Institute of Engineering Science and Technology (IIEST), Shibpur	7	0	pic_qip@iiests.ac.in
4	QIP0004	Indian Institute of Science (IISC), Bengaluru	19	0	rsundaresan@iisc.ac.in
5	QIP0005	Shri Guru Gobind Singhji Institute of Engineering and Technology (SGGSIET), Nanded	6	5	dean.rd@sggs.ac.in
6	QIP0007	Government Engineering College, Thrissur	8	0	qipcoordinator@gectcr.ac.in
7	QIP0008	National Institute of Technology (NIT), Arunachal Pradesh	5	5	qip@nitap.ac.in
8	QIP0009	College of Technology and Engineering, MPUAT, Udaipur	10	9	navneetctae@gmail.com
9	QIP0010	Indira Gandhi Institute of Technology (IGIT), Odisha	3	0	bbpanda@igitsarang.ac.in
10	QIP0011	Indian Institute of Technology (IIT), Mandi	8	7	qipcoordinator@iitmandi.ac.in
11	QIP0012	National Institute of Technology (NIT), Raipur	7	6	qip.coordinator@nitrr.ac.in
12	QIP0014	Indian Institute of Information Technology (IIIT), Nagpur	4	0	tapan.jain@iiitn.ac.in
13	QIP0015	College of Engineering, Trivandrum	5	5	qip@cet.ac.in
14	QIP0016	Indian Institute of Technology (IIT), Guwahati	13	5	tvb@iitg.ac.in
15	QIP0017	Thiagarajar College of Engineering, Madurai	11	5	qip@tce.edu
16	QIP0018	Government College of Engineering, Aurangabad	5	6	deanrnd@geca.ac.in
17	QIP0020	Veermata Jijabai Technological Institute (VJTI), Mumbai	7	8	vmphalle@me.vjti.ac.in
18	QIP0021	COEP Technological University, Pune (FORMERLY COEP Pune)	8	0	rpm.instru@coep.ac.in
19	QIP0022	University College of Engineering, Osmania University, Hyderabad	1	0	saraswathamma.k@uceou.edu
20	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	18	14	coordinator.qip@itbhu.ac.in
21	QIP0024	TKM College of Engineering, Kollam	5	6	qipcoordinator@tkmce.ac.in

22	QIP0025	Jamia Millia Islamia (JMI), New Delhi	10	0	mjamil@jmi.ac.in
23	QIP0026	Sardar Vallabhbhai National Institute Of Technology (SVNIT), Surat	6	6	adean_acad@svnit.ac.in
24	QIP0027	Indian Institute of Technology (IIT), Delhi	22	0	qipcep@admin.iitd.ac.in
25	QIP0028	Alagappa Chettiar Government College of Engineering and Technology, Karaikudi	6	0	venkateee10@gmail.com
26	QIP0029	Walchand College of Engineering, Sangli	5	6	qip@walchandsangli.ac.in
27	QIP0030	Indian Institute of Technology (IIT), Patna	10	7	qip@iitp.ac.in
28	QIP0031	Indian Institute of Technology (IIT), Roorkee	29	0	qip@iitr.ac.in
29	QIP0032	National Institute of Technology (NIT), Manipur	5	0	bakim143@gmail.com
30	QIP0033	Tezpur University, Assam	8	8	deansoe@tezu.ernet.in
31	QIP0034	Harcourt Butler Technical University, Kanpur	4	0	daa@hbtu.ac.in
32	QIP0035	Indian Institute of Technology (IIT), Kanpur	16	0	qip@iitk.ac.in
33	QIP0036	Indian Institute of Technology (IIT), Bombay	21	0	pic-cep@iitb.ac.in
34	QIP0037	National Institute of Technology (NIT), Hamirpur	5	0	anoop@nith.ac.in
35	QIP0038	National Institute of Technology (NIT), Silchar	6	0	qip@nits.ac.in
36	QIP0039	Indian Institute of Information Technology, Design and Manufacturing (IIITDM), Kancheepuram	4	3	pic-qip@iiitdm.ac.in
37	QIP0040	Puducherry Technological University, Puducherry	8	12	dean.research@ptuniv.edu.in
38	QIP0041	Madhav Institute Of Technology & Science, Gwalior	5	0	qip@mitsgwalior.in
39	QIP0042	Veer Surendra Sai University Of Technology (VSUT), Burla	9	0	deancdce@vssut.ac.in
40	QIP0045	Bannari Amman Institute of Technology, Erode	3	0	hodaero@bitsathy.ac.in
41	QIP0046	Anna University (Centre For Research), Chennai	1	0	dirresearch@gmail.com
42	QIP0047	University of Hyderabad, Hyderabad	1	0	qip@uohyd.ac.in
43	QIP0048	RAJIV GANDHI INSTITUTE OF PETROLEUM TECHNOLOGY	3	0	qip_coordinator@rgipt.ac.in
44	QIP0049	Indian Institute of Technology (IIT), Chennai	15	11	chaircce@iitm.ac.in
45	QIP0050	Rajiv Gandhi Institute of Technology (RGIT), Govt. Engineering College	6	5	prince@rit.ac.in

46	QIP0051	Government College of Engineering, Salem	8	0	pkarpagavalli@yahoo.co.in
47	QIP0057	Jadavpur University	13	4	bb13@rediffmail.com
48	QIP0059	Malaviya National Institute of Technology (MNIT), Jaipur	7	0	adpg.acad@mnit.ac.in
49	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	16	11	bvas@nitt.edu
50	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	14	9	shekar_shet@yahoo.com
51	QIP0063	National Institute of Technical Teachers Training and Research (NITTTR) Engg., Chandigarh	5	5	qip_engg@nitttrchd.ac.in
52	QIP0065	National Institute of Technology (NIT) Engg., Calicut	10	7	deanacademic@nitc.ac.in
53	QIP0067	PDPM - Indian Institute of Information Technology, Design and Manufacturing (IIITDM), Jabalpur	4	0	varunb@iiitdmj.ac.in
54	QIP0069	National Institute of Technology (NIT), Durgapur	8	8	nirmalkumar.roy@ee.nitdgp.ac.in
55	QIP0070	National Institute of Technology (NIT), Agartala	12	8	rajsekhar_panua@yahoo.co.in
56	QIP0071	National Institute of Technology (NIT), Srinagar	4	0	grbegh@nitsri.net
57	QIP0072	G. B. Pant Institute of Engineering & Technology, Pauri	6	5	qip.gbpiet@gmail.com
58	QIP0073	Indian Institute of Technology (IIT), Indore	11	4	qip-coordinator@iiti.ac.in
59	QIP0074	Shri G. S. Institute Of Technology And Science, Indore	5	0	qip.sgsits@gmail.com
60	QIP0075	Indian Institute of Technology (IIT), Kharagpur	31	0	adeanoutr@iitkgp.ac.in
61	QIP0076	Sant Longowal Institute of Engineering & Technology, Longowal	6	0	phd@sliet.ac.in
62	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	15	9	director.rch@dcrustm.org
63	QIP0084	The National Institute of Engineering, Mysuru	5	3	anithar@nie.ac.in
64	QIP0085	Moti Lal Nehru National Institute Of Technology (MNNIT), Prayagraj (Engg.)	14	0	qip@mnnit.ac.in
65	QIP0087	Indian Institute of Technology (IIT), Bhubaneswar	12	0	deance@iitbbs.ac.in
66	QIP0091	Indian Institute of Technology (ISM), Dhanbad	18	14	adpg@iitism.ac.in
67	QIP0093	Visvesvaraya National Institute of Technology (VNIT), Nagpur	2	0	deanr_c@vnit.ac.in

68	QIP0094	Basaveshwar Engineering College, (Autonomous), Bagalkot	5	0	pgraddi66@gmail.com
69	QIP0095	Delhi Technological University (DTU), Delhi	18	10	umanangia@dce.ac.in
70	QIP0096	Guru Nanak Dev Engineering College, Ludhiana	3	3	harmeetpawar@gmail.com
71	QIP0098	Coimbatore Institute of Technology (CIT), Coimbatore	4	0	manikandan@cit.edu.in
72	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	17	11	sikkam@nitj.ac.in
73	QIP0100	SRM Institute of Science and Technology (SRMIST), Chengalpattu, Tamil Nadu	6	6	hod.phy.ktr@srmist.edu.in
74	QIP0101	PSG College of Technology	13	11	dean.aufn@psgtech.ac.in
75	QIP0102	Indian Institute of Technology (IIT), Ropar	11	6	qip_iitropar@iitrpr.ac.in
76	QIP0104	Rajasthan Technical University ,Kota	5	0	dkpalwalia@rtu.ac.in
77	QIP0105	Indian Institute of Management Bodh Gaya (IIM Bodh Gaya)	8	0	chairpersonphd@iimbg.ac.in
78	QIP0107	M.B.M. ENGINEERING COLLEGE, JAI NARAIN VYAS UNIVERSITY, JODHPUR	1	1	jayashrivajpai@gmail.com
79	QIP0108	NIT Rourkela	20	12	dean-ac@nitrkl.ac.in
80	QIP0109	Indian Institute of Management, Sirmaur	8	0	dprchair@iimsirmaur.ac.in
81	QIP0110	Netaji Subhas University of Technology University in Delhi	5	0	vijaydee@nsut.ac.in
82	QIP0111	Indian Institute Of Management–Nagpur (IIM–Nagpur)	8	0	qipcoordinator@iimnagpur.ac.in
83	QIP0112	IIT Palakkad	9	3	cce@iitpkd.ac.in
84	QIP0113	Indian Institute of Technology Dharwad	10	1	fa.cep@iitdh.ac.in
85	QIP0114	IIM Shillong	7	0	phd@iimshillong.ac.in
86	QIP0117	University of Visvesvaraya College of Engineering, Bangalore	5	5	kirank@uvce.ac.in

Annexure-2

S. No.	Institute Unique ID	Institute Name	Course	Department Name	Department Unique ID	Specialization	Minimum Qualification
1	QIP0001	Indian Institute of Technology (IIT), Hyderabad	Ph.D Engineering	Biomedical Engineering	DN000638	Mechanical, Electrical, Biomedical, Biotechnology, Chemical, Computer Science, Electronics, Physics, Chemistry	First class MTech or MSc with other criteria as laid down by QIP PhD admissions
2	QIP0001	Indian Institute of Technology (IIT), Hyderabad	Ph.D Engineering	Electrical Engineering	DN000639	Micro & VLSI, CSP, PEPS	Master's degree in Electrical or Electronics and Communication Engineering, Instrumentation Engineering, Nano technology or Master's degree in Physics followed by a Master's degree in Engineering in an area of relevance to the area of research with other criteria as laid down by QIP PhD admissions
3	QIP0001	Indian Institute of Technology (IIT), Hyderabad	Ph.D Engineering	Chemical Engineering	DN000640	Chemical Engineering	M Tech / B. Tech in Chemical Engineering with other criteria as laid down by QIP PhD admissions
4	QIP0001	Indian Institute of Technology (IIT), Hyderabad	Ph.D Engineering	Biotechnology	DN000641	Biochemistry, Molecular Biology, Cell Biology, Computational Biology, Structural Biology, Biophysics, Virology, Protein Misfolding Diseases, Cell Signaling in Diseases.	M.Tech or M.Sc. degree in any allied area of Life Sciences with other criteria as laid down by QIP PhD admissions
5	QIP0001	Indian Institute of Technology (IIT), Hyderabad	Ph.D Engineering	Computer Science & Engineering	DN000642	Theoretical Computer Science, Networks, Machine Learning, Data Science, Computer Architecture, Parallel and Distributing Computing, and other emerging areas in Computer Science and Engineering.	Candidates with a B.Tech./B.E./B.S./M.Sc./MCA degree in any Discipline and having a M.Tech/M.E./ M.S. degree in CSE/ IT/ ECE/EE with other criteria as laid down by QIP PhD admissions

6	QIP0001	Indian Institute of Technology (IIT), Hyderabad	Ph.D Engineering	Civil Engineering	DN000649	All 6 specializations of Civil Engineering: Structural Engineering, Environment Engineering, Geotechnical Engineering, Hydraulics and Water Resources Engineering, Transport Engineering	BTech Civil engineering is mandatory with other criteria as laid down by QIP PhD admissions
7	QIP0001	Indian Institute of Technology (IIT), Hyderabad	Ph.D Engineering	Materials Science and Metallurgical Engineering	DN000711	1. Computational Materials Science, Computational Modeling of Phase Transformations in Materials 2. Structural materials (HEA, additive manufacturing, high temperature materials, etc.) and Integrity (corrosion), Welding & Joining, Functional Materials (sensors & actuators, magnetic devices, semi-conducting devices, multifunctional materials), Computational Materials Science and Engineering, Healthcare & Bio-Materials, Electrochemical Extraction, Recovery & Processing/Coatings of metals/alloys, Energy Materials (batteries, supercapacitors, hydrogen), Materials Recycling, Nanoscience & Nanotechnology (nanoparticles & nanowires; thin films)	Qualifications required for specialization 1 : B.Tech./M.Tech.in Materials/Metallurgical/Ceramic/Mechanical/Electrical/Chemical/Industrial/Manufacturing Engineering or M.Sc. in Physics/Applied Mathematics Qualifications required for specialization 2 : M.Tech./M.E. or equivalent degree in Materials Science and Engineering, Metallurgical Engineering, Ceramics, Mechanical Engineering, Manufacturing/ Production Engineering, Nanoscience, Polymer, Biomaterial, Chemical Engineering and other relevant areas. OR M.Sc. or equivalent in Materials Science/ Physics/ Chemistry or equivalent degree OR B.Tech./B.E. or equivalent Degree in relevant discipline with two years of experience in the relevant area IIT Hyderabad's prescribed CGPA/percentage criteria shall be followed.
8	QIP0001	Indian Institute of Technology (IIT), Hyderabad	Ph.D Management	Entrepreneurship and Management	DN000712	Marketing, Finance, Supply Chain Management, Logistics, Entrepreneurship, Strategic Management, Human Resources, Organizational Behavior	a) Qualified UGC NET or Valid GATE Score. Candidates must provide documentary evidence of qualifying UGC NET or GATE at the time of application. b) 60% marks or equivalent CGPA in the Master's degree. c) Shortlisted candidates must pass a written test and/or interview conducted by the Department of Entrepreneurship and Management, IITH

9	QIP0001	Indian Institute of Technology (IIT), Hyderabad	Ph.D Engineering	Mechanical and Aerospace Engineering	DN000713	Mechanics and Design, Thermo-fluid engineering, Aerospace Engineering, Integrated Design and Manufacturing	Masters in Design/Thermal/Fluids/Manufacturing/Production/Aerospace /Aeronautics
10	QIP0001	Indian Institute of Technology (IIT), Hyderabad	Ph.D Engineering	Climate Change	DN000714	Climate Change	M.Tech/M.Sc/M.Arch/M.Des/M.Phil in any discipline.
11	QIP0001	Indian Institute of Technology (IIT), Hyderabad	M.Tech	Biomedical Engineering	DN000715	Biomedical, Biotechnology, Electrical, Electronics and communication, Instrumentation, Mechanical, Computer Science, MBBS/BDS, Chemical Engineering, Metallurgy and Material Science	First class or 60% marks (55% for SC/ST reserved categories) in (A) BTech/BE in Biomedical, Biotechnology, Electrical, Electronics and communication, Instrumentation, Mechanical, Computer Science and Information Technology, Chemical Engineering, Metallurgy and Material Science, Textile Engineering and Fibre Science, Engineering Sciences (or) (B) M Sc or equivalent (2 year) in Physics, Biophysics, Chemistry, Material science, Ceramics, Electronics, Computer Science, Life Sciences , Physiology, Engineering Sciences (or) (C) MBBS, BDS, BVSc or equivalent programme with duration of 4 years or more.
12	QIP0001	Indian Institute of Technology (IIT), Hyderabad	M.Tech	Chemical Engineering	DN000717	Chemical Engineering	B. Tech/B.E. in Chem Engg / BioTechnology
13	QIP0001	Indian Institute of Technology (IIT), Hyderabad	M.Tech	Civil Engineering	DN000718	Structural Engineering, Environmental Engineering, Geotechnical Engineering, Hydraulics and Water Resources, Transportation Engineering	BTech/BE Civil Engineering, First class in BTech
14	QIP0001	Indian Institute of Technology (IIT), Hyderabad	M.Tech	Climate Change	DN000719	Climate Change	Candidates eligible to appear for GATE in the Subjects: BT/CE/CH/CY/CS/EC/EE/ES/EY/GE/GG/ME/ MT/PH/ST/XE can apply.

15	QIP0001	Indian Institute of Technology (IIT), Hyderabad	M.Tech	Computer Science & Engineering	DN000720	Computer Science and Engineering	A 4-year B.Tech./B.E. degree in CS/IT, and an excellent academic record.
16	QIP0001	Indian Institute of Technology (IIT), Hyderabad	M.Tech	Artificial Intelligence	DN000764	Artificial Intelligence	BTech/BE degree in CS/EE/IT or MSc/MS/MCA degree in CS/EE/IT/Maths/Statistics
17	QIP0001	Indian Institute of Technology (IIT), Hyderabad	M.Tech	Electrical Engineering	DN000793	Micro and VLSI, CSP, and PEPS	BTech in ECE, EE, Instrumentation
18	QIP0001	Indian Institute of Technology (IIT), Hyderabad	M.Tech	Mechanical and Aerospace Engineering	DN000794	Aerospace Engineering, Mechanics and Design, Thermofluids Engineering, Integrated Design and Manufacturing	B.Tech / B.E in Mechanical / Production/ Manufacturing Sciences/Aerospace/ Aeronautics/Automobile with minimum 2 years of teaching / work experience
19	QIP0001	Indian Institute of Technology (IIT), Hyderabad	M.Tech	Materials Science and Metallurgical Engineering	DN000800	Materials Science and Metallurgical Engineering	Candidates having B.E./B.Tech. (Materials Sci. and Eng., Metallurgy, Ceramics, Polymers, Mining, Mechanical, Industrial, Production, Electronics, Electrical, Chemical, Instrumentation, Aerospace, Energy, Artificial Intelligence) or similar disciplines such as Engineering Physics, so on or M.Sc. in Materials Science/Nanoscience/Nanotechnology/Physics/Chemistry
20	QIP0002	National Institute of Technology (NIT), Warangal	Ph.D Engineering	Biotechnology	DN000060	Algal Biotechnology & Microbial Fuel Cell Big Data & Data Science Bioelectrochemical System & Biological Wastewater Treatment Bioenergy, Biorefinery & Therapeutic Proteins/ Enzymes Bioinformatics Biomass, Biomaterials & Metabolic Engineering	B.E./B.Tech. in Biotechnology/ Industrial Biotechnology/ Biochemical Engineering/ Bioinformatics/ Biomedical Engineering/ Biotech. Engineering/ Bioengineering/ Chemical and Bio-Engineering/ Genetic Engineering/ Food Technology and Biochemical Engineering/ Biological Sciences and Bioengineering/ Biosciences and Bioengineering/ Biotechnology and Biochemical Engineering/ Biochemical and Biotechnology Engineering/ Biomedical Instrumentation, AND M.E./ M. Tech./ M.S. (by Research)/ M.S.* (from abroad Two-year program only) in Biotechnology/ Industrial

						Bioseparations Technology Cancer Biology & Cell Signaling Computational Biophysics Drug Design & Discovery Environmental Biotechnology Functional Genomics & Metabolic Disorders Gene Therapy Machine Learning Microbial Gene regulation & Epigenetics Modeling & Simulation of Bioprocesses Molecular & Biochemical Parasitology Nanobiotechnology & Medical Biosensors Network Systems Biology of Large-Scale Data & Cancer Signaling Pathways Plant Biotechnology & Plant Tissue Culture Stem Cell Engineering Structural Biology Systems Biology	Biotechnology/ Biochemical Engineering/ Bioinformatics/ Biomedical Engineering/ Biotech. Engineering/ Bioengineering/ Chemical and Bio-Engineering/ Genetic Engineering/ Food Technology and Biochemical Engineering/ Biological Sciences and Bioengineering/ Biosciences and Bioengineering/ Biotechnology and Biochemical Engineering/ Biochemical and Biotechnology Engineering/ Biomedical Instrumentation. (OR) B.E./B.Tech. in Biotechnology/ Industrial Biotechnology/ Biochemical Engineering/ Bioinformatics/ Biomedical Engineering/ Biotech. Engineering/ Bioengineering/ Chemical and Bio-Engineering/ Genetic Engineering/ Food Technology and Biochemical Engineering/ Biological Sciences and Bioengineering/ Biosciences and Bioengineering/ Biotechnology and Biochemical Engineering/ Biochemical and Biotechnology Engineering/ Biomedical Instrumentation with valid GATE score and at least CGPA of 8.0/10 or 75% of marks under GEN/ OBC-NCL/ GEN-EWS category and at least CGPA of 7.5/10 or 70% for candidates under SC/ ST/ PwD category. (OR) Dual Degree i.e. B.E./ B.Tech. & M.E./ M.Tech./ M.S. (by Research) in (same as mentioned above). (OR) Integrated M.E./ M.Tech. in (same as mentioned above). (OR) M.Sc. in Biotechnology/Biochemistry/ Microbiology/ Botany/ Zoology/ Bioinformatics/ Life Sciences AND M.Tech. in Biotechnology.

21	QIP0002	National Institute of Technology (NIT), Warangal	Ph.D Engineering	Chemical Engineering	DN000062	Biomass Gasification Plate Heat Exchangers Bioreactors Reactive Distillation Micro fluidics Interfacial Science Waste Water Treatment Micro Reactors Process Intensification Nano Materials Fluidized Bed Operations Catalysis Fuel Cells Membrane processes Flow batteries Chemical process scheduling Multiphase flows Chemical reactor analysis and design Sustainable and energy efficient technologies Process control Nonlinear analysis Computational Fluid Dynamics Biofuels Corrosion Engineering	B.Tech/ B.E. or Equivalent degree in Chemical Engineering/ Mechanical Engineering/ Biotechnology/ Civil Engineering / Metallurgy /Petrochemical Engineering/ Petroleum Technology/ Instrumentation and Control Engineering/ EEE/ Electrochemical Engineering/ Electronics & Instrumentation/ Chemical Technology/ Polymer Technology/ Biochemical Engineering/ Energy Engineering/ Environmental Engineering and allied disciplines AND M.Tech. or M.E. in Chemical Engineering/ Mechanical Engineering/ Biotechnology/ Petrochemical Engineering/ Petroleum Technology/ Process Control and Instrumentation/ Control Systems/ Polymer Technology/ Biochemical Engineering /Energy Engineering/ Nanotechnology/ Environmental Engineering and allied areas. (OR) B.Tech/B.E. or Equivalent degree in Chemical Engineering/ Mechanical Engineering/ Biotechnology/ Petrochemical Engineering/ Petroleum Technology/ Instrumentation and Control Engineering/ EEE/ Electrochemical Engineering/ Electronics & Instrumentation/ Chemical Technology/ Polymer Technology/ Biochemical Engineering/ Energy Engineering/ Environmental Engineering and allied disciplines with valid GATE score and at least CGPA of 8.0/10 or 75% of marks under GEN/ OBC-NCL/ GEN-EWS category and at least CGPA of 7.5/10 or 70% for candidates under SC/ ST/ PwD category.
22	QIP0002	National Institute of Technology (NIT), Warangal	Ph.D Engineering	Civil Engineering	DN000063	Engineering Structures Geotechnical Engineering Environmental Engineering Transportation Engineering Water Resources Engineering Construction Technology & Management Remote Sensing & Geographic Information System Waste Management	B.Tech/ B.E. or Equivalent degree in any branch of Engineering & Technology AND M.Tech/ M.E. in relevant specialization. (OR) B.Tech/ B.E. or Equivalent degree in Engineering/ Technology with valid GATE score and at least CGPA of 8.0/10 or 75% of marks under GEN/ OBC-NCL/ GEN-EWS category and at least

							CGPA of 7.5/10 or 70% for candidates under SC/ ST/ PwD category.
23	QIP0002	National Institute of Technology (NIT), Warangal	Ph.D Engineering	Computer Science & Engineering	DN000065	Optimization Techniques, Big Data Analytics, Database Management Systems, Parallel Computing, Artificial Intelligence, Algorithms and Graph Theory, Cluster and Cloud Computing, Security and Privacy, Information Security, Cryptography, Neural Networks, Distributed Systems, Computer Vision, Machine Learning and Soft Computing, Data Mining, Bioinformatics, Computer Networks, Mobile Computing, Service-Oriented Architecture, Computational Neuroscience, Image Processing, Wireless Ad-hoc and Sensor Networks, Model-Driven Framework-oriented systems.	B.Tech/ B.E. or Equivalent degree in Computer Science and Engineering AND M.Tech/ M.E. in Computer Science and Engineering or equivalent. (OR) B.Tech/ B.E or Equivalent degree in Computer Science and Engineering with valid GATE score and at least CGPA of 8.0/10 or 75% of marks under GEN/ OBC-NCL/ GEN-EWS category and at least CGPA of 7.5/10 or 70% for candidates under SC/ ST/ PwD category.

24	QIP0002	National Institute of Technology (NIT), Warangal	Ph.D Engineering	Electrical Engineering	DN000067	FACTS/ HVDC Control, Power Quality, Power System State Estimation, Real Time Control of Power Systems, Power System Protection, Power System Deregulation, AI Techniques in Power Systems, Smart Grid Technologies, Power System Stability and Security, Wide Area Control of Power Systems, Renewable Energy Sources, Motor Drives, Switch Mode Power Conversion, Control & Instrumentation, Multi-Level Inverters, Energy Storages Systems, Pulsed Power Technology, Condition Monitoring of Power Equipment, Multifunctional Grid Tied Inverter Configurations & Control Strategies, Electricity Market Modeling, Risk Optimization Ancillary Service Market, Grid Integration of Large Scale Distributed Energy Resources.	B.Tech/ B.E. or Equivalent degree in Electrical Engineering or Electrical and Electronics Engineering AND M.Tech/ M.E. in Electrical Engineering or allied Specializations in broad research areas mentioned above. (OR) B.Tech/ B.E. or Equivalent degree in Electrical Engineering or Electrical and Electronics Engineering with valid GATE score and at least CGPA of 8.0/10 or 75% of marks under GEN/ OBC-NCL/ GEN-EWS category and at least CGPA of 7.5/10 or 70% for candidates under SC/ ST/ PwD category.

25	QIP0002	National Institute of Technology (NIT), Warangal	Ph.D Engineering	Electronics & Communication Engineering	DN000069	Radar Signal Processing, RFIC, MMIC for 5G, MW Active and Passive circuits, Antennas, Antenna Arrays, MIMO Antennas & Beam forming, Smart Antennas, 5G, MIMO, MMIMO, VLSI Architectures, MOS Devices, On-chip circuits, Nano Electronics & Devices, Visible Light Communications, Optical Signal Processing, Cognitive Radio, Speech Processing, Embedded Systems, Bio-medical Engineering, Process Control Design, Image & Video Processing.	B.Tech/ B.E. or Equivalent degree in Electronics and Communication Engineering AND M.Tech/ M.E. in Electronics and Communication Engineering or equivalent with Research areas in Communication/ VLSI/ Instrumentation. (OR) B.Tech/B.E. or Equivalent degree in B.Tech/ B.E. or Equivalent degree in Electronics and Communication Engineering with valid GATE score and at least CGPA of 8.0/10 or 75% of marks under GEN/ OBC-NCL/ GEN-EWS category and at least CGPA of 7.5/10 or 70% for candidates under SC/ ST/ PwD category.
26	QIP0002	National Institute of Technology (NIT), Warangal	Ph.D Engineering	Mechanical Engineering	DN000075	Materials Technology, Mechatronics, Fluid Mechanics, Machine Design, Renewable Fuels, Automobile Engineering, Thermal Engineering, Additive Manufacturing, Energy Studies, Micro-combustors, Tribology, Manufacturing Engineering, Industrial Engineering and Management & Entrepreneurship, Modeling of IC Engines, Friction Stir Welding/ Processing.	B.Tech/ B.E. or Equivalent degree in Mechanical Engineering/ Production Engineering/ Industrial Engineering/ Mechatronics/ Automobile Engineering/ Aeronautical Engineering/ Marine Engineering AND M.Tech/ M.E. in Mechanical Engineering allied areas and specializations within the broad research areas mentioned below. (OR) B.Tech/ B.E. or Equivalent degree in Mechanical Engineering/ Production Engineering/ Industrial Engineering/ Mechatronics/ Automobile Engineering/ Aeronautical Engineering/ Marine Engineering with valid GATE score and at least CGPA of 8.0/10 or 75% of marks under GEN/ OBC-NCL/ GEN-EWS category and at least CGPA of 7.5/10 or 70% for candidates under SC/ ST/ PwD category.

27	QIP0002	National Institute of Technology (NIT), Warangal	Ph.D Engineering	Metallurgical & Materials Engineering	DN000077	Physical Metallurgy, Powder Metallurgy, Welding Metallurgy, Structure Property Correlation, Special steels/ High temperature materials, Severe plastic deformation, Materials for extreme Environments, Smart Materials, Non-destructive evaluation, 3D Printing, Surface Engineering, High Temperature Corrosion and Oxidation, Fatigue and Fracture Mechanics, Environmental degradation of Materials, Ceramics, Polymers and Composites, Biomaterials, Nano Materials, Ultra-fine grain Materials.	B.Tech/B.E. or Equivalent degree in Metallurgical & Materials Engineering/ Mechanical Engineering AND M.Tech/ M.E. in Metallurgical and Materials Engineering and related fields. (OR) M.Sc. in Physics/ Chemistry/ Materials Science / Electronics/ Nanoscience and Nanotechnology AND M.Tech. in Materials Science/ Metallurgy/ Nanoscience and Nanotechnology/ Ceramic Engineering/ Surface Engineering. (OR) B.Tech. or B.E. or Equivalent degree in Metallurgical & Materials Engineering/ Mechanical Engineering with valid GATE score and at least CGPA of 8.0/10 or 75% of marks under GEN/ OBC-NCL/ GEN-EWS category and at least CGPA of 7.5/10 or 70% for candidates under SC/ ST/ PwD category.
28	QIP0002	National Institute of Technology (NIT), Warangal	Ph.D Science	Mathematics	DN000124	Fluid Dynamics, Mathematical Biology, Computational Fluid Dynamics, Biomechanics.	B.Sc. and M.Sc./ M.Phil. in Mathematics or equivalent degree.

29	QIP0002	National Institute of Technology (NIT), Warangal	Ph.D Science	Physics	DN000132	Fiber Optic Sensing/ Photonics/ Optical Design, Electronic Instrumentation/ Biomedical Signal Processing/ Sensors and Transducers, Materials Science/ Condensed matter Physics/ Quantum Interference, Theoretical Condensed Matter Physics, Polymer Composites, Liquid Crystals/ Microfluidics/ Emulsions, Nanophosphors, Nanomaterials/ Thin films, Nuclear Instrumentation, Swift Ion Beam Irradiation, Glass and glass Ceramics for Photonic Applications, Low Dimensional Systems (Quantum Dots), Spintronics and Density Functional Theory, Organic Electronic Devices, Solar cells/ Fuel cells, Biomaterials.	B.Sc. with Physics and M.Sc./ M.Sc. (Tech) in Physics (or) M.Tech with specialization in Photonics/ Electronics/ Instrumentation/ Materials Science/ Nanotechnology/ Solid State Physics or any equivalent specialization.

30	QIP0002	National Institute of Technology (NIT), Warangal	Ph.D Science	Chemistry	DN000134	Coordination Chemistry, Electrochemistry, Catalysis, Spectrophotometry, Chromatography, Environmental Pollution, Synthetic Organic Chemistry, Stereo Selective Synthesis, Electrochemical Biosensors, Nanocatalysts for Fuel Cells, Bio-Organic Chemistry, Nanomaterials, Organic Synthesis, Medicinal Chemistry, Supramolecular Chemistry, Carbohydrate Chemistry, Molecular Modeling.	B.Sc. and M.Sc./ M.Phil. in Chemistry or equivalent degree.
31	QIP0002	National Institute of Technology (NIT), Warangal	Ph.D Humanities	Humanities and Social Science	DN000136	British Literature, English Language Teaching.	Post Graduate Degree in English with GATE/ UGC/ NET Qualification and having studied B.A./ B.Sc./ B.Com. or any other Bachelor's Degree.
32	QIP0002	National Institute of Technology (NIT), Warangal	Ph.D Management	School of Management	DN000139	Marketing, Finance, Information Technology, General Management and Allied Areas, Human Resources, Economics, Operations Management, Interdisciplinary Research.	Any graduate having Full-time M.B.A. degree with UGC/ NET qualification.

33	QIP0002	National Institute of Technology (NIT), Warangal	M.Tech	Biotechnology	DN000166	Biotechnology	First class with 60% aggregate or 6.5 CGPA at B.Tech/B.E. for GEN/OBC/EWS category and minimum 55% aggregate marks or 6.0 CGPA for candidates under SC/ST/PwD category. B.E. / B.Tech. in Biotechnology / Industrial Biotechnology / Biochemical Engineering / Bioinformatics / Biomedical Engineering/ Biotech. Engineering/ Bioengineering / Chemical and Bio Engineering / Genetic Engineering / Food Technology and Biochemical Engineering / Biological Sciences and Bioengineering / Biosciences and Bioengineering / Biotechnology and Biochemical Engineering / Biochemical and Biotechnology Engineering / Biomedical Instrumentation.
34	QIP0002	National Institute of Technology (NIT), Warangal	M.Tech	Chemical Engineering	DN000168	Chemical Engineering, Systems and Control Engineering.	First class with 60% aggregate or 6.5 CGPA at B.Tech/B.E. for GEN/OBC/EWS category and minimum 55% aggregate marks or 6.0 CGPA for candidates under SC/ST/PwD category. B.Tech. or B.E. or Equivalent degree in Chemical Engineering / Mechanical Engineering / Biotechnology / Petrochemical Engineering / Petroleum Technology / Instrumentation and Control Engineering / EEE / Electrochemical Engineering / Electronics & Instrumentation / Chemical Technology / Polymer Technology / Biochemical Engineering / Energy Engineering / Environmental Engineering and allied disciplines.
35	QIP0002	National Institute of Technology (NIT), Warangal	M.Tech	Civil Engineering	DN000169	Construction Technology and Management, Engineering Structures, Environmental Engineering, Geotechnical Engineering, Remote Sensing and Geographic Information Systems, Transportation Engineering, Waste Management, Water Resources Engineering.	First class with 60% aggregate or 6.5 CGPA at B.Tech/B.E. for GEN/OBC/EWS category and minimum 55% aggregate marks or 6.0 CGPA for candidates under SC/ST/PwD category. B.Tech. or B.E. or Equivalent degree in Civil Engineering.

36	QIP0002	National Institute of Technology (NIT), Warangal	M.Tech	Computer Science & Engineering	DN000170	Computer Science and Engineering, Computer Science and Information Security.	First class with 60% aggregate or 6.5 CGPA at B.Tech/B.E. for GEN/OBC/EWS category and minimum 55% aggregate marks or 6.0 CGPA for candidates under SC/ST/PwD category. B.Tech. or B.E. or Equivalent degree in Computer Science and Engineering/ Computer Engineering/ Computer Science/ Computer Science and Information Technology/ Computer Technology/ Information Technology/Computer and Communication Engineering/Computer Engineering and Application/Computer Networking/Computer Science and Technology/ Computing in Computing/ Computing in Multimedia/ Computing in Software/Electronics and Computer Engineering/Electronics and Information Systems/Information and Communication Technology/ Information Engineering/ Information Science/Information Science and Engineering/Software Engineering/Systems Science Engineering/Advanced Communication and Information System/Electrical and Computer Engineering/Information Science and Technology/Information Technology and Engineering/Information Technology and Mathematical Innovations/ Artificial Intelligence (AI) and Data Science/ Artificial Intelligence and Machine Learning/ Computer Science and Applied Mathematics/ Computer Science and Biosciences/ Computer Science and Design/ Computer Science and Business Systems/ Computer Science and Engineering (Cyber Security)/ Computer Science and Engineering (Artificial Intelligence)// Computer Science and Engineering (Artificial Intelligence and Machine Learning)/ Computer Science and Engineering (Data Science)/ Computer Science and Engineering (Internet of Things and Cyber Security Including Block Chain Technology)/ Computer Science and Engineering (IoT)/ 6 Computer Science and Engineering (Networks)/ Computer Science and Engineering and Business Systems/ Computer Science and Medical Engineering/ Computer Science and Social Sciences/ Electronics and Computer Science/Computer Engineering (Software Engineering)/ MCA.

37	QIP0002	National Institute of Technology (NIT), Warangal	M.Tech	Electrical Engineering	DN000172	Power Electronics and Drives, Power Systems Engineering, Smart Electric Grid.	First class with 60% aggregate or 6.5 CGPA at B.Tech/B.E. for GEN/OBC/EWS category and minimum 55% aggregate marks or 6.0 CGPA for candidates under SC/ST/PwD category. B.Tech. or B.E. or Equivalent degree in Electrical Engineering or Electrical and Electronics Engineering.
38	QIP0002	National Institute of Technology (NIT), Warangal	M.Tech	Electronics & Communication Engineering	DN000174	Advanced Communication Systems, Electronic Instrumentation and Embedded Systems, VLSI Systems Design.	First class with 60% aggregate or 6.5 CGPA at B.Tech/B.E. for GEN/OBC/EWS category and minimum 55% aggregate marks or 6.0 CGPA for candidates under SC/ST/PwD category. B.Tech. or B.E. or Equivalent degree in Electronics and Communication Engineering.
39	QIP0002	National Institute of Technology (NIT), Warangal	M.Tech	Mechanical Engineering	DN000175	Additive Manufacturing, Automobile Engineering, Computer Integrated Manufacturing, Machine Design, Manufacturing Engineering, Materials and Systems Engineering Design, Thermal Engineering.	First class with 60% aggregate or 6.5 CGPA at B.Tech/B.E. for GEN/OBC/EWS category and minimum 55% aggregate marks or 6.0 CGPA for candidates under SC/ST/PwD category. B.Tech. or B.E. or Equivalent degree in Mechanical Engineering /Production Engineering /Industrial Engineering /Mechatronics /Automobile Engineering /Aeronautical Engineering / Marine Engineering.
40	QIP0002	National Institute of Technology (NIT), Warangal	M.Tech	Metallurgical & Materials Engineering	DN000177	Industrial Metallurgy, Materials Technology.	First class with 60% aggregate or 6.5 CGPA at B.Tech/B.E. for GEN/OBC/EWS category and minimum 55% aggregate marks or 6.0 CGPA for candidates under SC/ST/PwD category. B.Tech. or B.E. or Equivalent degree in Metallurgical & Materials Engineering / Mechanical Engineering.
41	QIP0003	Indian Institute of Engineering Science and Technology (IIEST), Shibpur	Ph.D Engineering	Aerospace Engineering and Applied Mechanics	DN000219	Bio-Mechanics, Soil Structure, Robotics, Fluid Mechanics/ Hydraulics, Computational Mechanic, Earthquake Engineering, Structural Dynamics, Aero Dynamics, Aero-structure.	Post Graduate Degree in Mechanical, Civil, Aerospace, Aeronautics or equivalent fields in Engineering. Candidates possessing M.Tech. / M.E. / M.Sc.(Engg.) / M.Arch. / M.U.R.P. / M.Plan. / M.T.R.P. / M.Sc. or an equivalent postgraduate degree in the relevant branch from a recognized University/Institute shall have minimum 60% marks (or minimum 6.5 CGPA/DGPA on a 10 point scale) throughout from class X to the qualifying degree to apply for admission in the relevant departments. For SC/ST/ Person with Disability (PwD) category, a minimum 55% marks (or minimum 6.0 CGPA/ DGPA on 10 point scale) throughout from class X to the qualifying degree is required.

42	QIP0003	Indian Institute of Engineering Science and Technology (IIEST), Shibpur	Ph.D Engineering	Information Technology	DN000224	Machine Learning and applications, Machine Learning for Integrated Sensing and Communication, AI-driven Biomedical and Healthcare Systems, Internet of Things (IoT), Internet of Medical Things (IoMT), Edge Computing and IoT, IoT Communication, Cloud computing, Intelligent Transportation Systems,Future generation traffic analysis, Smart Cities, 5G and beyond, Theoretical Computer Science, Cellular Automata, Democracy and Computation, Logic and Automata, Artificial Life, Information security, Multimedia forensics, VLSI Design and Test, Logic Synthesis, VLSI Design for Manufacturability, Design for DMFB, Image Analysis using Deep Learning techniques, Digital Geometric techniques for image processing, Medical image analysis, Blind Image restoration using deep learning, Gesture recognition, Image captioning, 3D IC testing, Wireless Sensor Network, Hardware Security, Design for MEDA based DMFB.	Post Graduate Degree in the relevant field in Engineering or equivalent. Candidates possessing M.Tech. / M.E. / M.Sc.(Engg.) / M.Arch. / M.U.R.P. / M.Plan. / M.T.R.P. / M.Sc. or an equivalent postgraduate degree in the relevant branch from a recognized University/Institute shall have minimum 60% marks (or minimum 6.5 CGPA/DGPA on a 10 point scale) throughout from class X to the qualifying degree to apply for admission in the relevant departments. For SC/ST/ Person with Disability (PwD) category, a minimum 55% marks (or minimum 6.0 CGPA/ DGPA on 10 point scale) throughout from class X to the qualifying degree is required.
43	QIP0003	Indian Institute of Engineering Science and Technology (IIEST), Shibpur	Ph.D Engineering	Metallurgy and Materials Engineering	DN000228	Nano Materials, High Strength Steel, Phase Transformation, Joining of Materials, Neural Network, Tribology, Additive Manufacturing, High Entropy alloys, Non-ferrous technology, Microstructure modeling.	Post Graduate Degree in the relevant field in Engineering or equivalent. Candidates possessing M.Tech. / M.E. / M.Sc.(Engg.) / M.Arch. / M.U.R.P. / M.Plan. / M.T.R.P. / M.Sc. or an equivalent postgraduate degree in the relevant branch from a recognized University/Institute shall have minimum 60% marks (or minimum 6.5 CGPA/DGPA on a 10 point scale) throughout from class X to the qualifying degree to apply for admission in the relevant departments. For SC/ST/ Person

							with Disability (PwD) category, a minimum 55% marks (or minimum 6.0 CGPA/ DGPA on 10 point scale) throughout from class X to the qualifying degree is required.
44	QIP0003	Indian Institute of Engineering Science and Technology (IIEST), Shibpur	Ph.D Engineering	Civil Engineering	DN000397	Structural Engineering & Concrete Technology, Earthquake Engineering, Applied Mechanics, Geotechnical Engineering, Water resource Engineering, Environment Engineering, Highway and Traffic Engineering etc.	Post Graduate Degree in the relevant field in Engineering or equivalent. Candidates possessing M.Tech. / M.E. / M.Sc.(Engg.) / M.Arch. / M.U.R.P. / M.Plan. / M.T.R.P. / M.Sc. or an equivalent postgraduate degree in the relevant branch from a recognized University/Institute shall have minimum 60% marks (or minimum 6.5 CGPA/DGPA on a 10 point scale) throughout from class X to the qualifying degree to apply for admission in the relevant departments. For SC/ST/ Person with Disability (PwD) category, a minimum 55% marks (or minimum 6.0 CGPA/ DGPA on 10 point scale) throughout from class X to the qualifying degree is required.
45	QIP0003	Indian Institute of Engineering Science and Technology (IIEST), Shibpur	Ph.D Engineering	Electrical Engineering	DN000400	“Power and Energy Systems”, “Control Systems and Instrumentation”, “Power Electronics, Machines and Drives”	Post Graduate Degree in the relevant field in Engineering or equivalent. Candidates possessing M.Tech. / M.E. / M.Sc.(Engg.) / M.Arch. / M.U.R.P. / M.Plan. / M.T.R.P. / M.Sc. or an equivalent postgraduate degree in the relevant branch from a recognized University/Institute shall have minimum 60% marks (or minimum 6.5 CGPA/DGPA on a 10 point scale) throughout from class X to the qualifying degree to apply for admission in the relevant departments. For SC/ST/ Person with Disability (PwD) category, a minimum 55% marks (or minimum 6.0 CGPA/ DGPA on 10 point scale) throughout from class X to the qualifying degree is required.
46	QIP0003	Indian Institute of Engineering Science and Technology (IIEST), Shibpur	Ph.D Engineering	Mechanical Engineering	DN000401	Thermal & Fluid Sciences, CFD, Combustion Sc & Engineering, Biomass & Bio-Energy, Biofuels Vibration & Control, Nonlinear Dynamics, Fuel Cell Technology Biomechanics, Biotribology Solar Energy, Greenhouse Technology Composite Materials Non-traditional machining.	Post Graduate Degree in the relevant field in Engineering or equivalent. Candidates possessing M.Tech. / M.E. / M.Sc.(Engg.) / M.Arch. / M.U.R.P. / M.Plan. / M.T.R.P. / M.Sc. or an equivalent postgraduate degree in the relevant branch from a recognized University/Institute shall have minimum 60% marks (or minimum 6.5 CGPA/DGPA on a 10 point scale) throughout from class X to the qualifying degree to apply for admission in the relevant departments. For SC/ST/ Person with Disability (PwD) category, a minimum 55% marks (or

							minimum 6.0 CGPA/ DGPA on 10 point scale) throughout from class X to the qualifying degree is required.
47	QIP0003	Indian Institute of Engineering Science and Technology (IIEST), Shibpur	Ph.D Engineering	Mining Engineering	DN000404	GSI/GPS/Remote Sensing, Occupational Health & Safety, Ergonomics and Industrial Safety, Coal bed methane & Carbon sequestration, Mine Environment, Mineral Dressing.	Post Graduate Degree in the relevant field in Engineering or equivalent. Candidates possessing M.Tech. / M.E. / M.Sc.(Engg.) / M.Arch. / M.U.R.P. / M.Plan. / M.T.R.P. / M.Sc. or an equivalent postgraduate degree in the relevant branch from a recognized University/Institute shall have minimum 60% marks (or minimum 6.5 CGPA/DGPA on a 10 point scale) throughout from class X to the qualifying degree to apply for admission in the relevant departments. For SC/ST/ Person with Disability (PwD) category, a minimum 55% marks (or minimum 6.0 CGPA/ DGPA on 10 point scale) throughout from class X to the qualifying degree is required.
48	QIP0004	Indian Institute of Science (IISC), Bengaluru	Ph.D Engineering	Aerospace Engineering	DN000045	Theoretical and Experimental Fluid Mechanics Applied Aerodynamics Hypersonic and High Enthalpy Flows, Computational Fluid Dynamics Flight Mechanics of Aircraft and Helicopters Dynamics and Control of Aerospace Vehicles, Orbital Mechanics, Space Robotics, Guidance Parallel/Distributed Processing and Neural Networks Applications Optimization & Estimation Techniques in Aerospace Systems; Aerospace Propulsion, Basic and Applied Combustion, Experimental and Computational Studies on Reactive Flows, Combustion of PropellantsComposite	M.E. /M.Tech or equivalent degree in Aerospace, Mechanical, Electrical, Electronics, Chemical, Computer Science, Civil.

						Structures, Smart structures, Non-destructive Evaluation, Finite Element Methods, Fracture Mechanics, Structural Integrity and Reliability, Structural Dynamics and Aeroelasticity, Rotorcraft Dynamics	
49	QIP0004	Indian Institute of Science (IISC), Bengaluru	Ph.D Engineering	Chemical Engineering	DN000046	Nanostructures and nanotechnology for sensors, flexible electronics and energy applications; Flow batteries and super capacitors; Nanomaterials forgas separations, methane storage and carbon capture; Mechanics anddynamics of granular materials, suspensions, soft solids, living matter andstructured fluids; Interfacial engineering for process modelling and process intensification; Reaction kinetics, catalysis, and bioengineering forenvironmental and energy sector. Thermodynamics and molecular simulations of interfaces and soft matter. Systems biology and singlemolecule methods for therapeutics and disease detection; Microfluidics forpoint of care diagnostics, cancer therapeutics; Treatment of Drinking water	M.E./M.Tech or equivalent degree

50	QIP0004	Indian Institute of Science (IISC), Bengaluru	Ph.D Engineering	Civil Engineering	DN000047	Geotechnical Engineering: Earthquake Geotechnical Engineering, Geoenvironmental Engineering, Physico-chemical Aspects and Constitutive Modeling of Soil Behavior, Foundations, Earth and Earth Retaining Structures, Ground Improvement Techniques, Geosynthetics, Mechanics of Granular Media, Nuerical Modelling of Soils and rocks, Risk and Reliability Assessment of Geohazards Soil Dynamics, Rock Mechanics Experimental Mechanics Water Resources and Environmental Engineering.: Water Resources Systems, Climate Hydrology, Surface and Ground WaterHydrology, Vadose Zone Hydrology, Open Channel Flows, Urban Water Distribution Systems, River Mechanics, Environmental Hydraulics, Water QualityModeling, Contaminant Transport in Surface and Ground Water Flows. Structural Engineering: Structural Mechanics, Finite Element Analysis, RC and Prestressed Concrete, Masonry Structures, Structural Dynamics, Non-Linear and Stochastic Dynamical Systems, Earthquake Engineering, Structural Safety, Fracture Mechanics of Concrete, Materials in Civil, Engineering,	M.E./M.Tech or equivalent Degree in Civil

						Low Carbon Materials, Structural Health Monitoring, Contact Mechanics, Computational Plasticity. Transportation Systems Engineering: Sustainable Transportation Planning; Modeling and Optimization of Transportation Systems; Travel Behaviour, and Travel Demand Analysis; Network Modeling; PublicTransport and Non-Motorized Transport Planning and Management; Intelligent Transport System (ITS); Traffic Management; Road Safety;Freight and Logistics; Air and Rail Transport; Electric, Connected,Automated, and Shared Mobility	
51	QIP0004	Indian Institute of Science (IISC), Bengaluru	Ph.D Engineering	Computer Science & Automation	DN000051	Theoretical Computer Science - Algorithms; Complexity Theory; Combinatorial Optimization; Graph Theory; Information and Coding Theory; Cryptography; Cryptology; Security; Secure Distributed Computing; Computational Geometry; Computational Topology; Algorithmic Algebra; Computational Biology; Automata Theory; Formal Verification. Computer Systems and Software - Computer Architecture; MultiCore Computing; Parallel and High	M.E/M.Tech or equivalent Degree in Computer Science and /or Engineering or Electronics or Electrical Communication Engineering or Electrical Engineering or Information Technology or Information Sciences or allied disciplines.

						Performance Computing; Operating Systems; Storage Systems; Computer Systems Security; Database Systems; Cloud Computing; Distributed Computing; Modeling and Simulation; Compiler Design, Program Analysis, Programming Languages, Software Engineering Adhoc Mobile and Sensor Networks, Graphics and Visulaization. Intelligent Systems - Data Mining; Data Analytics; Deep Learning;Information Retrieval; Machine Learning; Pattern Recognition; Reinforcement Learning; Convex Optimization; Stochastic Control and Optimization; Game Theory; Auctions and Mechanism Design; Electronic Markets; Social Network Analysis; Cognitive Systems; Natural Language Processing; Computational Neural Modeling, Computational Brain Imaging	

52	QIP0004	Indian Institute of Science (IISC), Bengaluru	Ph.D Engineering	Electronics & Communication Engineering	DN000165	Communication and Networking: Information Theory, Source coding MIMO Systems, Spce-Time and LDPC Codes, Coding for Distributed Storage and Coded Modulation, Error-Control Coding, Coding for StorageMedia, Information Theoretic Security, Power Control and Scheduling,Wireless Mobile Communication, Multiple Access Protocols, CellularMobile Radio, DMA, Multiuser/MIMO Detection, Large-MIMO systems,Cooperative Communications, MIMO-OFDM, Spatial Modulation, Visiblelight wireless communication, Communication Networks: Modeling,Analysis, Optimization and Control of the Internet, wireless access networks, wireless ad-hoc Networks, Wireless Sensor Networks and the networks, wireless ad-hoc Networks, Wireless Sensor Networks and the Internet of Things. Learning & Decision-Making, Research at the interfaces of various Networks: Wireless, Social Transportation, Neuronal etc. Network Management, Multimedia communication Protocols, ubiquitous Computing. Cognitive Radio Communication, WDM Optical Network Computing. Cognitive Radio Communication, WDM	M.E/M.Tech or equivalent Degree Electrical / Electronics /Electronics and Communication, Telecommunicaiton /Instrumentation / Biomedical Engineering / Computer Science and / or Engineering or M.Sc in Physics / Mathematics / Electronics / Statistics / Computer Science/ Phtonics or Master's in Computer Application or Graduates of 4-years Bachelor of Science Program

						Optical Networks Optical Communications. Green Communications Nanoelectronics and VLSI: Nano-CMOS Technology, Non-Classicial Transistor Design, T Architectures. Analog Mixed-Signal & RF circuits, Embedded Systems, Cyber Physical Systems. Applied Photonics: Photonic Integrated Circuits, Micro-OptoElecro- Mechanical systems (MOEMS), Photonic Bandgap Structures, Quantum Photonics. Biomedical Optics, Biophotonics. Optics and Fluid Dynamics of Nanostructures, Plasmonics. Signal Processing: Spatial Signal Processing, Speech and Audio, Speech Recognition and Enhancement. Music Content Classification, Auditory Model and Hearing Aids. Compressive Sensing. Sparse Signal Recovery. Statistical Signal Processing: Signal Detection and Estimation, Space-Time (MIMO) Signal Processing Algorithms with applications to Wireless Communications, Acoustic Signal Separation using Microphone Arrays, Indoor Positioning and Navigation. Microwave Engineering: Passive and Active Circuits (RF and Microwave), Microwave Imaging Antennas, FractalDesigns in Electromagnetics, MEMS and Micromachining (RF MEMS),	

						Terahertz devices for antennas, scattering and imaging. Composite Materials for Microwave Applications, Computational Electromagenetics	

53	QIP0004	Indian Institute of Science (IISC), Bengaluru	Ph.D Engineering	Electrical Engineering	DN000183	Power Systems and Power Electronics: Power system dynamics, Development of stabilizing controls for power system, Smar Grids, Power System Protection, High performance computing applications in power systems, Power electronics applications in power system, Integration of renewables in weak power grid, Wind-Solar integration, Distributed Generation, Micro-grids, Power quality, Harmonic suppression, Reactivepower control, Power Electronics and Drives, Electric Machines, Pulsewidth Modulation, Switch mode power supplies, High frequency isolated inverters, soft-switched converters, Digital control of power converters. High Voltage Engineering EHV Power Tansmission, Overvoltage Protection, Lighting Protection, Computational Electron magnetic, GasInsulated Systems, Partial Discharges, Insulation Engineering, Condition Monitoring and Diagnostics for HV Power Apparatus, Nanodielectrics, Environmental applications of electrical discharges. Systems Science and Signal Processing: Pattern Recognition, Data Mining,	M.E./ M. Tech or equivalent degree in Electrical, Electronics Communication, High Voltage Engineering, Instrumentation, Computer Science, Information Technology or Biomedical Mechanical Engg., Mechatronics, Aerospace Engineering or related dsiciplines.

						Machine Learning, DSP Theory and Applications, Sparse Signal Processing & Compressive Sensing, Image and Video Analysis, bComputer Vision,Medical Imaging and Analysis, Optimization, Speech Processing, Sensor Networks, Event-triggered control, Distributed Systems and Networked Control Systems.	

54	QIP0004	Indian Institute of Science (IISC), Bengaluru	Ph.D Engineering	Electronic Systems Engineering	DN000205	Power Electronics & Drives: Control of inverters, multi-level inverters for drives, renewable energy, power supplies Signal and Information Processing: Information theory, coding and signa lprocessing for magnetic and optical nano- memories, mathematical biology and applications, quantum information processing and systems architecture. Communication Networks: Physical layer security, network science, data center networking, information centric networking, network economics, function computation on networks, optimization and learning over networks, optimal data transport in sensor, wireless and mesh networks, energy harvested networked embedded and cyber physical systems, Internet to Things, smart grids. Micro and Nano Electronics: Modeling of carrier transport in nanoscale electron devices at atomistic, device and circuit level, reliability study ofstate-of-the-art MOSFET, fabrication of 2D material based transistors, GaNand other power semiconductor devices. Brain-inspired Computing: Neuromorphic Engineering, M.E./ M. Tech or equivalent degree in Electrical, Electronics Communication, High Voltage	M.E./ M. Tech or equivalent degree in Electrical, Electronics Communication, High Voltage Engineering, Instrumentation, Computer Science, Information Technology or Biomedical Mechanical Engg., Mechatronics, Aerospace Engineering or related disciplines.

						Engineering, Instrumentation, Computer Science, Information Technology or Biomedical Mechanical Engg., Mechatronics, Aerospace Engineering or related dsiciplines. ASIC/FPGAVLSI design, analog IC design, brain-inspired algorithms, machine learning, neuromorphic sensors and their applications and compressive sensing. Microsystems and Biomedical Devices: Microengineering for clinical research, Advanced fabrication of micro engineering devices using glass, silicon, polymers and integrate with unusual classes of micro/nanomaterials. Integration of biology/medicine with microtechnology, nanotechnology Integration of biology/medicine with microtechnology, nano technology and additive manufacturing, Fabrication of flexible sensors, micro sensors microfluidic devices, and microelectromechanical systems with an emphasis on cancer diagnosis, therapeutics, e-nose, and biomedical device technologies	

55	QIP0004	Indian Institute of Science (IISC), Bengaluru	Ph.D Engineering	Management Studies	DN000207	Applied Statistics, Business Analytics, Energy and Environmental Policy and Management, Entrepreneurship, Finance, Industrial Economics, Logistics and Supply Chain Management, Operations Management, Operations Research, Organizational Behaviour, Public Policy, Technology & Innovation Management.	B.E/ B.Tech or equivalent degre in any discipline of Master's degree in Economics, Policy studies, Commerce, Mathematics, Statistics, Psychology, Social Work, Operationla Research, Computer Science / Application or MBA post MSc/BE/ BTech or equivalent degree
56	QIP0004	Indian Institute of Science (IISC), Bengaluru	Ph.D Engineering	Mechanical Engineering	DN000218	Experimental Stress Analysis and Fracture Mechanics, Tribology, Mechanisms, Robotics and CAD, Fluid Mechanics, Turbulence, Heat Transfer, Combustion, Laser Diagnostics applied to Thermo-fluid Science, Refrigeration and Air Conditioning, Dynamics, Micro Electro-Mechanical Systems (MEMS), Nano Tribology, Structural Optimaization and Design, Mechanical Properties of Materials, Biomechanics, acoustics and noise control, Computational Mechanics	M.E/M.Tech in Mechanical / Aerospace /Civil / Materials / Chemical Engineering /Bio- Technology

57	QIP0004	Indian Institute of Science (IISC), Bengaluru	Ph.D Science	Physics	DN000242	(A) Experimental studies in I. Condensed Matter Physics II. Atomic, Optical Physics, and Specific areas include: Raman and other Spectroscopy, Fast Ionic Conductivity, Manipulation of Matter by Light, Laser Cooling and trapping of atoms, Ion trapping, Precision Laser Spectroscopy, Magnetism, Spintronics, Magnetic thin films, Magnetotransport, quantum transport in low- dimensional and disordered materials, the metal-insulator transition, Magnetic Resonance Phenomena, Nanoscience and nanomaterial's, Superconductivity in bulk as well as thin films,Semiconductors, Ferro electricity, Crystal Growth Studies, NonlinearOptical Materials, Phase Transition Studies, High Pressure and LowTemperature Studies, Study of Low Dimensional Materials, Amorphous Systems, Soft Condensed Matter: colloids, surfactants and biologicalmaterials, Polymer Physics, SurfaceX-ray scattering, surface phasetransitions, Thermoelectrics. (B)Theoretical Studies on a	ME / M.Tech./ M.Sc. (Engineering or equivalent degree or M.Sc. or equivalent degree in Physics, Biophysics, Biotechnology,Mathematics, Chemistry or Polymer Science or B.E./ B.Tech. or equivalent degree or B.Sc. or equivalent degree followed byAMIE, Grad, IETE, MII ChE, AMIIM, AMAeSI.

						variety of aspects of condensed matter physics, in particular; Strongly Correlated Systems, Quantum manybody theory and magnetism, exotic order and quantum criticality; Phase transitions, equilibrium statistical physics; Disordered and Amorphous Systems, the glass transition, neural networks, Spatiotemporal Chaos and Turbulence in fluids, plasmas and cardiac tissue; Soft condensed matter: colloids, surfactants, membranes, liquid crystals, vortex lattices; biological physics: the mechanics of living matter; Molecular modeling of soft and bio-materials	

58	QIP0004	Indian Institute of Science (IISC), Bengaluru	Ph.D Engineering	Earth Sciences	DN000251	Application of major & trace element, radiogenic and stable isotope geochemistry to modern day and early Earth processes; paleoclimate reconstsruction, Seismic inversion and signal processing, Geochronology, Petrology, Mantle convection, Planetary magnetism - models and experiments.	B.E./B.Tech or equivalentdegree in any discipline,M.E./M.Tech. or equivalent degree, MSc.or equivalent degree in any branch of Science.
59	QIP0004	Indian Institute of Science (IISC), Bengaluru	Ph.D Engineering	Instrumentation & Applied Physics	DN000257	Nanoelectronic devices; Quantum Dots (QD); Quantum computation; Graphene Electronics; Micro and nano systems; Layered 2D materials; Sensors and related Instrumentation; QD containing optical fibers; Nanoscale Imaging; Super-Resolution Microscopy and Imaging; Fluorescence Microscopy;Precision Motion Control; Microfluidics and Devices Nano-metrology; Atomic Force Microscopy, Semiconductor Devices and Circuits, Electrrical transprot studies in low-dimentsional materials, QD laser, Quantum measurement and control, Bioinstrumentation, Materials Science, Electrical and Thermal Contacst Resistance, Fibre-Bragg Grating Sensors, Phase Change Memories, Energy Systems, Image Processing Microfluidics and Lab-on-a-Chip,	M.E/ M.Tech in any discipline OR M.Sc or equivalent degree in Physics / Applied Physics / Engineering Physics / Bio-Physics / Materials Science

						Interferometry, Computational Imaging, Image Processing, Biomedical Instrumentation, Optofludics and Point-of-Care Diagnostics, Optical metrology, Optical Microscopy.	
60	QIP0004	Indian Institute of Science (IISC), Bengaluru	Ph.D Science	Mathematics	DN000262	Partial Differential Equations, Homogenization, Controllability, NonlinearDynamics and Chaos, Time Series Analysis with Applications toNeuroscience, Probability and Stochastic Processes, Stochastic Control,Stochastic Dynamic Games, Random Matrix Theory, Functional Analysis,Operator Theory, Algebraic Topology, Differential Topology, Commutative Algebra, Algebraic Geometry, Harmonic Analysis, Several Complex variables, Differential Geometry, Mathematical Finance, Low Dimensional Topology, Numerical Analysis, Number Theory, Combinatiorics, Statistical Mechanics, Representation Theory, Combinatorial Topology.	M.Sc or equivalent degree in Mathematics, Statistics, Physics or any branch of Mathematical Sciences or BE / B Tech or equivalent degree (provided they have good aptitute for Mathematics).

61	QIP0004	Indian Institute of Science (IISC), Bengaluru	Ph.D Engineering	Centre For Sustainable Technologies	DN000264	Water quality and sustainable supply; Water and sanitation; Renewableenergy; solar, biomass combustion and gasification, biomethanation, bio- fuels, etc. Energy planning, demand side management, energy efficiency;Alternative building technologies and materials, energy efficient andenvironmentally sound technologies; Climate-responsive architecture/building technology; Building Integrated Photovoltaics (BIPV) and GreenBuildings; Building-comfort studies in tropical regions; Waste management;reuse and recycling; Natural Resources Management; Climate change mitigation, Smart / efficient Turbines for renewable energy applications. Waste to Energy.	M. Arch. or M.E / M Tech / M.Sc (Engg.) / Architecture, in Mechanical, Civil, Chemical including Renewable Energy, M. Arch. or M.E / M Tech / M.Sc (Engg.) / Architecture, in Mechanical, Civil, Chemical including Renewable Energy,
62	QIP0004	Indian Institute of Science (IISC), Bengaluru	Ph.D Engineering	Centre for Atmospheric & Oceanic Sciences	DN000658	Monsoon Dynamics, Tropical Convection, Satellite Meteorology, Dynamics of Oceans, Coupled Ocean-atmospheric Systems; Climate Modeling, Boundary Layer, Dynamics of Atmospheres, Aerosols and Climate	M.E./M.Tech or equivalent degree in Mechanical, Civil/Aerospace/ Chemical Engineering, Atmospheric and Oceanic Sciences

63	QIP0004	Indian Institute of Science (IISC), Bengaluru	Ph.D Engineering	Materials Research Centre	DN000659	Preparation of Advanced Materials by Physical, Chemical and Non equlibrium Routes Feroelectric and Semiconducting Thin Films, Multilayers and Hard Coatings, Nanomaterials's and Composites, Self Assembly and Nanopatternings, Theoretical and Computational Materials Science Ferric materials, glasses and glass-ceramics, Electro and Nonlinear Optics. Magnetic materials, Biomaterials.	M.Sc or equivalent degree in Materials Science Chemistry or Physics or M.E.MTech/M.Sc (Engineering or equivalent degree in materials Science Engineering, Ceramic Engineering and Technology
64	QIP0004	Indian Institute of Science (IISC), Bengaluru	Ph.D Engineering	Product Design	DN000661	Computer Aided Engineering Tools for Product Design, Vehicle Crash worthiness and occupant Safety, Occupational Health and Safety, Product Safety, Computer Aided Ergonomics, Human Engineering, Digital Human Modelling, Biomechanics, Kinesiology, Biosensors, ComputerAided Design and Usability Studies, Haptics Integrated Design interfaces, knowledge Management, Product Life Cycle Management, Artificial Intelligence in Design, Design for Environment, Design Creativity Collaborative Design, Design Synthesis, Requirements Engineering, Design Methodology, Clinical and Rehabilitation Engineering, Human-Machine Interaction, Smart Manufacturing,	M.E / M Tech or equivalent degree in Design, any branch of Engineering Architecture, Instrumentation and medicine or Master's degree in physics, Mathematics, Computer Sciences, Physiology Psychology or B.E / B Tech or equivalent degree in Design, any branch of Engineering Architecture Instrumentation.

						Sustainability, Medical diagonistics / therapeutics, Eco-Design, Life Cycle Assessement, Sustainbiligy Analysis, Biocomposite, Additive Manufacturing, Sustainable Manufacturing, Computational Metrology, Human Computer Interaction, Multi Model Interaction, Automotive User Interface Assistive Technology, Bio-Medical Devices, Co- Design, Collobaration and Open Source Design.	

65	QIP0004	Indian Institute of Science (IISC), Bengaluru	Ph.D Engineering	Computational & Data Sciences	DN000663	Bio-molecular Computation, Computationa l Electrodynamics, Computational Photonics, Computational Material Physics, Computational Fluid Mechanics, Computational Mathematics / Scientific Computation, Finite Element Analysis, High Performance Computing (HPC), MedicalImaging, Numerical Linear Algebra, and Structural Biology &Bio- Computing, Genomics.Computer Aided Design, Cloud Computing Systems, Distributed Systems,Data Sciences, Big Data Platforms, Computer Vision and Image/ Video Analytics, Database Systems, Embedded System-On-Chip Architectures, High Performance Computing Systems, Machine Learning, Natural Language Processing, Deep Learning for Vision and Language, Paral	M.E./ M.Tech./ M.Sc.(Engg.) or equivalent degree in any discipline.
66	QIP0004	Indian Institute of Science (IISC), Bengaluru	Ph.D Engineering	Materials Engineering	DN000668	Mechanical Behavior of Metals, Ceramics, Polymers Glasses and Thin Films Biomaterials Engineering Polymer Nano-composities Organic Electronics Sensors Mineral Processing Biohydrometallurgy. Extractive Metallurgy Process Modeling Physical Metallurgy Phase Stability and Transformation Diffusion, Solidification Li-ion	M.E / M Tech or equivalent degree in Metallurgical, Mineral, Chemical, Ceramics or Mechanical, Electrical, Electronics or Materials Science / Engineering or Biotechnology, Polymers

						batteries. Electro-catalysts. Printed Electronics	
67	QIP0005	Shri Guru Gobind Singhji Institute of Engineering and Technology (SGGSIET), Nanded	Ph.D Engineering	Electronics & Telecommunications Engineering	DN000048	Signal Processing Speech, Biomedical Signals. Image and Video Processing. Pattern Recognition.	M.E./ M.Tech degree in relevant discipline with minimum 55% marks or equivalent CGPA.
68	QIP0005	Shri Guru Gobind Singhji Institute of Engineering and Technology (SGGSIET), Nanded	Ph.D Engineering	Instrumentation & Control Engineering	DN000052	Process Control and Instrumentation Signal and Image Processing Control Engineering Agriculture Instrumentation Biomedical Instrumentation Micro sensors and Systems Electrical Engineering	M.E./ M.Tech or Equivalent degree in Instrumentation, Instrumentation & Control, Electrical Engineering, Electronics, Electronics & Telecommunication, Electronics & Instrumentation, Electrical & Electronics Engineering, Biomedical Instrumentation with minimum 55% marks or equivalent CGPA
69	QIP0005	Shri Guru Gobind Singhji Institute of Engineering and Technology (SGGSIET), Nanded	Ph.D Engineering	Production Engineering	DN000054	Micro-Manufacturing Advanced Manufacturing Technologies Modeling and Analysis of Manufacturing Processes: Machining, Casting, Welding and Metal Forming. CAE for Composites Robust Design and Simulation Analysis for Products and Processes Production/Operations Management and PLM Tool Condition Monitoring	M.E./ M.Tech. degree in Production, Mechanical or equivalent with minimum 55% marks or equivalent CGPA.

70	QIP0005	Shri Guru Gobind Singhji Institute of Engineering and Technology (SGGSIET), Nanded	Ph.D Engineering	Civil Engineering	DN000055	Hydraulics and / Water Resources Engineering Environmental Engineering Geotechnical Engineering Structural Engineering	Master's degree in Hydraulics and/ or Water Resources/ Environmental Engineering or equivalent degree with minimum 55% marks or equivalent CGPA.
71	QIP0005	Shri Guru Gobind Singhji Institute of Engineering and Technology (SGGSIET), Nanded	Ph.D Engineering	Mechanical Engineering	DN000056	Micro Manufacturing Advanced Manufacturing Technologies Tribological Characterization Quality and Reliability Production and Operation Management Manufacturing Process Modeling and Analysis: Machining, Casting, Welding and Metal Forming Thermo-Structural Analysis, Design and Analysis of Composites	M.E./ M.Tech. degree In Mechanical/ Production Engineering or equivalent with minimum 55% marks or equivalent CGPA.
72	QIP0005	Shri Guru Gobind Singhji Institute of Engineering and Technology (SGGSIET), Nanded	Ph.D Engineering	Computer Science & Engineering	DN000057	Deep Learning Cyber Security	M.E./ M.Tech. degree In Mechanical/ Production Engineering or equivalent with minimum 55% marks or equivalent CGPA.

73	QIP0005	Shri Guru Gobind Singhji Institute of Engineering and Technology (SGGSIET), Nanded	M.Tech	Instrumentation & Control Engineering	DN000780	Instrumentation and control, technologies and its applications including, Process Control, Artificial Intelligence, Robust Control, Sensor Technology, Signal and Image Processing, Biomedical, Instrumentation Engineering and Allied area etc.	1. Polytechnic Faculty are eligible for M.Tech. only 2. A Bachelor's Degree in the Appropriate branch 3. Criteria as per Director of Technical Education, Mumbai Maharashtra Govt. (1) For Maharashtra Candidature Candidate and All India Candidature Candidate,- (i) The Candidate should be an Indian National; (ii) Passed Bachelor Degree in the relevant field of Engineering and Technology from All India Council for Technical Education or Central or State Government approved institutions or equivalent, with at least 50% marks (at least 45% marks in case of candidates of Backward Class categories, Economically weaker section and Persons with Disability category belonging to Maharashtra State); (iii) Passed Bachelor Degree in the relevant course of Engineering and Technology as specified in the eligibility criteria for admission to a Post Graduate Degree course of the concerned University for which admission is being sought; (iv) Obtained Qualified score in Graduates Aptitude Test in Engineering (GATE) conducted by the Indian Institute of Technology and valid for the current academic year ; or (iv) Obtained Qualified score in Graduates Aptitude Test (GPAT) conducted by National Testing Agency and valid for the current academic year ; or (iv) Obtained non-Qualified marks in Graduates Aptitude Test (GPAT) conducted by National Testing Agency for the current academic year; or (iv) For sponsored candidates, minimum of two years of full time work experience in a registered firm/ company/ industry/ educational and/ or research institute/ any Government Department or Government Autonomous Organization in the relevant field in which admission is being sought; (v) GATE or GPAT Qualified Candidates shall have preference over the not qualified Candidates. (2) NRI / OCI / PIO, Children of Indian workers in the Gulf countries, Foreign National. — (i) Passed Bachelor Degree in the relevant field of Engineering and Technology from All India Council for

							Technical Education or Central or State Government approved institutions or equivalent, with at least 50 % marks; (ii) Passed Bachelor Degree in the relevant course of Engineering and Technology as specified in the eligibility criteria for admission to a Post Graduate Degree course of the concerned University for which admission is being sought. (iii) Any other criterion declared from time to time by the appropriate authority as defined under the Act.
74	QIP0005	Shri Guru Gobind Singhji Institute of Engineering and Technology (SGGSIET), Nanded	M.Tech	Electronics Engineering	DN000781	Embedded System and VLSI Design, Modern Solid State Devices, Digital IC Design, Low power VLSI Design, Analog and Mixed Signal Design, etc	1.Polytechnic Faculty are eligible for M.Tech. only 2. A Bachelor's Degree in the Appropriate branch 3. Criteria as per Director of Technical Education, Mumbai Maharashtra Govt. (1) For Maharashtra Candidature Candidate and All India Candidature Candidate,- (i) The Candidate should be an Indian National; (ii) Passed Bachelor Degree in the relevant field of Engineering and Technology from All India Council for Technical Education or Central or State Government approved institutions or equivalent, with at least 50% marks (at least 45% marks in

							case of candidates of Backward Class categories, Economically weaker section and Persons with Disability category belonging to Maharashtra State); (iii) Passed Bachelor Degree in the relevant course of Engineering and Technology as specified in the eligibility criteria for admission to a Post Graduate Degree course of the concerned University for which admission is being sought; (iv) Obtained Qualified score in Graduates Aptitude Test in Engineering (GATE) conducted by the Indian Institute of Technology and valid for the current academic year ; or (iv) Obtained Qualified score in Graduates Aptitude Test (GPAT) conducted by National Testing Agency and valid for the current academic year ; or (iv) Obtained non-Qualified marks in Graduates Aptitude Test (GPAT) conducted by National Testing Agency for the current academic year; or (iv) For sponsored candidates, minimum of two years of full time work experience in a registered firm/ company/ industry/ educational and/ or research institute/ any Government Department or Government Autonomous Organization in the relevant field in which admission is being sought; (v) GATE or GPAT Qualified Candidates shall have preference over the not qualified Candidates. (2) NRI / OCI / PIO, Children of Indian workers in the Gulf countries, Foreign National. — (i) Passed Bachelor Degree in the relevant field of Engineering and Technology from All India Council for Technical Education or Central or State Government approved institutions or equivalent, with at least 50 % marks; (ii) Passed Bachelor Degree in the relevant course of Engineering and Technology as specified in the eligibility criteria for admission to a Post Graduate Degree course of the concerned University for which admission is being sought. (iii) Any other criterion declared from time to time by the appropriate authority as defined under the Act.

75	QIP0005	Shri Guru Gobind Singhji Institute of Engineering and Technology (SGGSIET), Nanded	M.Tech	Computer Science & Engineering	DN000782	COMPUTER NETWORKS AND INFORMATION SECURITYM.Tech in Computer Networks and Information Security course dwells into the investigation of network and information security breaches and how can they be prevented. Candidates, who wish to get a deeper understanding of advanced skills involved in computer systems, know about the tools of designing, maintenance, management of network infrastructure and applications, this course can prove extremely beneficial for them	1. Polytechnic Faculty are eligible for M.Tech. only 2. A Bachelor's Degree in the Appropriate branch 3. Criteria as per Director of Technical Education, Mumbai Maharashtra Govt. (1) For Maharashtra Candidature Candidate and All India Candidature Candidate,- (i) The Candidate should be an Indian National; (ii) Passed Bachelor Degree in the relevant field of Engineering and Technology from All India Council for Technical Education or Central or State Government approved institutions or equivalent, with at least 50% marks (at least 45% marks in case of candidates of Backward Class categories, Economically weaker section and Persons with Disability category belonging to Maharashtra State); (iii) Passed Bachelor Degree in the relevant course of Engineering and Technology as specified in the eligibility criteria for admission to a Post Graduate Degree course of the concerned University for which admission is being sought; (iv) Obtained Qualified score in Graduates Aptitude Test in Engineering (GATE) conducted by the Indian Institute of Technology and valid for the current academic year ; or (iv) Obtained Qualified score in Graduates Aptitude Test (GPAT) conducted by National Testing Agency and valid for the current academic year ; or (iv) Obtained non-Qualified marks in Graduates Aptitude Test (GPAT) conducted by National Testing Agency for the current academic year; or (iv) For sponsored candidates, minimum of two years of full time work experience in a registered firm/ company/ industry/ educational and/ or research institute/ any Government Department or Government Autonomous Organization in the relevant field in which admission is being sought; (v) GATE or GPAT Qualified Candidates shall have preference over the not qualified Candidates. (2) NRI / OCI / PIO, Children of Indian workers in the Gulf countries, Foreign National. — (i) Passed Bachelor Degree in the relevant field of Engineering and Technology from All India Council for

							Technical Education or Central or State Government approved institutions or equivalent, with at least 50 % marks; (ii) Passed Bachelor Degree in the relevant course of Engineering and Technology as specified in the eligibility criteria for admission to a Post Graduate Degree course of the concerned University for which admission is being sought. (iii) Any other criterion declared from time to time by the appropriate authority as defined under the Act.
76	QIP0005	Shri Guru Gobind Singhji Institute of Engineering and Technology (SGGSIET), Nanded	M.Tech	Civil Engineering	DN000783	Water Resource System , Surface Water Hydrology , Ground Water Hydrology, Irrigation Engineering , Hydraulics Engineering Remote Sensing & GIS, Structural Engineering, Seismic Analysis , Structural Dynamics, Structural Masonry, Pre Stressed Concrete, Structural	1. Polytechnic Faculty are eligible for M.Tech. only 2. A Bachelor's Degree in the Appropriate branch 3. Criteria as per Director of Technical Education, Mumbai Maharashtra Govt. (1) For Maharashtra Candidature Candidate and All India Candidature Candidate,- (i) The Candidate should be an Indian National; (ii) Passed Bachelor Degree in the relevant field of Engineering and Technology from All India Council for Technical Education or Central or State Government approved institutions or equivalent, with at least 50% marks (at least 45% marks in

						Stability, Rehabilitation of Structures.	case of candidates of Backward Class categories, Economically weaker section and Persons with Disability category belonging to Maharashtra State); (iii) Passed Bachelor Degree in the relevant course of Engineering and Technology as specified in the eligibility criteria for admission to a Post Graduate Degree course of the concerned University for which admission is being sought; (iv) Obtained Qualified score in Graduates Aptitude Test in Engineering (GATE) conducted by the Indian Institute of Technology and valid for the current academic year ; or (iv) Obtained Qualified score in Graduates Aptitude Test (GPAT) conducted by National Testing Agency and valid for the current academic year ; or (iv) Obtained non-Qualified marks in Graduates Aptitude Test (GPAT) conducted by National Testing Agency for the current academic year; or (iv) For sponsored candidates, minimum of two years of full time work experience in a registered firm/ company/ industry/ educational and/ or research institute/ any Government Department or Government Autonomous Organization in the relevant field in which admission is being sought; (v) GATE or GPAT Qualified Candidates shall have preference over the not qualified Candidates. (2) NRI / OCI / PIO, Children of Indian workers in the Gulf countries, Foreign National. — (i) Passed Bachelor Degree in the relevant field of Engineering and Technology from All India Council for Technical Education or Central or State Government approved institutions or equivalent, with at least 50 % marks; (ii) Passed Bachelor Degree in the relevant course of Engineering and Technology as specified in the eligibility criteria for admission to a Post Graduate Degree course of the concerned University for which admission is being sought. (iii) Any other criterion declared from time to time by the appropriate authority as defined under the Act.

77	QIP0005	Shri Guru Gobind Singhji Institute of Engineering and Technology (SGGSIET), Nanded	M.Tech	Mechanical Engineering	DN000785	CAD/CAM engineering is a specialization in operation, use and application of computer software to create design for a variety of industries. M. Tech in CAD/CAM imparts, through a holistic curriculum, skills to apply computer and scientific principles to solve problems related to manufacturing. Product Lifecycle Management	1. Polytechnic Faculty are eligible for M.Tech. only 2. A Bachelor's Degree in the Appropriate branch 3. Criteria as per Director of Technical Education, Mumbai Maharashtra Govt. (1) For Maharashtra Candidature Candidate and All India Candidature Candidate,- (i) The Candidate should be an Indian National; (ii) Passed Bachelor Degree in the relevant field of Engineering and Technology from All India Council for Technical Education or Central or State Government approved institutions or equivalent, with at least 50% marks (at least 45% marks in case of candidates of Backward Class categories, Economically weaker section and Persons with Disability category belonging to Maharashtra State); (iii) Passed Bachelor Degree in the relevant course of Engineering and Technology as specified in the eligibility criteria for admission to a Post Graduate Degree course of the concerned University for which admission is being sought; (iv) Obtained Qualified score in Graduates Aptitude Test in Engineering (GATE) conducted by the Indian Institute of Technology and valid for the current academic year ; or (iv) Obtained Qualified score in Graduates Aptitude Test (GPAT) conducted by National Testing Agency and valid for the current academic year ; or (iv) Obtained non-Qualified marks in Graduates Aptitude Test (GPAT) conducted by National Testing Agency for the current academic year; or (iv) For sponsored candidates, minimum of two years of full time work experience in a registered firm/ company/ industry/ educational and/ or research institute/ any Government Department or Government Autonomous Organization in the relevant field in which admission is being sought; (v) GATE or GPAT Qualified Candidates shall have preference over the not qualified Candidates. (2) NRI / OCI / PIO, Children of Indian workers in the Gulf countries, Foreign National. — (i) Passed Bachelor Degree in the relevant field of Engineering and Technology from All India Council for

							Technical Education or Central or State Government approved institutions or equivalent, with at least 50 % marks; (ii) Passed Bachelor Degree in the relevant course of Engineering and Technology as specified in the eligibility criteria for admission to a Post Graduate Degree course of the concerned University for which admission is being sought. (iii) Any other criterion declared from time to time by the appropriate authority as defined under the Act.
78	QIP0007	Government Engineering College, Thrissur	Ph.D Engineering	Civil Engineering	DN000730	Environmental Engineering, Structural Engineering, Water Resources Engineering	Masters in Technology / Engineering Degree in the relevant field.
79	QIP0007	Government Engineering College, Thrissur	Ph.D Engineering	Chemical Engineering	DN000731	Environmental Engineering, Materials Science and Engineering-Biomaterials, Polymers and Composites	Masters in Technology / Engineering Degree in the relevant field
80	QIP0007	Government Engineering College, Thrissur	Ph.D Engineering	Computer Science & Engineering	DN000732	Image Processing, Machine Learning, Deep Learning, Natural Language Processing, Big Data, Cloud Computing, Computer Networks, Computer Architecture, Security, Algorithm and Program Analysis, Software Engineering and Testing	Masters in Technology/ Engineering Degree in the relevant field
81	QIP0007	Government Engineering College, Thrissur	Ph.D Engineering	Electronics & Communication Engineering	DN000733	Audio Processing, Musical Signal Processing, Speech Processing, Signal Processing, Image Processing, Computer Vision, Optical Communication, Computer Communication, Wireless Communication, Sensor networks, Microwave Engineering, RF Engineering, VLSI Circuits, Embedded Systems, MEMS, Instrumentation Engineering, Motor Drives, Power Electronics, Pattern Recognition, Machine	Masters in Technology/ Engineering Degree in the relevant field

						learning, Deep Learning, IoT, Network Security, Secure Communication, Biomedical Signal Processing	
82	QIP0007	Government Engineering College, Thrissur	Ph.D Engineering	Electrical & Electronics Engineering	DN000734	Power Electronics & Drives, Power Quality, Power Systems, Control systems, Guidance & Navigation Control, Robotics & Automation, Smart Grid, Micro Grid, Renewable Energy Systems, Biomedical Instrumentation and Signal Processing, Electric Vehicle Technologies	Masters in Technology/ Engineering Degree in the relevant field
83	QIP0007	Government Engineering College, Thrissur	Ph.D Engineering	Mechanical Engineering	DN000735	Fracture Mechanics, Structural Mechanics, Computational Mechanics, Finite Element Analysis, Stress Analysis, Manufacturing Technology, Computational Fluid Dynamics, I C Engines, Energy- Exergy analysis, Solar Energy, Fuel Cells, Tribology, Thermal Enhancement of Electronics, Optimization of thermal systems, Inverse methods, High speed compressible internal flows, high speed aerodynamics, Shock waves at microscale, Industrial management, Operation management, Lean manufacturing, sustainable development, Robotics & automation, Industrial safety engineering, Hazard assessment and analysis, Composite casting, Traditional machining and	Masters in Technology/ Engineering Degree in the relevant field

						nontraditional machining of difficult to machine materials, Fabrication of composites, 3D surface metrology, CMM, Laser metrology , Fluid power systems	
84	QIP0007	Government Engineering College, Thrissur	Ph.D Engineering	Production Engineering	DN000736	Operations management, Supply Chain Management, SCM-Quantitative analysis, Simulation, Reliability studies, CAD/CAM/CAE, Product lifecycle management, New product and process development, Ergonomics, Cloud manufacturing, Material science, Nanomaterials, Total Quality Management, Lean Manufacturing, Manufacturing Engineering, Industrial maintenance, Computer Integrated manufacturing, IOT in Manufacturing, Safety engineering and Management, Refrigeration, Natural Refrigerants, Thermal Engineering, Industrial Engineering.	Masters in Technology/ Engineering Degree in the relevant field
85	QIP0007	Government Engineering College, Thrissur	Ph.D Engineering	Architecture and Planning	DN000737	Architecture, Architectural Conservation, Sustainable Architecture, Climate Responsive Architecture	Master's Degree in Architecture or in allied subjects of Architecture
86	QIP0008	National Institute of Technology (NIT), Arunachal Pradesh	Ph.D Engineering	Mechanical Engineering	DN000033	Fluid & Thermal; Design; Robotics; Manufacturing; Renewable Energy; Heat Transfer; Composite materials; Tribology	M.E./M.Tech or Equivalent

87	QIP0008	National Institute of Technology (NIT), Arunachal Pradesh	Ph.D Engineering	Computer Science & Engineering	DN000035	machine learning; cryptography; image processing; network security; natural language processing (NLP); quantum computing; IoT; homographic encryption; Big data	M.E./M.Tech or equivalent
88	QIP0008	National Institute of Technology (NIT), Arunachal Pradesh	Ph.D Engineering	Electrical Engineering	DN000038	Renewable energy; control system design; high voltage electromagnetic computing; alternative energy resources; computational intelligent models; evolutionary optimization techniques; smart grids	M.E./M.Tech or Equivalent
89	QIP0008	National Institute of Technology (NIT), Arunachal Pradesh	Ph.D Engineering	Electronics & Communication Engineering	DN000040	VLSI; Natural language processing (NLP); wireless communication; device and circuit; robotics; IoT; Embedded system; optical communication ;	M.E./M.Tech or Equivalent
90	QIP0008	National Institute of Technology (NIT), Arunachal Pradesh	Ph.D Management	Humanities and Management	DN000044	Linguistics and English; Marketing and Finance; HRM; Interdisciplinary research; entrepreneurship; management;	MBA/M.Com/MA in Linguistics
91	QIP0008	National Institute of Technology (NIT), Arunachal Pradesh	M.Tech	Mechanical Engineering	DN000391	Fluids & Thermal	B.E./B.Tech in Mechanical Engineering or Equivalent
92	QIP0008	National Institute of Technology (NIT), Arunachal Pradesh	M.Tech	Computer Science & Engineering	DN000392	Computer Science & Engineering	B.E./B.Tech in Computer Science & Engineering or Equivalent

93	QIP0008	National Institute of Technology (NIT), Arunachal Pradesh	M.Tech	Electrical Engineering	DN000393	Renewable Energy and Energy Management	B.E./B.Tech in Electrical Engineering or Equivalent
94	QIP0008	National Institute of Technology (NIT), Arunachal Pradesh	M.Tech	Electronics & Communication Engineering	DN000394	VLSI Design & Embedded System	B.E./B.Tech in Electronics & Communication Engineering or Equivalent
95	QIP0008	National Institute of Technology (NIT), Arunachal Pradesh	M.Tech	Humanities and Management	DN000395	Innovation & Entrepreneurship	B.E./B.Tech in any Discipline or Equivalent
96	QIP0009	College of Technology and Engineering, MPUAT, Udaipur	Ph.D Engineering	Electronics & Communication Engineering	DN000008	Electronics & Communication Engineering	ME/ M.Tech. (Any specialization in Electronics & Comm. Engineering.)
97	QIP0009	College of Technology and Engineering, MPUAT, Udaipur	Ph.D Engineering	Electrical Engineering	DN000009	Electrical Engineering	M.E./M.Tech. (Any specialization in Electrical Engg)
98	QIP0009	College of Technology and Engineering, MPUAT, Udaipur	Ph.D Engineering	Farm Machinery & Power Engineering	DN000010	Farm Machinery & Power Engineering	ME/M.Tech. (Ag.Engg.)inFMP

99	QIP0009	College of Technology and Engineering, MPUAT, Udaipur	Ph.D Engineering	Processing & Food Engineering	DN000011	Processing & Food Engineering	M.E./ M.Tech. (Ag. Engg.) in Processing and Food Engineering,Food process Engineering,, Agricultural Processing and Food Engineering,Food Processing Engineering,,Agricultural process Engineering,,Post-Harvest Engineering Note: At least one degree i.e. B.Tech./ B.E. or M.Tech./ M.E. must be in Ag. Engg. Discipline
100	QIP0009	College of Technology and Engineering, MPUAT, Udaipur	Ph.D Engineering	Soil & Water Engineering	DN000012	Soil & Water Conservation Engineering	ME/ M.Tech. (Ag. Engg.) in SWCE/ IWME/SWE; ME/M.Tech.in Water Resources Engg./Water science and Technology/Irrigation Engg.;Irrigation and drainage Engineering, Land and water resources Engineering,Hydrology,Agricultural systems or relevant fields etc. Note: At least one degree i.e. B.Tech./ B.E. or M.Tech./ M.E. must be in Ag. Engg. Discipline.
101	QIP0009	College of Technology and Engineering, MPUAT, Udaipur	Ph.D Engineering	Renewable Energy Engineering	DN000013	Renewable Energy Engineering	ME/ M.Tech. (Ag. Engg.) in Renewable Energy
102	QIP0009	College of Technology and Engineering, MPUAT, Udaipur	Ph.D Engineering	Civil Engineering	DN000083	Civil Engineering	B.E./ B.Tech.(Civil Engg.) and M.E./ M.Tech. (Specialization in Structural Engg.)
103	QIP0009	College of Technology and Engineering, MPUAT, Udaipur	Ph.D Engineering	Mechanical Engineering	DN000084	Mechanical Engineering	M.E./ M.Tech. (Any specialization in Mechanical Engineering)
104	QIP0009	College of Technology and Engineering,	Ph.D Engineering	Mining Engineering	DN000085	Mining Engineering	M.Tech./M.E. in Mining Engg.or in relevant Mining Engineering field.

		MPUAT, Udaipur					
105	QIP0009	College of Technology and Engineering, MPUAT, Udaipur	M.Tech	Electrical Engineering	DN000086	Power Electronics	B.E./ B.Tech. (Electrical Engg.)
106	QIP0009	College of Technology and Engineering, MPUAT, Udaipur	M.Tech	Computer Science & Engineering	DN000087	Computer Science & Engineering	B.E./ B.Tech. (CSE /CE)
107	QIP0009	College of Technology and Engineering, MPUAT, Udaipur	Ph.D Engineering	Computer Science & Engineering	DN000088	Computer Science & Engineering	B.E./B.Tech. and M.E./M.Tech. At least one degree i.e. B.Tech./B.E or M.Tech./M.E. must be in the discipline of Computer Science and Engineering
108	QIP0009	College of Technology and Engineering, MPUAT, Udaipur	M.Tech	Mechanical Engineering	DN000089	CAD/ CAM	B.E./ B.Tech. (Mechanical/ Production & Industrial Engg.)
109	QIP0009	College of Technology and Engineering, MPUAT, Udaipur	M.Tech	Mining Engineering	DN000090	Mine Planning	B.E./ B.Tech. (Mining)
110	QIP0009	College of Technology and Engineering,	M.Tech	Civil Engineering	DN000091	Structural Engineering	B.E./ B. Tech.in Civil Engg.

		MPUAT, Udaipur					
111	QIP0009	College of Technology and Engineering, MPUAT, Udaipur	M.Tech	Farm Machinery & Power Engineering	DN000092	Farm Machinery & Power Engineering	BE/ B.Tech. (Ag./ Mech.)
112	QIP0009	College of Technology and Engineering, MPUAT, Udaipur	M.Tech	Renewable Energy Engineering	DN000093	Renewable Energy Engineering	BE/ B.Tech. (Ag./ Renewable Energy & Environmental Engineering/ Renewable Energy)
113	QIP0009	College of Technology and Engineering, MPUAT, Udaipur	M.Tech	Soil & Water Engineering	DN000094	Soil & Water Conservation Engineering	BE/ B.Tech. (Ag.)
114	QIP0009	College of Technology and Engineering, MPUAT, Udaipur	M.Tech	Processing & Food Engineering	DN000095	Processing & Food Engineering	BE/ B.Tech. (Ag. Engg./ Food Engg./ Food Process Engg.)
115	QIP0010	Indira Gandhi Institute of Technology (IGIT), Odisha	Ph.D Engineering	Civil Engineering	DN000197	Structural Engineering, Geotechnical Engineering, Transportation Engineering.	First Division or 60% marks in B. Tech in Civil Engineering & M. Tech. in relevant field.
116	QIP0010	Indira Gandhi Institute of Technology (IGIT), Odisha	Ph.D Engineering	Electrical Engineering	DN000199	M/c Drives & Power Electronics, Power Systems Engineering, Signal & Image Processing.	First Division or 60% marks in B. Tech in Electrical Engg OR in Electrical & Electronics Engineering (EEE) & M. Tech. in relevant field.
117	QIP0010	Indira Gandhi Institute of	Ph.D Engineering	Mechanical Engineering	DN000200	Machine Design, Production Engineering, Thermal Engineering.	First Division or 60% marks in B. Tech in Mechanical Engg. & M.Tech. in relevant field.

		Technology (IGIT), Odisha					
118	QIP0011	Indian Institute of Technology (IIT), Mandi	Ph.D Engineering	Biosciences & Bioengineering	DN000223	Biosciences	(a) Candidates with a Master's degree in Engineering/Technology with a good academic record or a Master's degree by research in Engineering/Technology disciplines, with a good academic record. or (b) Candidates with Master's degree in Sciences with a good academic record and of exceptional merit are eligible for the relevant Engineering discipline and with a valid GATE score or UGC/CSIR NET/NBHM or equivalent qualification in the relevant area tenable for the year of registration. In the case of candidates with more than 5 years of relevant experience after the Master's degree, the requirement of a test score may be waived by the Selection Committee. or (c) Candidates who have qualified for the award of Bachelor's degree in Engineering/Technology with exceptionally good academic record in an eligible discipline will be considered for direct admission (without previous Master's Degree) to Ph.D. Programme as a regular full time scholar subject to the following conditions: I. Bachelor's degree holder in Engineering/Technology from Centrally Funded Technical Institutes (CFTIs), with a minimum CGPA of 7.5 on a 10.0 point scale (or equivalent). (Criteria of qualifying a National Level examination are waived off for HTRA Scholarship) II. Bachelor's degree in Engineering/Technology from Non-CFTIs with a valid GATE score or other equivalent national exam qualification (Validity required at the time of joining) and CGPA of at least 7.5 out of 10.0(or equivalent). III. Bachelor's degree holder in Engineering/Technology, serving for two years or more in a reputed R&D Organization and having a proven research record.

119	QIP0011	Indian Institute of Technology (IIT), Mandi	Ph.D Engineering	Chemical Sciences	DN000225	Chemical Sciences	(a) Candidates with a Master's degree in Engineering/Technology with a good academic record or a Master's degree by research in Engineering/Technology disciplines, with a good academic record. or (b) Candidates with Master's degree in Sciences with a good academic record and of exceptional merit are eligible for the relevant Engineering discipline and with a valid GATE score or UGC/CSIR NET/NBHM or equivalent qualification in the relevant area tenable for the year of registration. In the case of candidates with more than 5 years of relevant experience after the Master's degree, the requirement of a test score may be waived by the Selection Committee. or (c) Candidates who have qualified for the award of Bachelor's degree in Engineering/Technology with exceptionally good academic record in an eligible discipline will be considered for direct admission (without previous Master's Degree) to Ph.D. Programme as a regular full time scholar subject to the following conditions: I. Bachelor's degree holder in Engineering/Technology from Centrally Funded Technical Institutes (CFTIs), with a minimum CGPA of 7.5 on a 10.0 point scale (or equivalent). (Criteria of qualifying a National Level examination are waived off for HTRA Scholarship) II. Bachelor's degree in Engineering/Technology from Non-CFTIs with a valid GATE score or other equivalent national exam qualification (Validity required at the time of joining) and CGPA of at least 7.5 out of 10.0(or equivalent). III. Bachelor's degree holder in Engineering/Technology, serving for two years or more in a reputed R&D Organization and having a proven research record.

120	QIP0011	Indian Institute of Technology (IIT), Mandi	Ph.D Science	Mathematical Science	DN000229	Mathematical and Statistical Sciences	(a) Candidates with a Master's degree in Engineering/Technology with a good academic record or a Master's degree by research in Engineering/Technology disciplines, with a good academic record. or (b) Candidates with Master's degree in Sciences with a good academic record and of exceptional merit are eligible for the relevant Engineering discipline and with a valid GATE score or UGC/CSIR NET/NBHM or equivalent qualification in the relevant area tenable for the year of registration. In the case of candidates with more than 5 years of relevant experience after the Master's degree, the requirement of a test score may be waived by the Selection Committee. or (c) Candidates who have qualified for the award of Bachelor's degree in Engineering/Technology with exceptionally good academic record in an eligible discipline will be considered for direct admission (without previous Master's Degree) to Ph.D. Programme as a regular full time scholar subject to the following conditions: I. Bachelor's degree holder in Engineering/Technology from Centrally Funded Technical Institutes (CFTIs), with a minimum CGPA of 7.5 on a 10.0 point scale (or equivalent). (Criteria of qualifying a National Level examination are waived off for HTRA Scholarship) II. Bachelor's degree in Engineering/Technology from Non-CFTIs with a valid GATE score or other equivalent national exam qualification (Validity required at the time of joining) and CGPA of at least 7.5 out of 10.0(or equivalent). III. Bachelor's degree holder in Engineering/Technology, serving for two years or more in a reputed R&D Organization and having a proven research record.

121	QIP0011	Indian Institute of Technology (IIT), Mandi	Ph.D Science	Physics	DN000232	Physical Sciences	(a) Candidates with a Master's degree in Engineering/Technology with a good academic record or a Master's degree by research in Engineering/Technology disciplines, with a good academic record. or (b) Candidates with Master's degree in Sciences with a good academic record and of exceptional merit are eligible for the relevant Engineering discipline and with a valid GATE score or UGC/CSIR NET/NBHM or equivalent qualification in the relevant area tenable for the year of registration. In the case of candidates with more than 5 years of relevant experience after the Master's degree, the requirement of a test score may be waived by the Selection Committee. or (c) Candidates who have qualified for the award of Bachelor's degree in Engineering/Technology with exceptionally good academic record in an eligible discipline will be considered for direct admission (without previous Master's Degree) to Ph.D. Programme as a regular full time scholar subject to the following conditions: I. Bachelor's degree holder in Engineering/Technology from Centrally Funded Technical Institutes (CFTIs), with a minimum CGPA of 7.5 on a 10.0 point scale (or equivalent). (Criteria of qualifying a National Level examination are waived off for HTRA Scholarship) II. Bachelor's degree in Engineering/Technology from Non-CFTIs with a valid GATE score or other equivalent national exam qualification (Validity required at the time of joining) and CGPA of at least 7.5 out of 10.0(or equivalent). III. Bachelor's degree holder in Engineering/Technology, serving for two years or more in a reputed R&D Organization and having a proven research record.

122	QIP0011	Indian Institute of Technology (IIT), Mandi	Ph.D Engineering	Mechanical Engineering	DN000233	Mechanical and Materials Engineering	(a) Candidates with a Master's degree in Engineering/Technology with a good academic record or a Master's degree by research in Engineering/Technology disciplines, with a good academic record. or (b) Candidates with Master's degree in Sciences with a good academic record and of exceptional merit are eligible for the relevant Engineering discipline and with a valid GATE score or UGC/CSIR NET/NBHM or equivalent qualification in the relevant area tenable for the year of registration. In the case of candidates with more than 5 years of relevant experience after the Master's degree, the requirement of a test score may be waived by the Selection Committee. or (c) Candidates who have qualified for the award of Bachelor's degree in Engineering/Technology with exceptionally good academic record in an eligible discipline will be considered for direct admission (without previous Master's Degree) to Ph.D. Programme as a regular full time scholar subject to the following conditions: I. Bachelor's degree holder in Engineering/Technology from Centrally Funded Technical Institutes (CFTIs), with a minimum CGPA of 7.5 on a 10.0 point scale (or equivalent). (Criteria of qualifying a National Level examination are waived off for HTRA Scholarship) II. Bachelor's degree in Engineering/Technology from Non-CFTIs with a valid GATE score or other equivalent national exam qualification (Validity required at the time of joining) and CGPA of at least 7.5 out of 10.0(or equivalent). III. Bachelor's degree holder in Engineering/Technology, serving for two years or more in a reputed R&D Organization and having a proven research record.

123	QIP0011	Indian Institute of Technology (IIT), Mandi	Ph.D Engineering	Civil & Environmental Engineering	DN000234	Civil and Environmental Engineering	(a) Candidates with a Master's degree in Engineering/Technology with a good academic record or a Master's degree by research in Engineering/Technology disciplines, with a good academic record. or (b) Candidates with Master's degree in Sciences with a good academic record and of exceptional merit are eligible for the relevant Engineering discipline and with a valid GATE score or UGC/CSIR NET/NBHM or equivalent qualification in the relevant area tenable for the year of registration. In the case of candidates with more than 5 years of relevant experience after the Master's degree, the requirement of a test score may be waived by the Selection Committee. or (c) Candidates who have qualified for the award of Bachelor's degree in Engineering/Technology with exceptionally good academic record in an eligible discipline will be considered for direct admission (without previous Master's Degree) to Ph.D. Programme as a regular full time scholar subject to the following conditions: I. Bachelor's degree holder in Engineering/Technology from Centrally Funded Technical Institutes (CFTIs), with a minimum CGPA of 7.5 on a 10.0 point scale (or equivalent). (Criteria of qualifying a National Level examination are waived off for HTRA Scholarship) II. Bachelor's degree in Engineering/Technology from Non-CFTIs with a valid GATE score or other equivalent national exam qualification (Validity required at the time of joining) and CGPA of at least 7.5 out of 10.0(or equivalent). III. Bachelor's degree holder in Engineering/Technology, serving for two years or more in a reputed R&D Organization and having a proven research record.

124	QIP0011	Indian Institute of Technology (IIT), Mandi	Ph.D Engineering	Computer Science & Engineering	DN000235	Computer Science and Engineering	(a) Candidates with a Master's degree in Engineering/Technology with a good academic record or a Master's degree by research in Engineering/Technology disciplines, with a good academic record. or (b) Candidates with Master's degree in Sciences with a good academic record and of exceptional merit are eligible for the relevant Engineering discipline and with a valid GATE score or UGC/CSIR NET/NBHM or equivalent qualification in the relevant area tenable for the year of registration. In the case of candidates with more than 5 years of relevant experience after the Master's degree, the requirement of a test score may be waived by the Selection Committee. or (c) Candidates who have qualified for the award of Bachelor's degree in Engineering/Technology with exceptionally good academic record in an eligible discipline will be considered for direct admission (without previous Master's Degree) to Ph.D. Programme as a regular full time scholar subject to the following conditions: I. Bachelor's degree holder in Engineering/Technology from Centrally Funded Technical Institutes (CFTIs), with a minimum CGPA of 7.5 on a 10.0 point scale (or equivalent). (Criteria of qualifying a National Level examination are waived off for HTRA Scholarship) II. Bachelor's degree in Engineering/Technology from Non-CFTIs with a valid GATE score or other equivalent national exam qualification (Validity required at the time of joining) and CGPA of at least 7.5 out of 10.0(or equivalent). III. Bachelor's degree holder in Engineering/Technology, serving for two years or more in a reputed R&D Organization and having a proven research record.

125	QIP0011	Indian Institute of Technology (IIT), Mandi	Ph.D Engineering	Electrical Engineering	DN000236	Electrical Engineering	(a) Candidates with a Master's degree in Engineering/Technology with a good academic record or a Master's degree by research in Engineering/Technology disciplines, with a good academic record. or (b) Candidates with Master's degree in Sciences with a good academic record and of exceptional merit are eligible for the relevant Engineering discipline and with a valid GATE score or UGC/CSIR NET/NBHM or equivalent qualification in the relevant area tenable for the year of registration. In the case of candidates with more than 5 years of relevant experience after the Master's degree, the requirement of a test score may be waived by the Selection Committee. or (c) Candidates who have qualified for the award of Bachelor's degree in Engineering/Technology with exceptionally good academic record in an eligible discipline will be considered for direct admission (without previous Master's Degree) to Ph.D. Programme as a regular full time scholar subject to the following conditions: I. Bachelor's degree holder in Engineering/Technology from Centrally Funded Technical Institutes (CFTIs), with a minimum CGPA of 7.5 on a 10.0 point scale (or equivalent). (Criteria of qualifying a National Level examination are waived off for HTRA Scholarship) II. Bachelor's degree in Engineering/Technology from Non-CFTIs with a valid GATE score or other equivalent national exam qualification (Validity required at the time of joining) and CGPA of at least 7.5 out of 10.0(or equivalent). III. Bachelor's degree holder in Engineering/Technology, serving for two years or more in a reputed R&D Organization and having a proven research record.
126	QIP0011	Indian Institute of Technology (IIT), Mandi	M.Tech	Biotechnology	DN000239	Biotechnology	Candidates who have qualified for the award of Bachelor's degree in Engineering/Technology from a recognized University or Institute in an appropriate discipline are eligible to apply for admission to the M.Tech. program. Candidates with M.Sc. degree from a recognized University or Institute in an appropriate discipline may also be eligible to apply for admission to the M.Tech. program. Exact eligibility criteria will

							be as prescribed in the regulations and approved by the senate of the Institute from time to time and announced by the Institute for admission in each year.
127	QIP0011	Indian Institute of Technology (IIT), Mandi	M.Tech	Computer Science & Engineering	DN000240	Computer Science and Engineering	Candidates who have qualified for the award of Bachelor's degree in Engineering/Technology from a recognized University or Institute in an appropriate discipline are eligible to apply for admission to the M.Tech. program. Candidates with M.Sc. degree from a recognized University or Institute in an appropriate discipline may also be eligible to apply for admission to the M.Tech. program. Exact eligibility criteria will be as prescribed in the regulations and approved by the senate of the Institute from time to time and announced by the Institute for admission in each year.
128	QIP0011	Indian Institute of Technology (IIT), Mandi	M.Tech	Power Electronics and Drives	DN000244	Power Electronics and Drives	Candidates who have qualified for the award of Bachelor's degree in Engineering/Technology from a recognized University or Institute in an appropriate discipline are eligible to apply for admission to the M.Tech. program. Candidates with M.Sc. degree from a recognized University or Institute in an appropriate discipline may also be eligible to apply for admission to the M.Tech. program. Exact eligibility criteria will be as prescribed in the regulations and approved by the senate of the Institute from time to time and announced by the Institute for admission in each year.
129	QIP0011	Indian Institute of Technology (IIT), Mandi	M.Tech	Electrical Engineering	DN000246	VLSI	Candidates who have qualified for the award of Bachelor's degree in Engineering/Technology from a recognized University or Institute in an appropriate discipline are eligible to apply for admission to the M.Tech. program. Candidates with M.Sc. degree from a recognized University or Institute in an appropriate discipline may also be eligible to apply for admission to the M.Tech. program. Exact eligibility criteria will be as prescribed in the regulations and approved by the senate of the Institute from time to time and announced by the Institute for admission in each year.

130	QIP0011	Indian Institute of Technology (IIT), Mandi	M.Tech	Electronics Engineering	DN000248	Electric Transportation	Candidates who have qualified for the award of Bachelor's degree in Engineering/Technology from a recognized University or Institute in an appropriate discipline are eligible to apply for admission to the M.Tech. program. Candidates with M.Sc. degree from a recognized University or Institute in an appropriate discipline may also be eligible to apply for admission to the M.Tech. program. Exact eligibility criteria will be as prescribed in the regulations and approved by the senate of the Institute from time to time and announced by the Institute for admission in each year.
131	QIP0011	Indian Institute of Technology (IIT), Mandi	M.Tech	Civil & Environmental Engineering	DN000250	Structural Engineering	Candidates who have qualified for the award of Bachelor's degree in Engineering/Technology from a recognized University or Institute in an appropriate discipline are eligible to apply for admission to the M.Tech. program. Candidates with M.Sc. degree from a recognized University or Institute in an appropriate discipline may also be eligible to apply for admission to the M.Tech. program. Exact eligibility criteria will be as prescribed in the regulations and approved by the senate of the Institute from time to time and announced by the Institute for admission in each year.
132	QIP0011	Indian Institute of Technology (IIT), Mandi	M.Tech	Mechanical Engineering	DN000252	Fluid Thermal and Engineering	Candidates who have qualified for the award of Bachelor's degree in Engineering/Technology from a recognized University or Institute in an appropriate discipline are eligible to apply for admission to the M.Tech. program. Candidates with M.Sc. degree from a recognized University or Institute in an appropriate discipline may also be eligible to apply for admission to the M.Tech. program. Exact eligibility criteria will be as prescribed in the regulations and approved by the senate of the Institute from time to time and announced by the Institute for admission in each year.
133	QIP0012	National Institute of Technology (NIT), Raipur	Ph.D Engineering	Civil Engineering	DN000884	Structural Engineering, Water Resources Engineering, Environmental Engineering, Geotechnical Engineering, Transportation Engineering, Geomatic Engineering	Minimum 60% marks or 6.5/10 CGPA/CPI at Master's degree is essential for admission in Ph.D. program of the Institute. However, a relaxation of 5% marks from 60% to 55% and from 6.5/10 CPI (CGPA) to 6.0/10 CPI (CGPA) may be allowed for those candidates belonging to SC, ST, OBC (Non-Creamy Layer), Differently abled and those who had obtained their master's degree prior to 19.09.1991. For more details visit: http://www.nitrr.ac.in/

134	QIP0012	National Institute of Technology (NIT), Raipur	M.Tech	Civil Engineering	DN000885	Water Resources Development & Irrigation Engineering, Structural Engineering	The minimum qualification for admission to the first semester of M. Tech. course shall be the passing of B.E./B.Tech. or equivalent exam with mark-sheet of any recognized university /institute in appropriate branch. For more details visit: http://www.nitrr.ac.in/
135	QIP0012	National Institute of Technology (NIT), Raipur	Ph.D Engineering	Mechanical Engineering	DN000886	Mechanical Engineering	Minimum 60% marks or 6.5/10 CGPA/CPI at Master's degree is essential for admission in Ph.D. program of the Institute. However, a relaxation of 5% marks from 60% to 55% and from 6.5/10 CPI (CGPA) to 6.0/10 CPI (CGPA) may be allowed for those candidates belonging to SC, ST, OBC (Non-Creamy Layer), Differently Abled and those who had obtained their master's degree prior to 19.09.1991. For more details visit: http://www.nitrr.ac.in/
136	QIP0012	National Institute of Technology (NIT), Raipur	M.Tech	Mechanical Engineering	DN000887	Thermal Engineering, Machine Design, Industrial Engineering & Management	The minimum qualification for admission to the first semester of M. Tech. course shall be the passing of B.E./B.Tech. or equivalent exam with mark-sheet of any recognized university /institute in appropriate branch. For more details visit: http://www.nitrr.ac.in/
137	QIP0012	National Institute of Technology (NIT), Raipur	Ph.D Engineering	Information Technology	DN000888	Information Technology	Minimum 60% marks or 6.5/10 CGPA/CPI at Master's degree is essential for admission in Ph.D. program of the Institute. However, a relaxation of 5% marks from 60% to 55% and from 6.5/10 CPI (CGPA) to 6.0/10 CPI (CGPA) may be allowed for those candidates belonging to SC, ST, OBC (Non-Creamy Layer), Differently Abled and those who had obtained their master's degree prior to 19.09.1991. For more details visit: http://www.nitrr.ac.in/
138	QIP0012	National Institute of Technology (NIT), Raipur	M.Tech	Information Technology	DN000889	Information Technology	The minimum qualification for admission to the first semester of M. Tech. course shall be the passing of B.E./B.Tech. or equivalent exam with mark-sheet of any recognized university /institute in appropriate branch. For more details visit: http://www.nitrr.ac.in/
139	QIP0012	National Institute of Technology (NIT), Raipur	Ph.D Engineering	Electrical Engineering	DN000890	Electrical Engineering	Minimum 60% marks or 6.5/10 CGPA/CPI at Master's degree is essential for admission in Ph.D. program of the Institute. However, a relaxation of 5% marks from 60% to 55% and from 6.5/10 CPI (CGPA) to 6.0/10 CPI (CGPA) may be allowed for those candidates belonging to SC, ST, OBC (Non-Creamy Layer), Differently Abled and those who had obtained their

							master's degree prior to 19.09.1991. For more details visit: http://www.nitrr.ac.in/
140	QIP0012	National Institute of Technology (NIT), Raipur	M.Tech	Electrical Engineering	DN000891	Power System and Control	The minimum qualification for admission to the first semester of M. Tech. course shall be the passing of B.E./B.Tech. or equivalent exam with mark-sheet of any recognized university /institute in appropriate branch. For more details visit: http://www.nitrr.ac.in/
141	QIP0012	National Institute of Technology (NIT), Raipur	Ph.D Engineering	Computer Science & Engineering	DN000892	AI, ML, Blockchain, Cloud Computing, NLP, WSN & IoT	Minimum 60% marks or 6.5/10 CGPA/CPI at Master's degree is essential for admission in Ph.D. program of the Institute. However, a relaxation of 5% marks from 60% to 55% and from 6.5/10 CPI (CGPA) to 6.0/10 CPI (CGPA) may be allowed for those candidates belonging to SC, ST, OBC (Non-Creamy Layer), Differently abled and those who had obtained their master's degree prior to 19.09.1991. For more details visit: http://www.nitrr.ac.in/
142	QIP0012	National Institute of Technology (NIT), Raipur	Ph.D Engineering	Electronics & Communication Engineering	DN000893	System design, image processing, computer & communication networks, distributed processing, Semiconductor Devices and VLSI, Wireless Sensor Network, Artificial Intelligence, Application of Machine Learning in internet of things (IOT). Cryptography, High-performance Architectures, Hardware Security, FPGA-based Designs, Free Space Optics, Fiber Optics, Non-linear Optics, IsOWC system design, Optical Signal Processing, Machine learning, Deep learning for wireless communication, Computer Vision, Multimedia Security, Signal Processing, Metaheuristic	Minimum 60% marks or 6.5/10 CGPA/CPI at Master's degree is essential for admission in Ph.D. program of the Institute. However, a relaxation of 5% marks from 60% to 55% and from 6.5/10 CPI (CGPA) to 6.0/10 CPI (CGPA) may be allowed for those candidates belonging to SC, ST, OBC (Non-Creamy Layer), Differently abled and those who had obtained their master's degree prior to 19.09.1991. For more details visit: http://www.nitrr.ac.in/

						Optimization, Soft Computing, System Identification, Filter Design, Antenna & Microwave Engineering, Microstrip & Dielectric Resonator Antennas, Silicon and thin film solar cells, semiconductor optoelectronic devices, MEMS and Nanoelectronic Devices, Wideband semiconductor devices (GaN/SiC)	
143	QIP0012	National Institute of Technology (NIT), Raipur	M.Tech	Electronics & Communication Engineering	DN000894	VLSI Design and Embedded Systems	The minimum qualification for admission to the first semester of M. Tech. course shall be the passing of B.E./B.Tech. or equivalent exam with mark-sheet of any recognized university /institute in appropriate branch. For more details visit: http://www.nitrr.ac.in/
144	QIP0012	National Institute of Technology (NIT), Raipur	Ph.D Engineering	Chemical Engineering	DN000895	Food processing, waste water treatment, process intensification, CFD, biochemical processing	Minimum 60% marks or 6.5/10 CGPA/CPI at Master's degree is essential for admission in Ph.D. program of the Institute. However, a relaxation of 5% marks from 60% to 55% and from 6.5/10 CPI (CGPA) to 6.0/10 CPI (CGPA) may be allowed for those candidates belonging to SC, ST, OBC (Non-Creamy Layer), Differently abled and those who had obtained their master's degree prior to 19.09.1991. For more details visit: http://www.nitrr.ac.in/
145	QIP0012	National Institute of Technology (NIT), Raipur	M.Tech	Chemical Engineering	DN000896	Energy and environment	The minimum qualification for admission to the first semester of M. Tech. course shall be the passing of B.E./B.Tech. or equivalent exam with mark-sheet of any recognized university /institute in appropriate branch. For more details visit: http://www.nitrr.ac.in/
146	QIP0014	Indian Institute of Information	Ph.D Engineering	Advanced Computing	DN000121	Artificial Intelligence, Machine Learning, Big Data Analytics,	BE (Engineering)

		Technology (IIIT), Nagpur				Natural Language Processing, Deep Learning	
147	QIP0014	Indian Institute of Information Technology (IIIT), Nagpur	Ph.D Engineering	Electronics & Communication Engineering	DN000127	All areas in Electronics System Design & Manufacturing (ESDM) and Communication Engineerings like Communication, Wireless or RF Communications, Microwave Engineering, Antennas, 5G, LTE, MIMO Technologies, Microprocessors and Embedded Systems, Image and Video Signal Processing, Computer Vision, Instrumentation, Opto-electronics, VLSI Design, Internet of Things, Automotive Electronics, Mechatronics, Embedded Systems Design, Wireless Sensor Networks, Cognitive Radio,LI-FI, and other Advanced topics of Electronics and Communication Engineering	BE (Engineering)
148	QIP0014	Indian Institute of Information Technology (IIIT), Nagpur	Ph.D Engineering	Biomedical Engineering	DN000128	Biomedical, Health Care, Telemedicine, Biomedical Signal Processing	BE / BTech (Engineering)
149	QIP0014	Indian Institute of Information Technology (IIIT), Nagpur	Ph.D Engineering	Wireless Communication	DN000131	All areas in Electronics System Design and Communication Engineerings like Communication, Wireless or RF Communications, Microwave Engineering, 5G, LTE, MIMO Technologies, Wireless Sensor	BE / BTech (Engineering)

						Networks, Cognitive Radio, LI-FI, and other Advanced topics of Electronics and Communication Engineering	
150	QIP0015	College of Engineering, Trivandrum	Ph.D Engineering	Electronics & Communication Engineering	DN000552	Signal processing, Power electronics and drives, Control system design, Optical communication, Computer vision, Artificial intelligence, Machine learning, Biomedical Instrumentation, Audio processing, Image processing, VLSI circuits, Embedded systems, Radio frequency engineering	M.E. /MTech degree in the relevant field of Engineering. Eligibility criteria as per the norms of "APJ Abdul Kalam Technological University (KTU).
151	QIP0015	College of Engineering, Trivandrum	Ph.D Engineering	Electrical & Electronics Engineering	DN000562	Power Systems, Electrical Machines, Control systems engineering, Guidance, Navigation, and Control, Control of autonomous systems, Robotics and Automation, Power electronics and Drives, Smart Grid, Micro-grid, Renewable Energy Systems,	M.E. /MTech degree in the relevant field of Engineering. Eligibility criteria as per the norms of "APJ Abdul Kalam Technological University (KTU).
152	QIP0015	College of Engineering, Trivandrum	Ph.D Engineering	Civil Engineering	DN000568	Structural Engineering, Geo technical Engineering, Hydraulics Engineering, Environmental Engineering, Traffic and Transportation Engineering, Geoinformatics	M.E. /MTech degree in the relevant field of Engineering. Eligibility criteria as per the norms of "APJ Abdul Kalam Technological University (KTU).

153	QIP0015	College of Engineering, Trivandrum	Ph.D Engineering	Mechanical & Industrial Engineering	DN000574	Supply chain management, Optimization and Simulation, Ergonomics, Quality control, Financial Engineering, Data Analytics, Machine Design, Metal matrix Composites, Tribology, Vibration, Microfluidics, Computational Fluid Dynamics, Thermal Engineering, Manufacturing and Automation, Friction Welding, Acoustics	M.E. /MTech degree in the relevant field of Engineering. Eligibility criteria as per the norms of "APJ Abdul Kalam Technological University (KTU).
154	QIP0015	College of Engineering, Trivandrum	Ph.D Engineering	Computer Science & Engineering	DN000577	Computer Networks, Theoretical Computer Science, Formal methods and Software verification, Machine Learning, Digital image processing, Cyber physical systems. Internet of Things, Cloud computing	M.E. /MTech degree in the relevant field of Engineering. Eligibility criteria as per the norms of "APJ Abdul Kalam Technological University (KTU).
155	QIP0015	College of Engineering, Trivandrum	M.Tech	Civil Engineering	DN000597	1 STRUCTURAL ENGG. 2 GEOTECHNICAL ENGG. 3 HYDRAULICS ENGG. 4 ENVIRONMENTAL ENGG. 5 TRAFFIC & TRANSPORTATION ENGG. 6 GEOINFORMATICS	B.E. /B.Tech degree in the relevant field of Engineering. Eligibility criteria as per the norms of "APJ Abdul Kalam Technological University (KTU).
156	QIP0015	College of Engineering, Trivandrum	M.Tech	Mechanical Engineering	DN000598	1 INDUSTRIAL ENGG. 2 THERMAL SCIENCE 3 MACHINE DESIGN 4 PROPULSION ENGG. 5 FINANCIAL ENGG. 6 MANUFACTURING & AUTOMATION 7 RENEWABLE ENERGY	B.E. /B.Tech degree in the relevant field of Engineering. Eligibility criteria as per the norms of "APJ Abdul Kalam Technological University (KTU).
157	QIP0015	College of Engineering, Trivandrum	M.Tech	Electrical & Electronics Engineering	DN000599	1 ELECTRICAL MACHINES 2 POWER SYSTEMS 3 CONTROL SYSTEMS 4 GUIDANCE & NAVIGATIONAL CONTROL 5 POWER ELECTRONICS	B.E. /B.Tech degree in the relevant field of Engineering. Eligibility criteria as per the norms of "APJ Abdul Kalam Technological University (KTU).

158	QIP0015	College of Engineering, Trivandrum	M.Tech	Electronics & Communication Engineering	DN000601	1 MICROWAVE &TELEVISION ENGG. 2 APPLIED ELECTRONICS & INSTRUMENTATION ENGG. 3 SIGNAL PROCESSING 4 MICRO & NANO ELECTRONICS 5 ROBOTICS & AUTOMATION	B.E. /B.Tech degree in the relevant field of Engineering. Eligibility criteria as per the norms of "APJ Abdul Kalam Technological University (KTU).
159	QIP0015	College of Engineering, Trivandrum	M.Tech	Computer Science & Engineering	DN000603	1 COMPUTER SCIENCE & ENGG. 2 INFORMATION SECURITY 3 ARTIFICIAL INTELLIGENCE	B.E. /B.Tech degree in the relevant field of Engineering. Eligibility criteria as per the norms of "APJ Abdul Kalam Technological University (KTU).
160	QIP0016	Indian Institute of Technology (IIT), Guwahati	Ph.D Engineering	Biosciences & Bioengineering	DN000102	All areas of Bio-sciences and Bio-engineering.	M.Tech. degree or equivalent in an appropriate area with minimum CPI of 6.5 or 60% marks or MSc Degree in Biotechnology/ Life Science/ Agricultural Sciences/ Related Disciplines with minimum CPI 7.5/10 or 70% marks.
161	QIP0016	Indian Institute of Technology (IIT), Guwahati	Ph.D Engineering	Chemical Engineering	DN000103	All areas of Chemical Engineering.	M.Tech. degree or equivalent in an appropriate area with minimum CPI of 6.5 or 60% marks.
162	QIP0016	Indian Institute of Technology (IIT), Guwahati	Ph.D Engineering	Civil Engineering	DN000104	Construction Management, Construction Materials, Infrastructure Engineering and Management, Environmental engineering, Geotechnical Engineering, Structural Engineering, Transportation Systems Engineering, Water Resources Engineering and Management, Earth Science, Remote Sensing and Geology.	M.Tech. degree or equivalent in an appropriate area with minimum CPI of 6.5 or 60% marks.

163	QIP0016	Indian Institute of Technology (IIT), Guwahati	Ph.D Engineering	Computer Science & Engineering	DN000105	Artificial Intelligence, Interpretability of AI and ML Models, Online Learning, Evolving and Adaptive Intelligent Systems, Data Mining, NLP, Speech processing, Computer Vision and Deep Learning, Nature-inspired Algorithms, Intelligent and Networked Robotics, AR/VR, Human-Computer Interaction, Distributed Systems, Edge and Cloud Computing, Wireless Networks, Software-defined Networking, IoT, Smart Grid, Intelligent Transportation Systems, Network Security, Controller Synthesis and Games, Formal Verification, Logic in Computer Science, High-level Synthesis, Electronic Design Automation, Hardware Acceleration, Embedded and Cyber-physical Systems, System-on-chip validation, Multicore Architecture, Memory Systems, Near-memory Computing, Disaggregated Compute Systems, Approximate Computing, Autonomous Vehicles, Hardware Security, Data Structures, Algorithms, Distributed Algorithms, Randomization and Approximation Algorithms, Optimization, Computational Geometry.	M.Tech. degree or equivalent in an appropriate area with minimum CPI of 6.5 or 60% marks.

164	QIP0016	Indian Institute of Technology (IIT), Guwahati	Ph.D Engineering	Energy Science & Engineering	DN000106	Screening and Genetic improvement of Bio-fuel crops, Glycerol, bioconversion and synthesis of alcoholic biofuels, Biodiesel from microalgae, oilseeds, Bioelectronics for bio-fuel cell, Biogas, Combustion and detonation, Wind energy, Waste heat recovery, Biohydrogen, bioethanol, biobutanol and microbial fuel cell, Thermal energy storage, electrochemical energy storage, hydrogen storage, solar driven cooling system, porous medium combustion and hydrogen energy, Solar cells.	M.Tech. degree or equivalent in an appropriate area with minimum CPI of 6.5/10 or 60% marks, OR M.Sc. in Physics, Chemistry, Bio-technology, Environmental Science or in relevant field with minimum of CPI 6.5/10 of 60% marks.
165	QIP0016	Indian Institute of Technology (IIT), Guwahati	Ph.D Engineering	Centre For Environment	DN000107	Environmental Chemistry/Biotechnology/Economics/Engineering; Environmental Chemical Biology/Chemical Genomics, Environmental Genomics;; Toxicology; Waste Water Treatment and Supply, CO2 Capture/storage; Atmospheric Chemistry; Air Quality monitoring; Environmental Hydraulics; and Other emerging areas of environment with interdisciplinary application of science, technology, arts and humanities.	M.Tech. degree or equivalent in an appropriate area with minimum CPI of 6.0/10 or 60% marks, OR, M.Sc. in Physics, Chemistry, Bio-technology, Environmental Science or in relevant field with minimum CPI of 6.0/10 or 60% marks.
166	QIP0016	Indian Institute of Technology (IIT), Guwahati	Ph.D Science	Mathematics	DN000108	All areas of Mathematics, Statistics, Probability and Theoretical Computer Science	Masters Degree in the relevant discipline with a first class or a minimum CPI 6.0/10 or 60% marks.

167	QIP0016	Indian Institute of Technology (IIT), Guwahati	Ph.D Engineering	Mechanical Engineering	DN000109	Stress Analysis; Experimental and Computational Fracture Mechanics; Composite Materials and Structures; Smart Materials and Smart Structures; Materials Characterization; Dynamics and Controls; Electro-Mechanical Systems; Robotics; Nonlinear Vibration; Bio-Mechanics; Noise; Tribology; Condition Monitoring; Experimental Fluid Dynamics; Computational Fluid Dynamics (CFD); Bio-MEMS and Micro Fluidics, Heat Transfer; Low Speed and High Speed Acrodynamics; Multiphase Flow; Hydrogen Energy; Metal Hydride Based Thermal Machines; Energy Storage and Fluidization; Bio-fuels; Metal Cutting; Micro Machining and Micro Fabrication; Unconventional Machining; Mechatronics; CAD/CAM/CAE; Materials Processing and Heat Treatment; Metal Forming; Welding; Bio-Nano Composites and Nanofluids.	M.Tech. degree or equivalent in an appropriate area with minimum CPI of 6.5 or 60% marks.
168	QIP0016	Indian Institute of Technology (IIT), Guwahati	M.Tech	Chemical Engineering	DN000112	Petroleum Refinery Engineering, Material Science & Technology	Bachelor Degree in Engineering / Technology in an appropriate area (having Mass Transfer, Heat Transfer, Fluid Mechanics, Thermodynamics, Reaction Engineering & Process Control as subjects in UG.) with minimum CPI of 6.5/10 or 60% or First Class.

169	QIP0016	Indian Institute of Technology (IIT), Guwahati	M.Tech	Civil Engineering	DN000113	i) Structural Engineering ii) Water Resources Engineering and Management iii) Geo-technical Engineering iv) Environmental Engineering v) Transportation Systems Engineering vi) Infrastructure Engineering & Management vii) Earth System Science and Engineering	For specialization i-vi: Bachelor's degree in Engineering/ Technology in an appropriate area with a minimum CPI of 6.5/10 or 60% marks or First Class. For specialization vii: 1) Four year Bachelor's degree in Civil Engineering, Petroleum Engineering, Mining Engineering, Mineral Engineering, Geosciences Engineering, Agriculture Engineering, Engineering Physics (or equivalent), Engineering Mathematics (or equivalent) with a minimum CPI of 6.5 or 60% of marks or first class. 2) M.Sc. degree in Geology (or equivalent), Geophysics (or equivalent), Physics including Soil Physics with a minimum of 6.5 or 60% of marks. 3) M.Sc. degree in Mathematics, Chemistry and allied areas in natural sciences with a minimum CPI of 7.0 or 65% marks.
170	QIP0016	Indian Institute of Technology (IIT), Guwahati	M.Tech	Computer Science & Engineering	DN000114	Computer Science & Engineering	Bachelor's degree in Engineering/ Technology or equivalent in an appropriate area or M.Sc. (Computer Science/Information Technology) or MCA from a Recognized Institution with a minimum CPI of 6.5/10 or 60% marks or First Class.
171	QIP0016	Indian Institute of Technology (IIT), Guwahati	Ph.D Science	Chemistry	DN000117	Inorganic Chemistry, Organic Chemistry Physical Chemistry & Theoretical Chemistry.	Masters degree in the relevant discipline with minimum of CPI 6.5/10 of 60% marks.
172	QIP0016	Indian Institute of Technology (IIT), Guwahati	Ph.D Humanities	Humanities and Social Science	DN000122	All areas of Humanities and Social Sciences	Masters Degree in the relevant discipline with a minimum of 55% marks or equivalent.

173	QIP0016	Indian Institute of Technology (IIT), Guwahati	Ph.D Science	Physics	DN000123	Condensed Matter Physics - biomaterials, cold atoms, energy materials, quantum computation, computational materials physics, materials for energy and environmental applications, ferroelectric and oxide materials, Graphene and analogue atomic thin materials, organic semiconductors, semiconducting materials, smart magnetic materials, Multiferroics, Luttinger liquids, soft condensed matter, spintronics, statistical physics, Percolation, Network, Self-organization, Active matters and collective motion, Quantum turbulence and non-linear instabilities in BEC, strongly correlated systems, superconductivity, topological insulators, quantum turbulence, quantum phase transitions, ultracold atoms in optical lattices, nanomaterials and nanotechnology, polymer physics, AdS/CMT, Magnetohydrodynamics. Laser and Photonics – Super resolution microscopy, optical tweezer, free space communication, Fiber Optics, Laser Matter Interaction, Nonlinear Optics, Quantum Optics, terahertz plasmonics and metamaterials, Quantum optomechanics.	Master's degree in the relevant discipline with a first class or a minimum CPI 6.5/10 or 60% marks.

						High Energy Physics – Theory and phenomenology: Dark matter phenomenology, Neutrino physics, Heavy flavor physics, Collider physics, Standard Model Precision calculations, aspects of CP violation, Matter-antimatter asymmetry, Astro-particle physics/Cosmological connections, Inflation, Effective Field Theory in particle and nuclear physics, Physics of exotic hadrons. Experimental particle Physics: B-Physics and neutrino Physics	
174	QIP0016	Indian Institute of Technology (IIT), Guwahati	Ph.D Engineering	Design	DN000126	Industrial Design, Product Design, Communication Design (Including art & visual Culture) Interaction and Usability engineering (Including HCL), Design Management , Ergonomics (Including Occupational health and safety), Environment Design, Animation.	M.Des/ M.Arch or M.Tech/ ME degree in relevant area with a minimum CPI 6.5/10 or 60% marks. Master's degree in Applied Arts/ Ergonomics/ Fine Arts/ Psychology/ Physiology with minimum CPI 6.5/10 or 55% may also be considered.
175	QIP0016	Indian Institute of Technology (IIT), Guwahati	M.Tech	Mechanical Engineering	DN000129	Fluids and Thermal Engineering, Machine Design, Computer Assisted Manufacturing, Computational Mechanics	Bachelor's degree in Engg/ Technology in an appropriate area with a minimum CPI of 6.5/10 or 60% marks or First Class.
176	QIP0016	Indian Institute of Technology (IIT), Guwahati	Ph.D Engineering	Electrical & Electronics Engineering	DN000655	All areas of Electrical, Electronics and Communication Engineering.	M. Tech degree or equivalent in an appropriate area with minimum CPI of 6.5/10 or 60% marks

177	QIP0016	Indian Institute of Technology (IIT), Guwahati	M.Tech	Electrical & Electronics Engineering	DN000656	Signal Processing, VLSI, Communication Engineering, Power and Control, RF and Photonics	Bachelor's degree in Electrical/ Electronics Engineering or Equivalent or M.Sc. (Electronics) with a minimum CPI of 6.5 / 10 or 60% marks or First Class
178	QIP0017	Thiagarajar College of Engineering, Madurai	Ph.D Engineering	Civil Engineering	DN000466	Structural Engineering, Environmental Engineering, Infrastructure Engineering & Management, Hydrology and Water Resources Management, Geotechnical Engineering, Transportation Engineering, Pollution control, Construction materials, Repair & Rehabilitation, Mechanics of Materials, Damage and Fracture Mechanics	As per the affiliating University norms M.E./ M.Tech. /M.S. (By Research) in the relevant branch of Engineering &Technology and A minimum of 55% marks or CGPA of 5.5 on a 10 point scale in the qualifying examination. In case of SC/ST/ differently – Abled candidates, 50% marks or CGPA of 5.0 on a 10 point scale.
179	QIP0017	Thiagarajar College of Engineering, Madurai	Ph.D Engineering	Electrical & Electronics Engineering	DN000493	Power Systems, Soft computing, Renewable Energy Resources, Energy Conservation, Power Electronics and Drives, Electrical Machines, Optimisation Techniques, Smart Grid, Distributed Generation Systems, Special Machines, Control Systems, FACTS devices and controllers, AI and Expert Systems Applications.	As per the affiliating University norms M.E./ M.Tech. /M.S. (By Research) in the relevant branch of Engineering &Technology and A minimum of 55% marks or CGPA of 5.5 on a 10 point scale in the qualifying examination. In case of SC/ST/ differently – Abled candidates, 50% marks or CGPA of 5.0 on a 10 point scale.

180	QIP0017	Thiagarajar College of Engineering, Madurai	Ph.D Engineering	Mechanical Engineering	DN000494	Thermal Engineering, Computational Fluid Dynamics, Design Engineering, Composite Materials, Automation, CAD/CAM, CIM ,Machine Vision, Mechatronics, Rapid Prototyping, Quality Engineering, Reliability Engineering, Industrial Engineering, Manufacturing Management and automation Logistics and Supply Chain Management, Lean/Agile Manufacturing, Robotics and design , Micro channel cooling, IC engines, Alternative fuels, waste heat recovery, Manufacturing, Engineering optimization, operations management, solar thermal , heat transfer, HVAC system , Thermal energy storage , Nano fluid heat transfer Energy , bio-fuel, combustion, Reverse Engineering, Bio Materials, Bio implants, Product Design, Heat pipe.	As per the affiliating University norms M.E./ M.Tech. /M.S. (By Research) in the relevant branch of Engineering &Technology and A minimum of 55% marks or CGPA of 5.5 on a 10 point scale in the qualifying examination. In case of SC/ST/ differently – Abled candidates, 50% marks or CGPA of 5.0 on a 10 point scale.
181	QIP0017	Thiagarajar College of Engineering, Madurai	Ph.D Engineering	Electronics & Communication Engineering	DN000495	Wireless Communication, Digital Signal Processing, RF Circuits and Systems Antennas., RFMEMS, Image Processing Remote Sensing and GIS, VLSI Design, Embedded Systems, Sensors and Instrumentation, Wireless Networks, Medical Electronics, Optical Communication	As per the affiliating University norms M.E./ M.Tech. /M.S. (By Research) in the relevant branch of Engineering &Technology and A minimum of 55% marks or CGPA of 5.5 on a 10 point scale in the qualifying examination. In case of SC/ST/ differently – Abled candidates, 50% marks or CGPA of 5.0 on a 10 point scale.

182	QIP0017	Thiagarajar College of Engineering, Madurai	Ph.D Engineering	Computer Science & Engineering	DN000497	Knowledge Engineering, Artificial Intelligence, Machine Learning, Deep Learning, Data Mining, Natural Language Processing, Recommendation Systems, Text Mining, Cloud Computing, Edge Computing, IoT, High Performance Computing, Parallel Processing, Computer Networks, Network Security, Software Testing, Software Quality and Reliability, Internet Technology, AR/VR, Computer Vision, Multimedia and Graphics, Compilers, Computer Algorithms, Optimization Techniques, Theoretical Computer Science.	As per the affiliating University norms M.E./ M.Tech. /M.S. (By Research) in the relevant branch of Engineering &Technology and A minimum of 55% marks or CGPA of 5.5 on a 10 point scale in the qualifying examination. In case of SC/ST/ differently – Abled candidates, 50% marks or CGPA of 5.0 on a 10 point scale.
183	QIP0017	Thiagarajar College of Engineering, Madurai	Ph.D Engineering	Computer Science and Business Systems	DN000499	Network Security, Data Mining, Artificial Intelligence, Multicore Architecture, Parallel Processing, Computer Networks, Knowledge Engineering, Machine Learning, Software Testing, Software Quality and Reliability	As per the affiliating University norms M.E./ M.Tech. /M.S. (By Research) in the relevant branch of Engineering &Technology and A minimum of 55% marks or CGPA of 5.5 on a 10 point scale in the qualifying examination. In case of SC/ST/ differently – Abled candidates, 50% marks or CGPA of 5.0 on a 10 point scale.
184	QIP0017	Thiagarajar College of Engineering, Madurai	Ph.D Engineering	Information Technology	DN000501	Information Security, Data Mining, Data Analytics, Data Science, Artificial Intelligence, Parallel Processing, Wireless Networks, Machine Learning, Software Testing, Software Quality and Reliability, Cloud Computing, Fog Computing, Internet Technology, Computer Vision, Biometrics, Computer Algorithms, Intelligent Computing, Internet of Things, Natural Language Processing,	As per the affiliating University norms M.E./ M.Tech. /M.S. (By Research) in the relevant branch of Engineering &Technology and A minimum of 55% marks or CGPA of 5.5 on a 10 point scale in the qualifying examination. In case of SC/ST/ differently – Abled candidates, 50% marks or CGPA of 5.0 on a 10 point scale.

						Ambient Intelligence, Cognitive Science, Explainable AI	
185	QIP0017	Thiagarajar College of Engineering, Madurai	Ph.D Engineering	Mechatronics	DN000503	Quality engineering, robust design, engineering education, health care, design of experiments, Reliability optimization, robotic assembly line problems, reliability-redundancy optimization, intelligent manufacturing system optimization, robot trajectory optimization, micro thermal systems, thermal management of microelectronics, MEMs, Heating, Ventilation, and Air Conditioning, Autonomous system, robot localization and navigation, path planning optimization, electric vehicle control, synthesis of nanocellulose, waste recovery, materials characterization, welding, composite materials .	As per the affiliating University norms M.E./ M.Tech. /M.S. (By Research) in the relevant branch of Engineering &Technology and A minimum of 55% marks or CGPA of 5.5 on a 10 point scale in the qualifying examination. In case of SC/ST/ differently – Abled candidates, 50% marks or CGPA of 5.0 on a 10 point scale.
186	QIP0017	Thiagarajar College of Engineering, Madurai	Ph.D Science	Physics	DN000505	Smart Materials, Nano Materials, Thin Film Technology, Multifunctional Materials, Crystal Growth	M.Sc. / M.S. (By Research) in the relevant branch of Science And A minimum of 55% marks or CGPA of 5.5 on a 10 point scale in the qualifying examination. In case of SC/ST/ differently – Abled candidates, 50% marks or CGPA of 5.0 on a 10 point scale.
187	QIP0017	Thiagarajar College of Engineering, Madurai	Ph.D Science	Chemistry	DN000507	Waste plastics – Road construction studies, Fuel derivatives, Materials for Energy and Environmental applications, Corrosion studies, Solar Energy Harvesting, Treatment of Water and Waste water, Applications of	M.Sc. / M.S. (By Research) in the relevant branch of Science And A minimum of 55% marks or CGPA of 5.5 on a 10 point scale in the qualifying examination. In case of SC/ST/ differently – Abled candidates, 50% marks or CGPA of 5.0 on a 10 point scale.

						metal complexes and supramolecular architectures	
188	QIP0017	Thiagarajar College of Engineering, Madurai	Ph.D Science	Mathematics	DN000508	Theoretical Computer Science - Grammar System and Automata theory, DNA Computing	M.Sc. / M.S. (By Research) in the relevant branch of Science And A minimum of 55% marks or CGPA of 5.5 on a 10 point scale in the qualifying examination. In case of SC/ST/ differently – Abled candidates, 50% marks or CGPA of 5.0 on a 10 point scale.
189	QIP0017	Thiagarajar College of Engineering, Madurai	M.E	Civil Engineering	DN000513	1. Structural Engineering 2. Construction Engineering and Management 3. Environmental Engineering	For Structural Engineering: B.E. / B.Tech. 1. Civil Engineering 2. Civil and Structural Engineering 3. Civil Engineering and Planning For Construction Engineering and Management: B.E. / B.Tech. 1. Civil Engineering 2. Civil and Structural Engineering 3. Civil Engineering and Planning For Environmental Engineering: B.E. / B.Tech. 1. Civil Engineering 2. Agricultural and Irrigation Engineering 3. Environmental Engineering 4. Chemical Engineering 5. Geo-informatics Engineering 6. B.Tech. (Energy and Environmental Engineering) of Tamil Nadu Agricultural University, Coimbatore. (or) B.E. / B.Tech. 7. Mechanical Engineering (sponsored candidates from Government organizations) 8. Electrical Engineering (with 3 years of relevant experience) (sponsored candidates from Government organizations)

							9. Civil and Structural Engineering 10.Agriculture Engineering
190	QIP0017	Thiagarajar College of Engineering, Madurai	M.E	Mechanical Engineering	DN000602	Engineering Design	B.E. / B.Tech. 1. Industrial Engg. 2. Mechanical Engg. 3. Manufacturing Engg./Tech 4. Production Engg./ Tech. 5. Automobile Engg. 6. Mechatronics 7. Industrial and Production Engg 8. Production and Industrial Engg 9. Mechanical and Automation Engg 10. Marine Engineering 11 Robotics & Automation 12. Aeronautical Engineering
191	QIP0017	Thiagarajar College of Engineering, Madurai	M.E	Electrical & Electronics Engineering	DN000604	Power Systems Engineering	B.E. / B.Tech. 1. Electrical and Electronics Engg. 2. Electrical Engineering
192	QIP0017	Thiagarajar College of Engineering, Madurai	M.E	Electronics & Communication Engineering	DN000606	Communication Systems	B.E. / B.Tech. 1. Electronics and Communication Engg. 2. Electronics Engg.
193	QIP0017	Thiagarajar College of Engineering, Madurai	M.E	Computer Science & Engineering	DN000607	Computer Science and Engineering	B.E. / B.Tech. 1. Computer Science and Engg. 2. Information Technology 3. Software Engineering 4. Computer and Communication Engg. 5. Electronics and Communication Engg.
194	QIP0018	Government College of Engineering, Aurangabad	Ph.D Engineering	Civil Engineering	DN000220	Water Resources Engineering, Structural Engineering	Post-Graduate degree (Master's Degree) examinations of university or an equivalent degree of any other recognized statutory university in the concerned subject with at least 55% marks in, aggregate or its equivalent grade "B" in the UGC - 7 point scale (or an equivalent grade in a point scale wherever grading system is followed)

							As per the ordinance: bamu.ac.in/Portals/0/NewOrdi_-1009_22062020.pdf
195	QIP0018	Government College of Engineering, Aurangabad	Ph.D Engineering	Electrical Engineering	DN000221	Applications of Power Electronics, Electrical Drive, Renewable Energy Systems, Special Machines, Electrical Power System	Post-Graduate degree (Master's Degree) examinations of university or an equivalent degree of any other recognized statutory university in the concerned subject with at least 55% marks in, aggregate or its equivalent grade "B" in the UGC - 7 point scale (or an equivalent grade in a point scale wherever grading system is followed) As per the ordinance: bamu.ac.in/Portals/0/NewOrdi_-1009_22062020.pdf
196	QIP0018	Government College of Engineering, Aurangabad	Ph.D Engineering	Electronics & Telecommunications Engineering	DN000222	Signal & Image Processing, Communication Engineering, Pattern Recognition, ANN, AI & ML	Post-Graduate degree (Master's Degree) examinations of university or an equivalent degree of any other recognized statutory university in the concerned subject with at least 55% marks in, aggregate or its equivalent grade "B" in the UGC - 7 point scale (or an equivalent grade in a point scale wherever grading system is followed) As per the ordinance: bamu.ac.in/Portals/0/NewOrdi_-1009_22062020.pdf
197	QIP0018	Government College of Engineering, Aurangabad	Ph.D Engineering	Mechanical Engineering	DN000753	Materials engineering, Mechanical design, Advance Composites, New renewable energy and thermodynamics, Advance manufacturing processes	Post-Graduate degree (Master's Degree) examinations of university or an equivalent degree of any other recognized statutory university in the concerned subject with at least 55% marks in, aggregate or its equivalent grade "B" in the UGC - 7 point scale (or an equivalent grade in a point scale wherever grading system is followed) As per the ordinance: bamu.ac.in/Portals/0/NewOrdi_-1009_22062020.pdf
198	QIP0018	Government College of Engineering, Aurangabad	Ph.D Engineering	Computer Science & Engineering	DN000770	Deep Learning, Artificial Intelligence & Machine Learning, Natural Language Processing	Post-Graduate degree (Master's Degree) examinations of university or an equivalent degree of any other recognized statutory university in the concerned subject with at least 55% marks in, aggregate or its equivalent grade "B" in the UGC - 7 point scale (or an equivalent grade in a point scale wherever grading system is followed) As per the ordinance: bamu.ac.in/Portals/0/NewOrdi_-1009_22062020.pdf

199	QIP0018	Government College of Engineering, Aurangabad	M.Tech	Civil Engineering	DN000771	Water Resource Engineering	Bachelor's Degree in the relevant field of Engineering & Technology from AICTE or Central or State Government approved institutions or equivalent with at least 50% marks (At least 45% marks in case of candidates of Backward Class categories, Economically weaker section and Persons with Disability Disability) As per https://me2022.mahacet.org/ViewPublicDocument?MenuId=2172 Page No.16
200	QIP0018	Government College of Engineering, Aurangabad	M.Tech	Electronics & Telecommunications Engineering	DN000772	Electronics & Telecommunication	Bachelor's Degree in the relevant field of Engineering & Technology from AICTE or Central or State Government approved institutions or equivalent with at least 50% marks (At least 45% marks in case of candidates of Backward Class categories, Economically weaker section and Persons with Disability Disability) As per https://me2022.mahacet.org/ViewPublicDocument?MenuId=2172 Page No.16
201	QIP0018	Government College of Engineering, Aurangabad	M.Tech	Computer Science & Engineering	DN000773	Computer Science & Engineering	Bachelor's Degree in the relevant field of Engineering & Technology from AICTE or Central or State Government approved institutions or equivalent with at least 50% marks (At least 45% marks in case of candidates of Backward Class categories, Economically weaker section and Persons with Disability Disability) As per https://me2022.mahacet.org/ViewPublicDocument?MenuId=2172 Page No.16
202	QIP0018	Government College of Engineering, Aurangabad	M.Tech	Mechanical Engineering	DN000774	Production	Bachelor's Degree in the relevant field of Engineering & Technology from AICTE or Central or State Government approved institutions or equivalent with at least 50% marks (At least 45% marks in case of candidates of Backward Class categories, Economically weaker section and Persons with Disability Disability) As per https://me2022.mahacet.org/ViewPublicDocument?MenuId=2172 Page No.16

203	QIP0018	Government College of Engineering, Aurangabad	M.Tech	Electrical Engineering	DN000775	1. Electrical Machine Drives 2. Electrical Power Systems	Bachelor's Degree in the relevant field of Engineering & Technology from AICTE or Central or State Government approved institutions or equivalent with at least 50% marks (At least 45% marks in case of candidates of Backward Class categories, Economically weaker section and Persons with Disability Disability) As per https://me2022.mahacet.org/ViewPublicDocument?MenuId=2172 Page No.16
204	QIP0018	Government College of Engineering, Aurangabad	M.Tech	Applied Mechanics	DN000778	Structural Engineering	Bachelor's Degree in the relevant field of Engineering & Technology from AICTE or Central or State Government approved institutions or equivalent with at least 50% marks (At least 45% marks in case of candidates of Backward Class categories, Economically weaker section and Persons with Disability Disability) As per https://me2022.mahacet.org/ViewPublicDocument?MenuId=2172 Page No.16
205	QIP0020	Veermata Jijabai Technological Institute (VJTI), Mumbai	Ph.D Engineering	Mechanical Engineering	DN000674	Design, Vibration, Tribology, FEA, Mechatronics, CAD/CAM, Robotics, Solar Energy,Energy Management, Thermodynamics, Microfluidics, Thermal and Fluid Engg., Computational Fluid Dynamics, Refrigeration and Air conditioning,Material science, Manufacturing Engg., Nanotechnology, Composites etc.	M.E./M.Tech. (Mechanical Engineering) or allied areas consistent with field of specialization.

206	QIP0020	Veermata Jijabai Technological Institute (VJTI), Mumbai	Ph.D Engineering	Civil & Environmental Engineering	DN000675	Civil Engineering, Structural Engineering, Bridge engineering, Composite Structures, Structural Dynamics, Environmental Engineering, Construction Management, Construction Engineering, Earth quake Engineering, Transportation Engineering, Geospatial Technology, Remote Sensing, Geotechnical Engineering, Geosynthetic Engineering, Geotechnical earthquake engineering, Water resource management, Civil Technology, Construction Engineering & Management, Construction Technology, Construction Technology & Management, Environmental Management, Environmental Science & Engineering, Environmental Science & Technology, Water & Environmental Technology, Civil and Water Management Engineering, Building Construction & Technology, Infrastructure Engineering	M.E./M.Tech. in Civil Engineering or allied areas consistent with the field of specialization.

207	QIP0020	Veermata Jijabai Technological Institute (VJTI), Mumbai	Ph.D Engineering	Textile Technology	DN000676	Textile Technology, Textile Engineering, Fibre Science &Technology, Textile Chemistry, Fibres & Textile Processing Technology, Manmade Fibre Technology, Jute and Fibre Technology, Technical Textiles	M.E./M.Tech in relevant branch.
208	QIP0020	Veermata Jijabai Technological Institute (VJTI), Mumbai	Ph.D Engineering	Electrical Engineering	DN000677	High Voltage, Partial Discharge, control system, Power System Stability, Smart Grid, Dynamic & Control, Renewable Energy	M.E./M.Tech. (Electrical Engineering) orallied areas consistent withfield of Specialization
209	QIP0020	Veermata Jijabai Technological Institute (VJTI), Mumbai	Ph.D Engineering	Electronics Engineering	DN000678	Biomedical Signal Processing, Computer Architecture, Virtual Instrumentation, Smart Grid, Dynamics & Control, Computer Communication, Wireless Communication, Sensor Networks, Cyber Physical Systems, Cyber Security of critical Infrastructure	M.E./M.Tech (Electronics Engineering/ Electronics & Telecommunication Engineering) orallied areasconsistent with field of specialization
210	QIP0020	Veermata Jijabai Technological Institute (VJTI), Mumbai	Ph.D Engineering	Computer engineering and information Technology	DN000679	Block Chain, Machin Learning, Databases And Mining, AI, Could Computing, Network Security, Digital Image Processing, Software Engineering, Wireless Sensor Network, IOT	M.E./M.Tech in relevant branch

211	QIP0020	Veermata Jijabai Technological Institute (VJTI), Mumbai	Ph.D Engineering	Production Engineering	DN000681	Nanoengineering,Additive Manufacturing,Nanomaterial in materials and Manufacturing,Industrial engineering, Supply Chain Management, Decision making and optimization, Composite materials and manufacturing, Advanced manufacturing, Simulation and modeling in nanoscale for material development, Finite element analysis for models in structural and dynamic, Project management, Production System and Operation Research, Design Engineering, CAD/CAM/CAE, Green / Sustainable Manufacturing Cellular Manufacturing, Nano/micro Manufacturing, Value Engineering	M.E./M.Tech in relevant branch
212	QIP0020	Veermata Jijabai Technological Institute (VJTI), Mumbai	M.Tech	Mechanical Engineering	DN000682	Mechanical Engineering (with specialization in Machine Design) Mechanical Engineering (with specialization in Automobile Engineering) Mechanical Engineering (with specialization CAD/CAM & Automation) Mechanical Engineering (with specialization in Thermal Engineering)	B. E./B. Tech in Relevant Branch

213	QIP0020	Veermata Jijabai Technological Institute (VJTI), Mumbai	M.Tech	Civil & Environmental Engineering	DN000683	Civil Engineering (with specialization in Construction Management) Civil Engineering (with specialization in Environmental Engineering) Civil Engineering (with specialization in Structural Engineering)	B.E./B.Tech in relevant branch
214	QIP0020	Veermata Jijabai Technological Institute (VJTI), Mumbai	M.Tech	Textile Technology	DN000684	Textile	B E/B Tech in relevant Branch
215	QIP0020	Veermata Jijabai Technological Institute (VJTI), Mumbai	M.Tech	Electrical Engineering	DN000685	Electrical Engineering (with specialization in Control Systems) Electrical Engineering (with specialization in Power Systems)	B. E./B. Tech in Relevant Branch
216	QIP0020	Veermata Jijabai Technological Institute (VJTI), Mumbai	M.Tech	Electronics Engineering	DN000686	Internet of Things (IOT) Electronics & Telecommunication Engineering	B. E./B. Tech in Relevant Branch
217	QIP0020	Veermata Jijabai Technological Institute (VJTI), Mumbai	M.Tech	Computer engineering and information Technology	DN000687	Computer Engineering Computer Engineering (with specialization in Network Infrastructure Management Systems) Computer Engineering (with specialization in Software Engineering)	B. E./B. Tech in Relevant Branch
218	QIP0020	Veermata Jijabai Technological	M.Tech	Production Engineering	DN000689	Production Engineering Project Management	B. E./B. Tech in Relevant Branch

		Institute (VJTI), Mumbai					
219	QIP0020	Veermata Jijabai Technological Institute (VJTI), Mumbai	M.Tech	Defence Technology	DN001131	Defence Technology	B E / B Tech in 1) Aerospace Engineering, 2)Aeronautical engineering 3) Applied Electronics and Communication Engineering 4) Applied Electronics and Instrumentation Engineering 5) Chemical Technology 6) Chemical engineering 7) Computer Science & Engineering 8) Computer and Communication Engineering 9) Computer Engineering 10) Computer Engineering and Applications 11) Computer Networking 12) Computer Science and Information Technology 13) Computer Science and Technology 14) Computer Technology 15) Electrical and Computer Engineering 16) Electrical and Electronics Engineering 17) Electrical and Instrumentation Engineering 18) Electrical and Power Engineering 19) Electrical Engineering 20) Electronics engineering 21) Electrical, Electronics and Power Engineering 22) Electronics and Communication engineering 23) Instrumentation engineering 24) Electronics, Instrumentation and Control Engineering 25) Electronics, Science and Engineering 26) Electronics and Computer Engineering 27) Electronics and Communication Engineering 28) Electronics and Computer Science 29) Electronics and Control Systems 30) Electronics and Power Engineering 31) Electronics and Telecommunication 32) Electronics, Instruments and Control Engineering 33)Electronics System Engineering 34) Instrumentation and Electronics

							35) Instrumentation Engineering 36) Marine Engineering 37) Marine Technology 38) Mechanical and Automation Engineering 39) Mechatronics Engineering 40) Mechanical engineering 41) Metallurgical and Materials Engineering 42) Military engineering 43) Optics and Opto-electronics 44) Power Electronics Engineering 45) Radio, Physics and Electronics 46) Software Engineering 47) Structural Engineering 48) Telecommunication Engineering

220	QIP0021	COEP Technological University, Pune (FORMERLY COEP Pune)	Ph.D Engineering	Civil Engineering	DN000370	Eligibility: Civil Engineering, Geotechnical Engineering , Structural Engineering, Construction Management, Environmental and water resources, Transportation Engineering, Town and country planning	Eligibility: M.E./M Tech/M.S. in Civil Engineering, Chemical Engineering, Agricultural Engineering and allied branches Valid GATE SCORE : Civil Engineering (CE) Chemical Engineering (CH) Environmental Science & Engineering (ES) Geomatic Engineering(GE) Agricultural Engineering (AG) OR QUALIFIED SCORE IN COEP Tech Ph.D. Research Program Eligibility Test (COEP Tech's RPET)
221	QIP0021	COEP Technological University, Pune (FORMERLY COEP Pune)	Ph.D Engineering	Computer Science & Engineering	DN000371	Computer Engineering, Information security	ELIGIBILTY M.E./M. Tech/M.S. VALID GATE SCORE :Computer Science and Information Technology (CS) OR QUALIFIED SCORE IN COEP Tech Ph.D. Research Program Eligibility Test (COEP Tech's RPET)
222	QIP0021	COEP Technological University, Pune (FORMERLY COEP Pune)	Ph.D Engineering	Electrical Engineering	DN000372	Power Electronics and power system , Embedded Control System, Power Electronics and Machines and Drives , Electrical Engineering	ELIGIBILITY: M.E./M Tech /M.S IN ELECTRICAL ENGINEERING VALID GATE SCORE:Electrical Engineering (EE) , Instrumentation Engineering (IN) OR QUALIFIED SCORE IN COEP Tech Ph.D. Research Program Eligibility Test (COEP Tech's RPET)

223	QIP0021	COEP Technological University, Pune (FORMERLY COEP Pune)	Ph.D Engineering	Electronics & Telecommunications Engineering	DN000374	Electronics and Telecommunication, Signal Processing, Wired and Wireless Communication, Electronics, Digital Systems, VLSI and Embedded Systems	ELIGIBILITY: M.E./M Tech /M.S. in Electronics and Communication Engineering VALID GATE SCORE : Electronics and Communication Engineering (EC) OR QUALIFIED SCORE IN COEP Tech Ph.D. Research Program Eligibility Test (COEP Tech's RPET)
224	QIP0021	COEP Technological University, Pune (FORMERLY COEP Pune)	Ph.D Engineering	Instrumentation & Control Engineering	DN000379	Instrumentation, Biomedical Instrumentation, Process Instrumentation and allied	ELIGIBILITY: M.E./M Tech /M.S. in Instrumentation Engineering, Bio Medical Engineering, and allied branches VALID GATE SCORE : Instrumentation Engineering (IN), Bio Medical Engineering (BM) OR QUALIFIED SCORE IN COEP Tech Ph.D. Research Program Eligibility Test (COEP Tech's RPET)
225	QIP0021	COEP Technological University, Pune (FORMERLY COEP Pune)	Ph.D Engineering	Mechanical Engineering	DN000382	echanical Engineering, Thermal Engineering, Design Engineering, Automotive Technology	ELIGIBILITY: M.E. /M. Tech/M.S. in Mechanical Engineering, Thermal Engineering, Automobile Engineering VALID GATE SCORE : Mechanical Engineering(ME) OR QUALIFIED SCORE IN COEP Tech Ph.D. Research Program Eligibility Test (COEP Tech's RPET)

226	QIP0021	COEP Technological University, Pune (FORMERLY COEP Pune)	Ph.D Engineering	Metallurgy Engineering and Materials Science	DN000385	Metallurgy Engineering, Process Metallurgy, Materials Engineering	ELIGIBILITY: M.E. /M. Tech/M.S. in Metallurgical Engineering, AND ALLIED BRANCHES VALID GATE SCORE : Mining Engineering(MN), Metallurgical Engineering(MT) , Chemical Engineering (CH), Engineering Sciences(XE), Bio Medical Engineering(BM), Agricultural Engineering (AG), Aerospace Engineering(AE) Naval Architecture and Marine Engineering (NM) OR QUALIFIED SCORE IN COEP Tech Ph.D. Research Program Eligibility Test (COEP Tech's RPET)
227	QIP0021	COEP Technological University, Pune (FORMERLY COEP Pune)	Ph.D Engineering	Production Engineering	DN000387	Production Engineering, Manufacturing Engineering and Automation, Mechatronics , Project Management, Artificial Intelligence and Robotics	ELIGIBILITY: M.E. /M. Tech/M.S. in Production Engineering, Manufacturing Engineering VALID GATE SCORE : Production and Industrial Engineering (PI) , Mechanical Engineering(ME) OR QUALIFIED SCORE IN COEP Tech Ph.D. Research Program Eligibility Test (COEP Tech's RPET)
228	QIP0022	University College of Engineering, Osmania University, Hyderabad	Ph.D Engineering	Biomedical Engineering	DN000822	Medical devices and diagnostics, Medical Image Processing, Tribiology studies of Medical Implants, Cell and Tissue Engineering, Cognitive Sciences and Bio-informatics	First class in M.E/ M.Tech/ M.Sc in Biomedical Engineering/ Electronics and Instrumentation Engineering/ Electronics Communication Engineering/ Bio Technology

229	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	Ph.D Engineering	Ceramic Engineering	DN000198	Bio-Ceramics, Ceramic/Metal/Polymer matrix composites, Electro Ceramics, Glass and Glass Ceramics, Refractories, Advanced Ceramics, Nano Technology, Cement & Concrete Technology, and Energy Materials.	Applicants with master's degrees in engineering in the discipline concerned or in an allied Discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0 point scale). Applicants with bachelor's degrees in engineering in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0 point scale) at the bachelor's degree level. For applicants with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on 10 point scale) at bachelor's degree provide the degree is from an Institution funded by the Central Government. Applicants with a master's degree in science as an allied discipline/area (where science is an allied discipline/area), must satisfy each of the following criteria: (i) A minimum of 65% marks or 6.5 CPI (on a 10.0 point scale) at the master's degree level, (ii) A minimum of 60% marks or 6.0 CPI (on a 10.0 point scale) at the bachelor's degree level. Discipline eligible for admission in the Ph.D. programme Bachelor's/ Master's degree in any branch of Engineering. Master's degree in Materials Science/ Chemistry/ Applied Chemistry/ Physics/ Applied Physics/ Geology or Geophysics (with Mathematics as a subject at Bachelor's Degree level). Master's degree in Biological Sciences/ Modern Medicine/ Indian Medicine (for the areas related to Bioceramics). Preference would be given to candidates with B.Tech./M.Tech. in Ceramic Engineering / with some background of ceramics.

230	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	Ph.D Engineering	Chemical Engineering	DN000201	All areas related to Chemical Engineering / Chemical Technology Energy and Environment Waste Management Nanotechnology Biotechnology	Applicants with master's degree in engineering in the discipline concerned or in an allied Discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0 point scale). Applicants with bachelor's degree in engineering in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0 point scale) at the bachelor's degree level. Applicant with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on 10 point scale) at bachelor degree provide the degree is from an Institution funded by the Central Government. Applicants with master's degree in science as an allied discipline/area (where science is an allied discipline/area), must satisfy each of the following criteria: (i) A minimum of 65% marks or 6.5 CPI (on a 10.0 point scale) at the master's degree level, (ii) A minimum of 60% marks or 6.0 CPI (on a 10.0 point scale) at the bachelor's degree level. Discipline eligible for admission in the Ph.D. programme B.Tech. or equivalent degree in Chemical Engg./Chemical Technology/ Allied Areas. OR M.Tech. or equivalent degree in Chemical Engg./Chemical Technology/ Allied area . OR Master's degree in Physics/Chemistry/ Mathematics/ Statistics/ Botany/ Biochemistry/ Environmental Science/ Biotechnology/ Industrial Chemistry/ Microbiology.

231	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	Ph.D Engineering	Civil Engineering	DN000202	Structural Engineering; Hydraulics and Water Resources Engineering; Environmental Engineering; Geotechnical Engineering; Transportation Engineering; Geo-informatics; Geology.	Applicants with master's degree in engineering in the discipline concerned or in an allied Discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0 point scale). Applicants with bachelor's degree in engineering in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0 point scale) at the bachelor's degree level. Applicant with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on 10 point scale) at bachelor degree provide the degree is from an Institution funded by the Central Government. Applicants with master's degree in science as an allied discipline/area (where science is an allied discipline/area), must satisfy each of the following criteria: (i) A minimum of 65% marks or 6.5 CPI (on a 10.0 point scale) at the master's degree level, (ii) A minimum of 60% marks or 6.0 CPI (on a 10.0 point scale) at the bachelor's degree level. Discipline eligible for admission in the Ph.D. programme M.Sc.(Engg.)/M.E./M.Tech. degree in Applied Mechanics, Mining Engineering, Chemical Engineering, Chemical Engineering and Technology, Chemical Technology, Mechanical Engineering, Aerospace Engineering, Naval Engineering, Industrial Engineering, Agricultural Engineering. M.Sc.(Engg.)/M.E./M.Tech. in Geoinformatics, Geomatics, Remote Sensing, Remote Sensing and GIS. M.E./M.Tech. in Computer Science and Engineering, Computer Engineering. B.Sc.(Engg.)./B.E./B.Tech./M.Sc.(Engg.)/M.E./M.Tech. or equivalent degree in Environmental Engineering,

							Environmental Science and Engineering, Environmental Science and Technology. M.Sc./M.Tech. in Geophysics, Geology.

232	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	Ph.D Engineering	Computer Science & Engineering	DN000203	Artificial Intelligence & Computer Vision, Data Engineering & High-Performance Computing, Systems & Networks, Theoretical Computer Science	Applicants with master's degree in engineering in the discipline concerned or in an allied Discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0 point scale). Applicants with bachelor's degree in engineering in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0 point scale) at the bachelor's degree level. Applicants with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on 10 point scale) at bachelor degree provide the degree is from an Institution funded by the Central Government. Applicants with master's degree in science as an allied discipline/area (where science is an allied discipline/area), must satisfy each of the following criteria: (i) A minimum of 65% marks or 6.5 CPI (on a 10.0 point scale) at the master's degree level, (ii) A minimum of 60% marks or 6.0 CPI (on a 10.0 point scale) at the bachelor's degree level. Discipline eligible for admission in the Ph.D. programme M.Tech./M.E. degree in Computer Technology/Information Technology/ Electronics and Communication Engineering/ All related subjects of Computer Engineering at M.Tech. level/ M.Tech. in Mathematics and Computing.

233	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	Ph.D Engineering	Electrical Engineering	DN000204	Electrical machines & Drives; Power Electronics; Control Systems; Power Systems Systems Engineering	Applicants with master's degree in engineering in the discipline concerned or in an allied Discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0 point scale). Applicants with bachelor's degree in engineering in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0 point scale) at the bachelor's degree level. Applicant with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on 10 point scale) at bachelor degree provide the degree is from an Institution funded by the Central Government. Applicants with master's degree in science as an allied discipline/area (where science is an allied discipline/area), must satisfy each of the following criteria: (i) A minimum of 65% marks or 6.5 CPI (on a 10.0 point scale) at the master's degree level, (ii) A minimum of 60% marks or 6.0 CPI (on a 10.0 point scale) at the bachelor's degree level. Discipline eligible for admission in the Ph.D. programme B.Tech. & M.Tech. in Electrical Engineering for Ph.D. in Electrical Engineering Bachelor's and Master's Degree in any Branch of Engineering or Bachelor's Degree in any Branch of Engineering for Ph.D. in System Engineering

234	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	Ph.D Engineering	Electronics Engineering	DN000274	Microelectronics Engg./Digital System Engg./ RF and Microwave Engg./Communication System Engg./VLSI Architecture and Chip Design	Applicants with master's degree in engineering in the discipline concerned or in an allied Discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0 point scale). Applicants with bachelor's degree in engineering in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0 point scale) at the bachelor's degree level. Applicant with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on 10 point scale) at bachelor degree provide the degree is from an Institution funded by the Central Government. Applicants with master's degree in science as an allied discipline/area (where science is an allied discipline/area), must satisfy each of the following criteria: (i) A minimum of 65% marks or 6.5 CPI (on a 10.0 point scale) at the master's degree level, (ii) A minimum of 60% marks or 6.0 CPI (on a 10.0 point scale) at the bachelor's degree level. Discipline eligible for admission in the Ph.D. programme Master's degree in any of the following areas: Digital Communication Systems, Information and Coding Theory, Telecom Networks, Mobile and Wireless Communication Systems, Digital Systems and Microprocessors, Digital Signal and Image Processing, Computer Vision and Robotics, Signal and Systems Theory, Control Systems, Fuzzy Logic, Neural Networks and their applications, Power Electronics, Microelectronics and VLSI Systems, Semiconductor Device Modelling and Simulation, Solid State Devices, Organic Electronics, Transparent Semiconductors and Photovoltaics, Sensors and Pattern Recognition, Electronic Instrumentation and Virtual Instrumentation, Electromagnetics, RF Engineering and Microwaves, Antennas,

							Optoelectronics and Optical Communication, Photonic Networks and Systems, Information Technology.

235	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	Ph.D Engineering	Pharmaceutical Engineering	DN000275	Pharmaceutics, Pharmaceutical Chemistry, Pharmacology, Pharmacognosy and allied disciplines	Applicants with master's degree in engineering in the discipline concerned or in an allied Discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0 point scale). Applicants with bachelor's degree in engineering in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0 point scale) at the bachelor's degree level. Applicant with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on 10 point scale) at bachelor degree provide the degree is from an Institution funded by the Central Government. Applicants with master's degree in science as an allied discipline/area (where science is an allied discipline/area), must satisfy each of the following criteria: (i) A minimum of 65% marks or 6.5 CPI (on a 10.0 point scale) at the master's degree level, (ii) A minimum of 60% marks or 6.0 CPI (on a 10.0 point scale) at the bachelor's degree level. Discipline eligible for admission in the Ph.D. programme M.Tech. in Pharmaceutical Engg. and allied discipline area

236	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	Ph.D Engineering	Mining Engineering	DN000276	All areas of mining engineering	Applicants with master's degree in engineering in the discipline concerned or in an allied Discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0 point scale). Applicants with bachelor's degree in engineering in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0 point scale) at the bachelor's degree level. Applicant with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on 10 point scale) at bachelor degree provide the degree is from an Institution funded by the Central Government. Applicants with master's degree in science as an allied discipline/area (where science is an allied discipline/area), must satisfy each of the following criteria: (i) A minimum of 65% marks or 6.5 CPI (on a 10.0 point scale) at the master's degree level, (ii) A minimum of 60% marks or 6.0 CPI (on a 10.0 point scale) at the bachelor's degree level. Discipline eligible for admission in the Ph.D. programme Master's degree in Geology/Geophysics/Geohydrology Mathematics/ Petroleum Geosciences /Chemistry/ Environmental Science/Materials Science/Botany/ Zoology/Polymer Science/ Computer Science Master's degree in Chemical Engg. / Environmental Engg. /Civil Engg./Industrial Engg./Mechanical Engg./Electrical Engg./ Computer Engg./Electronics Engg./Polymer Engg. or Technology/ Ceramic Engg./Materials Engg./Information Technology
237	QIP0023	Indian Institute of Technology {Banaras	M.Tech	Mining Engineering	DN000277	Mine Planning Mine Environment Rock Mechanics	Applicant must have bachelor's degree in Mining Engineering or allied areas

		Hindu University (BHU)}, Varanasi					
238	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	Ph.D Humanities	Humanistic Studies	DN000284	Techniques/ Strategies of Fiction, Professional Communication, Film Studies (Bollywood), Communication Studies, English Literature, Gender Studies, Comparative Grammar, Multiword Expressions, Pragmatics, Cognitive Semantics, Sociolinguistics, Applied Linguistics, Computational Linguistics, Semantics, Indian Philosophy, Traditional Shastra, Indian Knowledge Systems, Group Behaviour, Health & Well Being, Social Anthropology, Medical Anthropology, #Peace Studies, Sports Psychology.	Applicants with Master's degree in relevant subject or allied subjects with a minimum CPI of 6.00 on a 10.0 point scale (or 60% marks) in the qualifying degree. Applicants with Master's degree in Science or allied subjects with a minimum CPI of 6.00 on a 10.0 point scale (or 60% marks) in the qualifying degree. Applicants with Bachelor's degree in Engineering or Sciences (4-Year program) with a minimum CPI of 7.50 on a 10.0 point scale (or 75% marks) in the bachelor degree. Applicant with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on 10 point scale) at bachelor degree provide the degree is from an Institution funded by the Central Government.

239	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	Ph.D Engineering	Mechanical Engineering	DN000287	Machine Design: Fracture behavior of fibre composite through thickness, Mechanical behavior of biocomposites; Composites, Impact and failure mechanisms, Computational Fracture Mechanics, Transient Dynamics; Nuclear graphite and Fracture Characterization; Biomechanics, Cardiovascular stent design; Tiobology; Fracture Mechanics; Composite Materials such metal matrix composite, hybrid composite and nano composite for the mechanical and tribological applications; Fatigue wear modeling, contact modeling and its relevance to wear, Reliability of MEMS Devices. Production Engg.: Additive manufacturing, unconventional manufacturing, Incremental Forming & Manufacturing, Metal firming, Manufacturing automation using: CAD/CAM/CAE/CE/Reverse Engg.; Tool wear condition monitoring; Materials aspect of Triobology, Composite Materials and Laser Surface Texturing; Weld metal characteristics, Thermal effects on weld metal properties, stress removal in casting. Industrial Management:	Applicants with master's degree in engineering in the discipline concerned or in an allied Discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0 point scale). Applicants with bachelor's degree in engineering in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0 point scale) at the bachelor's degree level. Applicant with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on 10 point scale) at bachelor degree provide the degree is from an Institution funded by the Central Government. Applicants with master's degree in science as an allied discipline/area (where science is an allied discipline/area), must satisfy each of the following criteria: (i) A minimum of 65% marks or 6.5 CPI (on a 10.0 point scale) at the master's degree level, (ii) A minimum of 60% marks or 6.0 CPI (on a 10.0 point scale) at the bachelor's degree level. Discipline eligible for admission in the Ph.D. programme Bachelor's degree in Mechanical / Production Engineering and Master's degree in any discipline/ area relevant to Mechanical Engineering. For Ph.D. in Industrial Management: Bachelor's degree in any branch of Engineering and Master's degree in any branch of Engineering/Management.

						Operations Management, SCM, Production System	

240	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	Ph.D Engineering	Metallurgy Engineering	DN000289	Microstructural, Structural and Chemical Characterization; Mechanical Behavior, Deformation Processing and Failure Analysis; Phase Equilibria and Phase Transformation; Non-Equilibrium Processing of Advanced Materials; Ultra-Fine Grained and Nano-Structured Material; Metallurgical and E-Waste Utilization; Design and Development of Advanced Steels; Tribology and Surface Engineering' Thermodynamics and Kinetics of Metallurgical Processes' Advanced Structural and Functional Materials.	Applicants with master's degree in engineering in the discipline concerned or in an allied Discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0 point scale). Applicants with bachelor's degree in engineering in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0 point scale) at the bachelor's degree level. Applicant with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on 10 point scale) at bachelor degree provide the degree is from an Institution funded by the Central Government. Applicants with master's degree in science as an allied discipline/area (where science is an allied discipline/area), must satisfy each of the following criteria: (i) A minimum of 65% marks or 6.5 CPI (on a 10.0 point scale) at the master's degree level, (ii) A minimum of 60% marks or 6.0 CPI (on a 10.0 point scale) at the bachelor's degree level. Disciplines eligible for admission in the Ph.D. programme Bachelor's / Master's degree in Mechanical / Chemical / Production Engg./Manufacturing Engg./Mineral Engg./ Ceramic Engg. Master's degree in Materials Science / Engg./ Technology Master's degree in Physical Sciences (Solid State Physics)/Chemical Sciences (Inorganic / Physical Chemistry/ Industrial Chemistry)/ Biological Sciences/Geology with Mathematics as a subject at Bachelor's level.

241	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	Ph.D Science	Physics	DN000290	Solar & Space Plasma Physics, Condensed Matter Physics (Theory), Quantum Information, Condensed Matter Physics (Experiment) & Materials Science (Experiment), Biophysics, Photonics (Theory and Experiment), Remote Sensing, High Energy Physics, Nuclear Physics, Cosmology.	Applicants with master's degree in science in the discipline concerned or in an allied discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0 point scale) at the master's degree level. Applicants with four year bachelor's degree in Science in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0 point scale) at the bachelor's degree level. Applicant with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on 10 point scale) at bachelor degree provide the degree is from an Institution funded by the Central Government. Disciplines eligible for admission in the Ph.D. programme M.Sc./M.Tech. in Applied Physics, Engineering Physics, BioPhysics, Electronics Engg., Materials Science, Ceramic Engg., Metallurgical Engg., Electrical Engg., Bio-Informatics, Geomatics and Geoinformatics, Computer Science, Computer Engg., Mechanical Engg., Mathematics, Chemistry, Remote Sensing, Astrophysics, Space Physics, Applied Optics, Atmospheric Physics, Fibre Optics & Photonics, Nanotechnology and Biotechnology.

242	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	Ph.D Science	Chemistry	DN000291	Synthetic Chemistry, Environmental Chemistry, Surface Chemistry, and Computational Chemistry.	Applicants with master's degree in science in the discipline concerned or in an allied discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0 point scale) at the master's degree level. Applicants with four year bachelor's degree in Science in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0 point scale) at the bachelor's degree level. Applicant with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on 10 point scale) at bachelor degree provide the degree is from an Institution funded by the Central Government. Disciplines eligible for admission in the Ph.D. programme M.Sc./M.Tech. in Microbiology/ Chemistry/ Industrial Chemistry/ Applied Chemistry/ Biochemistry/ Biotechnology/ Medicinal Chemistry/ Materials Science & Technology/ Environmental Science and Nano Technology with chemistry as a subject at Bachelor Level
243	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	Ph.D Science	Mathematical Science	DN000293	Harmonic Analysis, Differential Geometry, Numerical Wavelet methods for partial differential equations, Numerical Analysis of PDEs, Mathematical Image Processing, Stochastic Modeling (Queuing Theory), Integral Equations, Numerical Analysis, Optimization, Fluid Dynamics, Biomechanics, Non-Linear Waves, Graph Theory and Network Science, Rings and Modules, Mathematical Modeling and Porous Media, Soft Computing, Fuzzy Sets, Algebraic Numerical Techniques,	Applicants with master's degree in science in the discipline concerned or in an allied discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0 point scale) at the master's degree level. Applicants with four year bachelor's degree in Science/engg. in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0 point scale) at the bachelor's degree level. Applicants with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on 10 point scale) at bachelor's degree provide the degree is from an Institution funded by the Central Government. Disciplines eligible for admission in the Ph.D. programme Master's degree in Statistics/ Computer Science/ Computer

						Mathematical Modeling on heat Transfer Problem.	Engineering, with Mathematics as a subject at Bachelor's level. Bachelor's degree (B.Tech./B.E.) in Mathematics and Computing/ Computer Engineering/Computer Science.

244	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	Ph.D Engineering	Biochemical Engineering	DN000309	All areas of Biochemical Engineering.	Applicants with master's degree in engineering in the discipline concerned or in an allied Discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0 point scale). Applicants with bachelor's degree in engineering in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0 point scale) at the bachelor's degree level. Applicant with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on 10 point scale) at bachelor degree provide the degree is from an Institution funded by the Central Government. Applicants with master's degree in science as an allied discipline/area (where science is an allied discipline/area), must satisfy each of the following criteria: (i) A minimum of 65% marks or 6.5 CPI (on a 10.0 point scale) at the master's degree level, (ii) A minimum of 60% marks or 6.0 CPI (on a 10.0 point scale) at the bachelor's degree level. Disciplines eligible for admission in the Ph.D. programme Master's degree in Biotechnology, Microbiology, Biochemistry, Bioinformatics, Biomedical Sciences/ Tech./Engg., Chemistry#, Food Sciences/Tech., Molecular Biology, Genetic Engineering, Human Genetics, Nanotechnology, Material Science and Environmental Sciences/Tech. Bachelor's/Master's degree in Biochemical Engineering, Biotechnology, Bioinformatics, Chemical Engg./Tech., Food Tech.//Engg., Biomedical Engg./Tech., Bioelectronics, Biomedical Tech./Engg., Environmental Engg./Tech., Nanotechnology, Material Science. with all specializations

245	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	Ph.D Engineering	Biomedical Engineering	DN000313	Physiology; Electrophysiology & Neuro Biology; Polymer in Medicine; Bioinstrumentation, Biomedical Signal & Image Processing; Modeling of Biological System, Biological Control System Analysis; Biomechanics; Tissue Engineering & Micro fluidics; Molecular Biology, Biochemistry, Biotechnology & Nano Medicine; Optical Nanomaterial, Biosending, Image Theuranostics. (1) Artificial Intelligence and its application to Biomedical Signal & Image Processing. (2) Bioinstrumentation. (3) Brain Computer Interface (4) Rehabilitation Engineering. (5) Computational Neuroscience. (6) Neuroinformatics. (7) Biomedical Signal Processing	Applicants with master's degree in engineering in the discipline concerned or in an allied Discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0 point scale). Applicants with bachelor's degree in engineering in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0 point scale) at the bachelor's degree level. Applicant with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on 10 point scale) at bachelor degree provide the degree is from an Institution funded by the Central Government. Applicants with master's degree in science as an allied discipline/area (where science is an allied discipline/area), must satisfy each of the following criteria: (i) A minimum of 65% marks or 6.5 CPI (on a 10.0 point scale) at the master's degree level, (ii) A minimum of 60% marks or 6.0 CPI (on a 10.0 point scale) at the bachelor's degree level. Disciplines eligible for admission in the Ph.D. programme B.Tech./M.Tech. degree in Bioengineering/ Biomedical/Electrical Engg./Electronics Engg./ Instrumentation Engg./Mechanical Engg./ Computer Engg./Materials Science and Technology/ Chemical Engg./ Biotechnology/ Nanotechnology. M.Sc./M.Tech. M.Sc./M.Tech. in Statistics, Mathematics. M.Sc. degree in Physics/Chemistry/ Polymer Sciences/ Biochemistry/Life Sciences/ Biotechnology. BDS/MBBS.

246	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	Ph.D Engineering	Material Science & Technology	DN000316	All areas of Material Science	Applicants with master's degree in engineering in the discipline concerned or in an allied Discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0 point scale). Applicants with bachelor's degree in engineering in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0 point scale) at the bachelor's degree level. Applicant with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on 10 point scale) at bachelor degree provide the degree is from an Institution funded by the Central Government. Applicants with master's degree in science as an allied discipline/area (where science is an allied discipline/area), must satisfy each of the following criteria: (i) A minimum of 65% marks or 6.5 CPI (on a 10.0 point scale) at the master's degree level, (ii) A minimum of 60% marks or 6.0 CPI (on a 10.0 point scale) at the bachelor's degree level. Disciplines eligible for admission in the Ph.D. programme Master's degree in Chemical Sciences, Materials Science and Physical Sciences. Bachelor's / Master's degree in Ceramic/ Chemical/ Civil/ Electrical/ Electronics/ Mechanical / Metallurgical/ Polymer Engineering/ Plastic Technology/ Materials Technology/ Nanotechnology. Master's degree in Dentistry/ Orthopedics/ E.N.T./ Rasa Shastra

247	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	Ph.D Engineering	Architecture, Planning and Design	DN000317	All areas of Architecture, Planning and Design	Applicants with master's degree in engineering/architecture in the discipline concerned or in an allied Discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0 point scale). Applicants with bachelor's degree in engineering/architecture in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0 point scale) at the bachelor's degree level. Applicant with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on 10 point scale) at bachelor degree provide the degree is from an Institution funded by the Central Government. Applicants with master's degree in science as an allied discipline/area (where science is an allied discipline/area), must satisfy each of the following criteria: (i) A minimum of 65% marks or 6.5 CPI (on a 10.0 point scale) at the master's degree level, (ii) A minimum of 60% marks or 6.0 CPI (on a 10.0 point scale) at the bachelor's degree level.
248	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	M.Tech	Chemical Engineering	DN000468	All areas of Chemical Engineering	B.Tech. or an equivalent degree in Chemical Engg. or allied areas.
249	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	M.Tech	Material Science and Engineering	DN000469	All areas of Material Sciences	B.Tech. or an equivalent degree in Ceramic/ Chemical/ Civil/ Electrical/ Electronics/ Polymer/ Plastic Technology/ Materials Technology/ Nanotechnology/ Mechanical / Metallurgical Engineering OR M.Sc. degree in Chemical Science/ Materials Science/ Physical Science provided the candidate has passed B.Sc./ B.Sc. (Hons.) Examination with Chemistry/ Physics/ Mathematics and Computer Science/ Statistics.

250	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	M.Tech	Biomedical Engineering	DN000470	All areas of Biomedical Engineering	B.Tech. or an equivalent degree in Biomedical/ Ceramic/ Chemical/ Computer/ Electrical/ Electronics (Telecommunication/Instrumentation/Control) / Mechanical/ Metallurgical Engg. / OR M.Sc. degree in Physics/ Biotechnology/Chemistry/Lifesciences
251	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	M.Tech	Pharmaceutical Engineering	DN000471	Pharmaceutics, Pharmaceutical Chemistry, Pharmacology and Pharmacognosy	B.Tech. in Pharmaceutical Engineering and Technology
252	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	M.Tech	Metallurgical Engineering	DN000472	All areas of Metallurgical Engg.	B.Tech. or an equivalent degree in Metallurgical Engg., Materials Science/Engineering, Mineral/Chemical/Ceramic/Mechanical Engg., Chemical Tech. or M.Sc. (Physics/ Chemistry) with specialization in Solid State Physics, Physical/ Inorganic Chemistry provided the candidate passed B.Sc./ B.Sc. (Hons.) Examination with Mathematics as one of the subject at undergraduate level
253	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	M.Tech	Ceramic Engineering	DN000473	All areas of Ceramic Engineering	B.Tech. or an equivalent degree in Ceramic/ Civil/ Electronics/ Electrical/ Mechanical/ Metallurgical Engg./ Chemical Engg. and Technology/Materials Science & Technology/ Silicate Technology or M.Sc. Physics (with special papers in Solid State/ Electronics) or Electronics or Chemistry (with special papers in Physical/ Inorganic/ Solid State Chemistry) provided the candidate has passed B.Sc./ B.Sc.(Hons.) Examination with Physics, Chemistry and Mathematics

254	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	M.Tech	Civil Engineering	DN000474	Environmental Engineering Geotechnical Engineering Hydraulics and Water Resources Engineering Structural Engineering Transportation Engineering	B.Tech. or an equivalent degree in civil engineering or allied areas.
255	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	M.Tech	Mechanical Engineering	DN000475	Machine Design Thermal and Fluid Engineering Production Engineering	B.Tech. or an equivalent degree in Mechanical / Production Engineering or equivalent.
256	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	M.Tech	Electronics Engineering	DN000476	(a) Power Systems (b) Electrical Machines and Drives (c) Control Systems (d) Power Electronics	B.Tech. or an equivalent degree in Electrical Engg. for (a) and (b) B.Tech. or an equivalent degree in Electrical/ Electronics/ Control Systems/ Instrumentation Engg. for (c) B.Tech. or an equivalent degree in Electrical/ Electronics Engg. for (d)
257	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	M.Tech	Industrial Engineering & Management	DN000477	Industrial Management (Offered by Mechanical Engineering Department)	B.Tech. or an equivalent degree in any branch of engineering
258	QIP0023	Indian Institute of Technology {Banaras Hindu University	M.Tech	Systems and Control Engineering	DN000478	Systems Engineering (Offered by the Electrical Engineering Department)	B.Tech. or an equivalent degree in any branch of engineering

		(BHU)}, Varanasi					
259	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	M.Tech	Biochemical Engineering	DN000479	All areas of Biochemical Engineering	B.Tech. or an equivalent degree in Biochemical/ Biotechnology/ Chemical/ Food Engg./ OR M.Sc. degree in Biochemistry/ Bio-Technology/ Microbiology or in Chemistry with specialization in Biochemistry or Physical Chemistry.
260	QIP0023	Indian Institute of Technology {Banaras Hindu University (BHU)}, Varanasi	M.Tech	Electrical Engineering	DN000724	a) Power Systems b) Electrical Machines and Drives c) Control Systems d) Power Electronics	B.Tech. or an equivalent degree in Electrical Engg. for specialization (a) and (b) B.Tech. or an equivalent degree in Electrical/ Electronics/ Control Systems/ Instrumentation Engg. for specialization (c) B.Tech. or an equivalent degree in Electrical/ Electronics Engg. for specialization (d)
261	QIP0024	TKM College of Engineering, Kollam	Ph.D Engineering	Civil Engineering	DN000527	Earthquake Engineering, Hydrology, Hydroclimatology, Water Resources Engineering, Applications of Artificial Intelligence in Civil Engineering, Hydraulics, Concrete, Supplementary Cementing Materials, Building Technology, Construction Management, Lean Construction, Sustainable Development Environmental Engineering, Environmental Geotechnology, Water and Wastewater Treatment, Advanced Oxidation Processes, Environmental Science, Geotechnical Engineering	Master’s degree in Civil Engineering with First division or equivalent

262	QIP0024	TKM College of Engineering, Kollam	Ph.D Engineering	Mechanical Engineering	DN000530	Thermal Management of Electronic Systems, Cryogenic Heat Transfer, Super Conductivity, Properties Studies at Cryogenic Temperatures, Heat and Mass Transfer in Multiphase & Single Phase Flows, Refrigeration, Thermo Acoustics, CFD, Computational Combustion, Micro/Nano fluids & Heat transfer, Alternate Energy, Solar Cooling Systems, Energy Storage, Green Buildings Fracture Mechanics, Biomechanics, Impact Mechanics, Design Engineering, Tribology, MR Dampers Abrasive Assisted Surface Finishing, Novel Composite Materials, Nano Composites, Additive Manufacturing, High Entropy Alloys, Friction Stir Joints Supply Chain Management, Product Development, Optimization Techniques, Data analytics and Design of Experiments, Artificial Intelligence	Master's degree in Mechanical Engineering with First division or equivalent

263	QIP0024	TKM College of Engineering, Kollam	Ph.D Engineering	Electrical & Electronics Engineering	DN000541	Power Systems, Power Electronics, Renewable energy, Electric Vehicles, Signal Processing, Medical Diagnostics, Image processing, Control Systems, Smart Grid Technology, Control and Instrumentation, Applications of AI in Electrical and Biomedical Engineering, Bio-Signal Processing, Machine learning, Non-Linear System Analysis and Control, Unmanned Aerial Vehicle Control, Robotics, Brain Computer Interfacing, Game Theoretical Analysis of Energy Markets, Microgrid development and Control, Smart Home Energy Management Systems	Master's degree in the relevant branch of Engineering with First division or equivalent
264	QIP0024	TKM College of Engineering, Kollam	Ph.D Engineering	Electronics & Communication Engineering	DN000543	Design and development of Organic Electronic devices, Biomedical instrumentation, Medical robotics, MEMS, (Medical) Signal and Image Processing, Biometrics, Machine Learning and Deep Learning, Applied electronics, Biomedical signal processing, Wireless communication, Communication Systems, Network Security, Satellite Communication, IoT, Wireless Adhoc Networks	Master's degree in the relevant branch of Engineering with First division or equivalent

265	QIP0024	TKM College of Engineering, Kollam	Ph.D Engineering	Computer Science & Engineering	DN000564	Internet of Things, Pattern Recognition and Data Mining, Big Data Analytics, Social Network Analytics, Machine Learning, High Performance Computing, Cloud Computing, Artificial Intelligence, Robotics, Natural Language Processing, Genetic and Evolutionary Computation, wireless and Sensor Systems, Network and Distributed Systems and Security, Image Processing and Mining, Bio Medical Image Processing, Applied Computing, Theoretical Computer Science, Computer Vision, Computer Networking and Mobile Computing, Intelligent Computing	Master’s degree in the relevant branch of Engineering with First division or equivalent.
266	QIP0024	TKM College of Engineering, Kollam	M.Tech	Civil Engineering	DN000576	1. Structural Engineering and Construction Management 2. Transportation Engineering	Bachelor's Degree in the relevant branch of Engineering with a minimum of 60% of marks or equivalent (Relaxations for SC/ST and other eligible communities will be as per Government rules)
267	QIP0024	TKM College of Engineering, Kollam	M.Tech	Electrical & Electronics Engineering	DN000578	1. Power System 2. Industrial Instrumentation and Control	Bachelor's Degree in the relevant branch of Engineering with a minimum of 60% of marks or equivalent (Relaxations for SC/ST and other eligible communities will be as per Government rules)
268	QIP0024	TKM College of Engineering, Kollam	M.Tech	Electronics & Communication Engineering	DN000579	Communication Systems	Bachelor's Degree in the relevant branch of Engineering with a minimum of 60% of marks or equivalent (Relaxations for SC/ST and other eligible communities will be as per Government rules)
269	QIP0024	TKM College of Engineering, Kollam	M.Tech	Computer Science & Engineering	DN000580	Computer Science and Engineering	Bachelor's Degree in the relevant branch of Engineering with a minimum of 60% of marks or equivalent (Relaxations for SC/ST and other eligible communities will be as per Government rules)

270	QIP0024	TKM College of Engineering, Kollam	M.Tech	Mechanical Engineering	DN000581	1. Industrial Refrigeration and Cryogenics 2. Artificial Intelligence 3. Computer Integrated Manufacturing	Bachelor's Degree in the relevant branch of Engineering with a minimum of 60% of marks or equivalent (Relaxations for SC/ST and other eligible communities will be as per Government rules)
271	QIP0024	TKM College of Engineering, Kollam	M.Tech	Chemical Engineering	DN000582	Industrial Safety and Engineering	Bachelor's Degree in the relevant branch of Engineering with a minimum of 60% of marks or equivalent (Relaxations for SC/ST and other eligible communities will be as per Government rules)
272	QIP0025	Jamia Millia Islamia (JMI), New Delhi	Ph.D Engineering	Electrical Engineering	DN000492	1. Power Systems 2. Power Electronics & Electric Machines 3. Control and Instrumentation 4. Electronics & Communication 5. Computer Science & Technology 6. Biomedical Engineering 7. Dental Sciences & Technology 8. Medical Sciences & Technology	Minimum 55% in M. Tech. in allied specialization of Electrical Engineering after B. Tech./ B.E. OR Minimum 55% in M. Tech. in allied specialization of Electrical Engineering after M. Sc./MCA OR M.B.B.S./BDS and Masters in any other science discipline with at least 55%

273	QIP0025	Jamia Millia Islamia (JMI), New Delhi	Ph.D Engineering	Civil Engineering	DN000510	1. Building Engineering & Management 2. Building Materials 3. CAD 4. Construction Management 5. Design Engineering 6. Disaster Management 7. Earth Sciences 8. Earthquake Engineering 9. Environmental Engineering 10. Environmental Management 11. Environmental Planning 12. FIuid Mechanics 13. Geoinformatics 14. Spatial Technologies 15. Geotechnical Engineering 16. Infrastructure 17. offshore Structures 18. Planning (Housing) 19. Soil Dynamics 20. Structural Dynamics 21. Structural Engineering 22. Transportation Engineering 23. Transportation Planning 24. Urban Planning 25. Water Resources Engineering	B. Tech in Civil Engineering/Environmental Engineering /Transportation Engineering /Construction management and Masters Degree with not less than 55% of marks in all branches of civil Engineering including.

274	QIP0025	Jamia Millia Islamia (JMI), New Delhi	Ph.D Engineering	Computer Science & Engineering	DN000523	1. NLP and Text Mining 2. Data Mining 3. Graph Mining and Bigdata Analytics 4. Massive Parallel and CUDA 5. HPC, Cloud Computing 6. MANET, WSN 7. Network and Information Security 8. Information Extraction 9. Machine Learning 10. Computer Networks 11. Image Progessing 12. Soft Computing 13. Fuzzy Theory 14. Computer Graphics, Computer Organization 15. Artificial Intelligence 16. Software Engineering	For admission in PhD, candidate must have obtained at least a Second Class Masters Degree with not less than 55% of marks of a University or a Degree recognized by the University as its equivalent.

275	QIP0025	Jamia Millia Islamia (JMI), New Delhi	Ph.D Engineering	Electronics & Communication Engineering	DN000637	1. Mobile Communication, 3G/4G/LTE/LTE-A/5G, IoT, Analog and Digital Communication, Coding Techniques, Speech Coding 2. Wireless Communication and Networking 3. High Power Gas Laser, Optoelectronics, Optical Diagnostics and Data Acquisition Systems 4. VLSI Design, Processor Designing, DNN accelerators, Fuzzy processors, Computer architecture, Nano-electronics, GaN based devices, energy harvesting, low power processor designing 5. Analog Signal Processing, Analog Devices, Computer Architecture 6. Analog Signal Processing, Analog Devices 7. VLSI Devices & Nano-electronics Circuits' Embedded System 8. Device modelling, Design and Simulation of silicon and III-V based Semiconductor Devices, Junction less MOSFET, TFET, TFT, Ferroelectric Devices, Device Modelling for sensor application, Digital VLSI Circuits and System Design, Analog/RF Device, Circuits and System Design 9. VLSI Design, Low Power Design, Digital Circuits & Systems and Devices, Nano-electronic Circuits	For admission in PhD, candidate must have obtained at least a Second Class Masters Degree with not less than 55% of marks of a University or a Degree recognized by the University as its equivalent.

						10. Modelling and Simulation of Novel Nano-electronic Devices, Organic Electronic Devices, Novel Semiconductor Memories, Robust Circuit and System Design, Low Power Digital VLSI Circuits and System Design, Analog/RF Device, Circuits and System Design, Energy Harvesting, and Neuromorphic Computing 11. Communications Systems, Telecommunication Systems, Digital and Data Communication Systems, Digital Signal Processing, Circuits analysis and Synthesis, Signals and Systems	

276	QIP0025	Jamia Millia Islamia (JMI), New Delhi	Ph.D Engineering	Mechanical Engineering	DN000805	Mechanical Engineering	First class degrees (60%) at Master's and Bachelor's levels, both to enhance the quality of students undertaking research work. The eligibility Criteria is as follows: Candidates should have passed with first Division a regular course of B.Tech/ B.E/ B.Sc. Engg in Mechanical Engineering, Automobile Engineering, Production Engineering, Industrial Engineering, Power Plant Engineering, Chemical Engineering, Metallurgy, Aeronautical, Automation and Mechatronics, Product Design, Electronic and Communication Engineering, Instrumentation and Control, Tribology, Energy, Environmental Engineering, Civil Engineering, Electrical Engineering, Polymer Sciences / Engineering, Petroleum Engineering/Mechanical Engineering, Production Engineering, Industrial Engineering, Thermal Engineering, Machine Design Engineering, Environmental Engineering, Mechanical Automation, CAD-CAM, Aeronautical Engineering, Chemical Engineering, Technology Management, Systems Management, Operations Management, Automobile Engineering, Applied Mechanics, Fluid Mechanics, Mechatronics and Welding Technology, Product Design, Electronic and Communication Engineering, Instrumentation and Control, Electrical Engineering, Tribology, Energy, Environmental Engineering, Civil Engineering, Polymer Sciences / Engineering, Petroleum Engineering.
277	QIP0025	Jamia Millia Islamia (JMI), New Delhi	Ph.D Engineering	Environmental Science & Engineering	DN000813	synergic approach for green house gas (GHG) emissions control & energy generation from slaughter house, bioelectrical energy generation for high strength BOD effluent	First Division (60%) in M.Tech., Environment Engineering, and M.Sc. Environment Science
278	QIP0025	Jamia Millia Islamia (JMI), New Delhi	Ph.D Science	Applied Chemistry	DN000823	M.Sc. Chemistry, M.Sc. Applied Chemistry, M.Sc. Environmental Chemistry, M.Sc. Industrial Chemistry, M.Sc. in Polymer Science/Polymer Technology, M.Sc. (Polymer Chemistry), M. Tech./M.Sc. Chemical Synthesis and Process Technology	For admission in PhD, candidate must have obtained at least a Second-Class Master's Degree with not less than 55% of marks of a university or a degree recognized by the University as its equivalent.

279	QIP0025	Jamia Millia Islamia (JMI), New Delhi	Ph.D Science	Applied Electronics	DN000824	M.Sc. Electronics, M.Sc. Physics (Specialization in Electronics, Material Science, Solid State Physics), M.Sc. in Bioelectronics and instrumentation, M.Sc. in Biotechnology and Instrumentation, M.Tech./M.Sc. Electronics, Electronics & Communication Engineering	For admission in PhD, candidate must have obtained at least a Second Class Masters Degree with not less than 55% of marks of a University or a Degree recognized by the University as its equivalent.
280	QIP0025	Jamia Millia Islamia (JMI), New Delhi	Ph.D Science	Applied Physics	DN000877	M.Sc. Physics, M.Sc. Applied Physics, M.Sc. Electronic Science, M.Sc./M. Tech. Nanotechnology, M. Tech./M.Sc. Electronics, Electronics & Communication Engineering, M.Tech./M.Sc. Nanoscience & Nanotechnology	For admission in PhD, candidate must have obtained at least a Second-Class Master's Degree with not less than 55% of marks of a university or a degree recognized by the University as its equivalent.
281	QIP0025	Jamia Millia Islamia (JMI), New Delhi	Ph.D Science	Applied Mathematics	DN000878	M.Sc. Tech. in Mathematics with Computer Science, M.Sc. in Mathematics with Computer Science, MA/M.Sc. in Mathematics, M.A./M.Sc. in Applied Mathematics, M.Sc. in Statistics, M.Sc. in Operational Research with Mathematics at Graduation Level, MCA with Mathematics at Graduation Level, M.Sc. Computer Science with Mathematics at Graduation Level, M.Tech. in Computer Science/Computer Application/Computer Engineering/Computer Science & Engineering, M.Tech./PG Diploma/M.A./M.Sc. in Data Science, Data Analytics, Mathematics, Economics, Bioinformatics, Environment Science/Environment Engineering	For admission in PhD, candidate must have obtained at least a Second-Class Master's Degree with not less than 55% of marks of a university or a degree recognized by the University as its equivalent.

282	QIP0026	Sardar Vallabhbhai National Institute Of Technology (SVNIT), Surat	Ph.D Engineering	Civil Engineering	DN000396	Environmental Engineering, Water Resources Engineering, Urban Planning, Transportation Engineering and Planning, Structural Engineering, Geotechnical Engineering, Construction Technology and Management.	Masters degree in relevant area of Engineering. Admission as per the norms available on the institute's website: www.svnit.ac.in
283	QIP0026	Sardar Vallabhbhai National Institute Of Technology (SVNIT), Surat	Ph.D Engineering	Mechanical Engineering	DN000398	Design and Dynamics, Thermal and Fluid Engineering, Manufacturing and Industrial Engineering.	Masters degree in Engineering with specialization in Thermal and Fluid Engineering/ Manufacturing and Industrial Engineering / Design and Dynamics / Robotics / Mechatronics / Energy Systems Engg. / Automobile Engg. / Aeronautical Engg. / Cryogenics / CAD/CAM/CIM/ Production / Tribology/ Turbomachines. Admission as per the norms available on the institute's website: www.svnit.ac.in
284	QIP0026	Sardar Vallabhbhai National Institute Of Technology (SVNIT), Surat	Ph.D Engineering	Electrical Engineering	DN000399	Power Electronics and Electrical Drives, Power Systems and Renewable Energy, Instrumentation and Control.	M.E./ M. Tech. in Electrical Engineering or in relevant specializations. Admission as per the norms available on the institute's website: www.svnit.ac.in

285	QIP0026	Sardar Vallabhbhai National Institute Of Technology (SVNIT), Surat	Ph.D Engineering	Electronics Engineering	DN000403	Communication and Networking: Communication Systems, Communication Network sand Internet, Computational Electromagnetics, RF and Microwaves, Metamaterial based Antennas, Multimedia Systems, Optical Communication and Photonics, 5G Technology and Networks, Wireless Communication, Edge Computing, Wireless Sensor Networks, Information Theory and Coding, Visible Light Communication, LiFi Systems, Software Defined Networking, Free Space Optics, Vehicular Technology, SDR based Systems, NavIC/IRNSS Based System and Research, RF Energy Harvesting, Satellite based Navigation. Microelectronics: Devices & IC Technology, Reliability of Electronics Devices and Circuits, Device, Simulation and Modeling, VLSI and System Hardware Design (ASIC as well as FPGA based), VLSI Architecture for Real-Time Signal/Image Processing/IoT/Deep Learning, CAD Tools, MEMS Design and Technology (including Bio-MEMS), Flash Memory Devices, Organic Semiconductor Devices, CMOS Devices, Spintronic Devices, Wearable Devices and Sensors, Optical and Optoelectronic Devices, Energy Storage Devices, Material	M.E./M.Tech. or equivalent degree In Electronics, Electronics and Communication, Telecommunication, Bio-medical Engg., VLSI, Nanoelectronics, Electronic System Design (M.E./M.Tech. in Electrical Engg. from IIT). Admission as per the norms available on the institute's website: www.svnit.ac.in

						Growth and Characterization, Quantum Technology. Electronics Systems: Electronic Instrumentation, Sensor Technology, Signal Processing Applications, Biomedical Electronics, Embedded System Design. RISC-V and SoC Design, Application Specific Processor Design, Energy-Efficient Computing, Drone, Smart Farming. Signal Processing: Speech Processing, Image Processing and Computer Vision, Bio Medical Signal Processing, Artificial Intelligence, Healthcare IoT/IoT, Neural Networks and Deep Learning.	
286	QIP0026	Sardar Vallabhbhai National Institute Of Technology	Ph.D Engineering	Computer Science & Engineering	DN000405	Information Security and Privacy, Software Engineering, Computer Vision, Image Processing, Soft Computing, Computer Network, Automata, Compiler, High	Masters degree in Computer Engineering or allied fields. Admission as per the norms available on the institute's website: www.svnit.ac.in

		(SVNIT), Surat				Performance Computing, Artificial Intelligence.	
287	QIP0026	Sardar Vallabhbhai National Institute Of Technology (SVNIT), Surat	Ph.D Engineering	Chemical Engineering	DN000406	Catalysis in refining & petrochemicals processes, Catalysis in biomass conversion, Biofuels, Nanofuels, Wastewater treatments, Membrane separations, Metal recovery methods, Multiphase flow, Syntheses and applications of metal/metal oxide nanoparticles, Crystallization processes, Energy and environment management, CFD in Chemical Engg., Polymer nanotechnology and polymer nanocomposites, Fuel cells, Microbial fuel cells, Distillation, Nanofluidics, Powder technology, Extraction, Thin film Solar cells, Colloids and interfacial engineering, Microfluidics, Electrocoagulation, Green Chemistry and Engineering, Nanomilling, Separation processes, Biosensor, Energy storage device.	Masters degree in Chemical Engineering or allied fields. Admission as per the norms available on the institute's website: www.svnit.ac.in
288	QIP0026	Sardar Vallabhbhai National Institute Of Technology (SVNIT), Surat	M.Tech	Chemical Engineering	DN000825	Chemical Engineering	The minimum qualification will be followed as per the Centralized Counseling for M.Tech./ M.Arch./ M.Plan. (CCMT: www.ccmt.nic.in) norms as will be notified time to time.

289	QIP0026	Sardar Vallabhbhai National Institute Of Technology (SVNIT), Surat	M.Tech	Civil Engineering	DN000854	Geotechnical Engineering, Structural Engineering, Environmental Engineering, Transportation Engineering and Planning, Urban Planning, Water Resources Engineering, Construction Management and Technology	(1) OPEN/EWS/OBC CATEGORY: a) B.E. / B.Tech. / B.Arch. or equivalent degree in respective discipline with minimum 60% marks (CGPA 6.5). The said percentage / CGPA The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. b) Minimum working experience of two years after graduation. At least one year continuous experience is required with sponsoring organisation. (2) RESERVED SC/ST/PWD CATEGORY: a) B.E. / B.Tech. / B.Arch. or equivalent degree in respective discipline with minimum Aggregate 55% marks (CGPA 6.0). The said percentage / CGPA The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. b) Minimum working experience of two years after graduation. At least one year continuous experience is required with sponsoring organisation. (3) The candidates must enclose self-attested copies of the following documents/ certificates. Same must be produced at the time of reporting/physical documents verification in concerned departments of SVNIT for admission, otherwise their candidature will not be considered. (i) Appointment letter issued by the current employer. (ii) Experience certificate of last two years duly signed by competent authority on letter head of the Company/Organization/Institute. (iii) Salary certificate / slips of last 24 months. (iv) Income-Tax return of last financial one year and Form-16 of last two years. (v) P.F. statement of at least last one year. (vi) All other documents/ certificate as mentioned in the information brochure of M. Tech. (Sponsored) programme. Note: a) Sponsorship certificate should be from the same organization who has issued the Appointment letter, Experience certificate and Salary slip.

							b) Salary Slip, Experience Certificate of one year must be from same (single) organization. (4) Moreover, the qualifying degree list for the M.Tech. admission 2023 is on the lines of the Centralized Counseling for M.Tech./ M.Arch./ M.Plan. (CCMT: www.ccmt.nic.in). If any difference arises in the qualifying degree nomenclature, the CCMT nomenclature will prevail.

290	QIP0026	Sardar Vallabhbhai National Institute Of Technology (SVNIT), Surat	M.Tech	Mechanical Engineering	DN000855	Mechanical Engineering, CAD/CAM, Thermal Systems Design, Turbo Machines, Manufacturing Engineering	(1) OPEN/EWS/OBC CATEGORY: a) B.E. / B.Tech. / B.Arch. or equivalent degree in respective discipline with minimum 60% marks (CGPA 6.5). The said percentage / CGPA The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. b) Minimum working experience of two years after graduation. At least one year continuous experience is required with sponsoring organisation. (2) RESERVED SC/ST/PWD CATEGORY: a) B.E. / B.Tech. / B.Arch. or equivalent degree in respective discipline with minimum Aggregate 55% marks (CGPA 6.0). The said percentage / CGPA The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. b) Minimum working experience of two years after graduation. At least one year continuous experience is required with sponsoring organisation. (3) The candidates must enclose self-attested copies of the following documents/ certificates. Same must be produced at the time of reporting/physical documents verification in concerned departments of SVNIT for admission, otherwise their candidature will not be considered. (i) Appointment letter issued by the current employer. (ii) Experience certificate of last two years duly signed by competent authority on letter head of the Company/Organization/Institute. (iii) Salary certificate / slips of last 24 months. (iv) Income-Tax return of last financial one year and Form-16 of last two years. (v) P.F. statement of at least last one year. (vi) All other documents/ certificate as mentioned in the information brochure of M. Tech. (Sponsored) programme. Note: a) Sponsorship certificate should be from the same organization who has issued the Appointment letter, Experience certificate and Salary slip.

							b) Salary Slip, Experience Certificate of one year must be from same (single) organization. (4) Moreover, the qualifying degree list for the M.Tech. admission 2023 is on the lines of the Centralized Counseling for M.Tech./ M.Arch./ M.Plan. (CCMT: www.ccmt.nic.in). If any difference arises in the qualifying degree nomenclature, the CCMT nomenclature will prevail.

291	QIP0026	Sardar Vallabhbhai National Institute Of Technology (SVNIT), Surat	M.Tech	Computer Science & Engineering	DN000856	Computer Science and Engineering	(1) OPEN/EWS/OBC CATEGORY: a) B.E. / B.Tech. / B.Arch. or equivalent degree in respective discipline with minimum 60% marks (CGPA 6.5). The said percentage / CGPA The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. b) Minimum working experience of two years after graduation. At least one year continuous experience is required with sponsoring organisation. (2) RESERVED SC/ST/PWD CATEGORY: a) B.E. / B.Tech. / B.Arch. or equivalent degree in respective discipline with minimum Aggregate 55% marks (CGPA 6.0). The said percentage / CGPA The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. b) Minimum working experience of two years after graduation. At least one year continuous experience is required with sponsoring organisation. (3) The candidates must enclose self-attested copies of the following documents/ certificates. Same must be produced at the time of reporting/physical documents verification in concerned departments of SVNIT for admission, otherwise their candidature will not be considered. (i) Appointment letter issued by the current employer. (ii) Experience certificate of last two years duly signed by competent authority on letter head of the Company/Organization/Institute. (iii) Salary certificate / slips of last 24 months. (iv) Income-Tax return of last financial one year and Form-16 of last two years. (v) P.F. statement of at least last one year. (vi) All other documents/ certificate as mentioned in the information brochure of M. Tech. (Sponsored) programme. Note: a) Sponsorship certificate should be from the same organization who has issued the Appointment letter, Experience certificate and Salary slip.

							b) Salary Slip, Experience Certificate of one year must be from same (single) organization. (4) Moreover, the qualifying degree list for the M.Tech. admission 2023 is on the lines of the Centralized Counseling for M.Tech./ M.Arch./ M.Plan. (CCMT: www.ccmt.nic.in). If any difference arises in the qualifying degree nomenclature, the CCMT nomenclature will prevail.

292	QIP0026	Sardar Vallabhbhai National Institute Of Technology (SVNIT), Surat	M.Tech	Electrical Engineering	DN000857	Power Electronics and Drives, Power Systems, Instrumentation and Control	(1) OPEN/EWS/OBC CATEGORY: a) B.E. / B.Tech. / B.Arch. or equivalent degree in respective discipline with minimum 60% marks (CGPA 6.5). The said percentage / CGPA The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. b) Minimum working experience of two years after graduation. At least one year continuous experience is required with sponsoring organisation. (2) RESERVED SC/ST/PWD CATEGORY: a) B.E. / B.Tech. / B.Arch. or equivalent degree in respective discipline with minimum Aggregate 55% marks (CGPA 6.0). The said percentage / CGPA The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. b) Minimum working experience of two years after graduation. At least one year continuous experience is required with sponsoring organisation. (3) The candidates must enclose self-attested copies of the following documents/ certificates. Same must be produced at the time of reporting/physical documents verification in concerned departments of SVNIT for admission, otherwise their candidature will not be considered. (i) Appointment letter issued by the current employer. (ii) Experience certificate of last two years duly signed by competent authority on letter head of the Company/Organization/Institute. (iii) Salary certificate / slips of last 24 months. (iv) Income-Tax return of last financial one year and Form-16 of last two years. (v) P.F. statement of at least last one year. (vi) All other documents/ certificate as mentioned in the information brochure of M. Tech. (Sponsored) programme. Note: a) Sponsorship certificate should be from the same organization who has issued the Appointment letter, Experience certificate and Salary slip.

							b) Salary Slip, Experience Certificate of one year must be from same (single) organization. (4) Moreover, the qualifying degree list for the M.Tech. admission 2023 is on the lines of the Centralized Counseling for M.Tech./ M.Arch./ M.Plan. (CCMT: www.ccmt.nic.in). If any difference arises in the qualifying degree nomenclature, the CCMT nomenclature will prevail.

293	QIP0026	Sardar Vallabhbhai National Institute Of Technology (SVNIT), Surat	M.Tech	Electronics Engineering	DN000859	Communication Systems, VLSI & Embedded Systems	(1) OPEN/EWS/OBC CATEGORY: a) B.E. / B.Tech. / B.Arch. or equivalent degree in respective discipline with minimum 60% marks (CGPA 6.5). The said percentage / CGPA The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. b) Minimum working experience of two years after graduation. At least one year continuous experience is required with sponsoring organisation. (2) RESERVED SC/ST/PWD CATEGORY: a) B.E. / B.Tech. / B.Arch. or equivalent degree in respective discipline with minimum Aggregate 55% marks (CGPA 6.0). The said percentage / CGPA The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. b) Minimum working experience of two years after graduation. At least one year continuous experience is required with sponsoring organisation. (3) The candidates must enclose self-attested copies of the following documents/ certificates. Same must be produced at the time of reporting/physical documents verification in concerned departments of SVNIT for admission, otherwise their candidature will not be considered. (i) Appointment letter issued by the current employer. (ii) Experience certificate of last two years duly signed by competent authority on letter head of the Company/Organization/Institute. (iii) Salary certificate / slips of last 24 months. (iv) Income-Tax return of last financial one year and Form-16 of last two years. (v) P.F. statement of at least last one year. (vi) All other documents/ certificate as mentioned in the information brochure of M. Tech. (Sponsored) programme. Note: a) Sponsorship certificate should be from the same organization who has issued the Appointment letter, Experience certificate and Salary slip.

							b) Salary Slip, Experience Certificate of one year must be from same (single) organization. (4) Moreover, the qualifying degree list for the M.Tech. admission 2023 is on the lines of the Centralized Counseling for M.Tech./ M.Arch./ M.Plan. (CCMT: www.ccmt.nic.in). If any difference arises in the qualifying degree nomenclature, the CCMT nomenclature will prevail.

294	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Engineering	Mechanical Engineering	DN000697	1. Design, Production, Thermal Engineering 2. Industrial Engineering	Inst: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the year/ semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.5 CGPA). Deptt: 1. Design, Production, Thermal Engineering: Master's Degree in Mechanical Engineering/ relevant Engineering discipline to be approved by the department. 2. Industrial Engineering: Master's Degree in any Engineering discipline/ any relevant non- engineering discipline i.e. MBA, PGDM, MCA, M.Stat., etc., as approved by the department. Any other relevant PG degree with focus of Industrial engineering to be approved by the department.
295	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Engineering	Rural Development & Technology	DN000700	Artisanal technologies and rural industries, Biogas Production and enrichment and animal power, Renewable energy technologies, Rural energy systems, Agricultural machines and power, Biomass and Environment, Microbial Biotechnology, Ecological Sanitation. Bioremediation, Waste Management, Bio fertilizers and Biopesticides, Tissue culture, Mushroom technology, Algal Biofuels, Food Quality & Safety, Rapid Composting, Waste water treatment and Bioenergy generation, Dairy and Food Engineering, Rural Development Planning, Panchgavya scientific validation, phytochemistry,	Inst: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the year/ semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.5 CGPA). Deptt: Master's degree in any discipline of Engineering/ Technology or Science.

						Governmentality studies, Social Exclusion, Public Policy, Indigenous communities, Bio-char & its valorization, LCA, Block chain and nanotechnology in rural perspective, Isolation Encapsulation and value addition of food bioactives, Food printing	

296	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Management	Management Studies	DN000751	General Management, Economic Development, Indian Financial System, International Business, Competitiveness, Corporate Planning, Corporate Governance, Organization Management and Development, Organizational Behavior, Organizational Studies, Human Resources Management, Organizational Culture, Leadership and Business Ethics, Financial Management, Corporate Finance, Portfolio Management, Security Analysis, Corporate Governance & CSR, Management of Investment, International Finance, Production and Operations Management, Optimization Techniques, Facility Layout/ Location Problems, Multi-level and Multi-objective optimization problems, Manufacturing Systems, Project Management, Risk Management, Infrastructure Projects, Mergers and Acquisitions, Productivity and Efficiency Analysis, Marketing Management, Sales Management, Strategic Marketing Management, Market Research, Product Management, IPR Management, Information Systems & Technology, E-Business, E-Governance, Telecom Systems Management, International Telecom Management, Flexible Systems Management of Change,	Institute: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the year/ semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.5 CGPA). Department: Master's degree in any branch of Engineering/ Technology or Master's degree in Science, Commerce, Economics, Social Science with MBA, or Graduate in any branch of Engineering/ Technology with MBA or equivalent with CGPA 6.75 on a 10-point scale or 60% in aggregate for general category.

						Entrepreneurship Management & Development, Creativity and Innovation Management, R&D Management, Managerial Ethics, Environment Management, Management of Technology, Management of education and academic leadership, Logistics & Supply Chain Management, Social Media & Business Practices, Social Media Analytics, Cyber Security, Business analytics, Big Data/ Natural Language Processing/ Deep Learning/AI, Platform business/ economy, digital transformation IoT/Block chain/Information Security Management, Banking and Financial Institutions, Data science, Machine learning, Digital transformation and smart cities	

297	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Humanities	Humanities and Social Science	DN000752	Psychology Positive Psychology, Social Psychology, Intergroup relations, Social identity, Group based emotions, Intergroup contact and social change, Stigma and wellbeing, Leadership, Cognition, Emotion, Judgement and Decision Making. Sociology Agrarian Studies, Anthropology of the State, Dalit and Tribal Studies, Development Studies, Environmental Sociology, Globalization, Migration, New Media Studies, Political Sociology/Anthropology, Sociology of Culture, Sociology of Food and Nutrition, Sociology of Movements, Sociology of Religion, Sociological Theory, Urban Sociology, Sociology of Gender. Philosophy Moral, Political, and Legal philosophy, Metaphysics of the Self, Philosophy of Mind, Philosophical Aesthetics, Philosophy of Mind and Cognition, Philosophy of Culture and History, Contemporary Thought and Intellectual History, Deep Ecology, Buddhism/and Politics, Exile and Travel, Religion and Politics, Peace Studies, Tibetan Literature and Politics, Ethnicities and Margins, Children and Literature.	Inst: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the year/ semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.5 CGPA). Deptt: M.A. with 1st Class in the relevant subject for English it is 55%. The DRC reserves the right to raise the minimum shortlisting criteria

						Literature Culture Studies, Gender Studies, Performance and Theatre Studies, Digital Humanities, Modernist and Postmodernist Literature, Indian English Theatre, Indian Writing in English, Contemporary Fiction, Postcolonial Literature, Philosophy of Literature Linguistics Phonology, Language Education, Language Variation, Formal Syntax and semantics, Language Acquisition, Cognitive Studies, Computational Linguistics, Psycholinguistics, Neurolinguistics. Economics Microeconomics theory, Game theory, Mechanism design, Decision theory, Structural changes and aggregate productivity, Endogenous growth, Public good provision and income inequality, Development Economics, Issues in India's economic development, Issues in India's Macroeconomy. Interdisciplinary Area (Technology in Society) Further details regarding PhD Areas are available at: https://hss.iitd.ac.in/areas	

298	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Science	Physics	DN000754	Condensed Matter Experiments, Condensed Matter Theory, Statistical and Computational Physics, High Energy Physics, Optics and Photonics, Physics of Quantum Materials & Information Systems, Plasma Physics, Atomic and Molecular Physics, Astrophysics	Inst: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the year/ semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.5 CGPA). Deptt: M.Sc. in Physics/ B.Tech. in Engineering Physics/ M.Tech. in Applied Optics/ Solid State Materials/ Opto-electronics/ Photonics.
299	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Science	Mathematics	DN000756	Pure Mathematics, Applied Mathematics, Statistics, Operational Research, Theoretical Computer Science.	Inst: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the year/ semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.5 CGPA). Deptt: Master's Degree in Mathematics, Statistics, or Operational Research or Computer Science, MCA, B.Tech. in Computer Science, or Mathematics and Computing. For B.Tech. degree the minimum eligibility is 70% marks or 7.0 CGPA in 10-point scale. For B.Sc. and M.Sc. degrees, the minimum eligibility is 60% or 6.0 CGPA in 10-point scale in both the degrees.
300	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Science	Chemistry	DN000758	Physical Chemistry, Organic Chemistry, Inorganic Chemistry, Analytical Chemistry, Bio-chemistry, Theoretical Chemistry, Materials Chemistry.	Inst: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the year/ semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.5 CGPA). Deptt: M.Sc. or M.Tech. with M.Sc. in Chemistry/Biochemistry/Biotechnology/Life

							Sciences/Material Science/Chemistry related discipline with at least 60% marks or CGPA of 6.00 on a ten-point Scale.

301	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Engineering	Biochemical Engineering and Biotechnology (DBEB)	DN000760	Bioprocess Engineering: Engineering analysis of enzymatic, cellular, metabolic processing involving bioprocess kinetics, Modeling for development of reactor operation strategies & process optimization, Use of Innovative bioreactor designs, Process integration & scale-up for economic production of metabolites, Monitoring and control of process parameters, Animal cell technology, Metabolic flux analysis, Bioenergetics, Biotransformation. Downstream Processing: Novel product separation strategies based on sorption, Liquid-liquid extraction, Ultra-filtration, Affinity methods. Molecular Biology and Recombinant DNA Technology: Development of recombinant cultures for hyperproduction of metabolites and commercially important enzymes (β glycosidase, laccase, protease) Protein engineering, Heterologous protein production (including therapeutics in Escherichia coli, Pichia pastoris), Cancer molecular biology, microRNA research and RNA technology, Bioinformatics and Genomics. Bioremediation and Environmental Biotechnology:	Inst: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the year/ semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.5 CGPA). Deptt: M.Tech./ M.S. degree in Chemical/ Biochemical Engineering, Bio-technology, Environmental Bio-technology, Pharmaceutical Biotechnology, Industrial Bio-technology, Applied Microbiology, Biophysics

						Prospecting of microbes & their application in wastewater treatment and agriculture. Pharmaceutical Biotechnology and Industrial Biotechnology. Bionanotechnology: Lab-on-a-chip devices, drug delivery and diagnostics devices. Biological soft-matter and Biomicrofluidics: Microfluidic devices for flow-mediated studies on human cells, electrical manipulation of biological soft-matter systems (cells/liposomes) under static and flow, Biophysics of cell membrane/liposomes Theoretical and Computational Biophysics: Biological fluid dynamics, biophysics of membrane deformation, theoretical modeling of bacterial physiology, mechanics of cell adhesion receptors and cytoskeleton, cell migration in diseases.	

302	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Engineering	Electrical Engineering	DN000790	Computer Architecture, Parallel Processing, Multimedia, Embedded/ Cyber Physical Systems Medical and Public Health Informatics, Computational Linguistics, Systems Biology, Cognitive Science, Computer and Communication Networks, Communications, 5G, beyond 5G and 6G communications, Signal Processing, Image Processing, Computer Vision, Pattern Recognition, Machine Learning, Bio-metrics, Computational Neuroscience, Perception Engineering, Assistive Technology, Medical Electronics/Biomedical Instrumentation, Biomedical Signal/Image Processing, Bio-informatics, Optical Communications, Control Systems, Bio-molecular Circuits and Systems, Adaptive and Robust Control, Learning Control, Multi-agent systems and control, Intelligent Control, Nonlinear Control, Robotics, Systems Theory, Integrated circuits and devices, semiconductor devices, VLSI Design, Photonics, Mixed-Signal/Analog/Digital/RF Circuit design, quantum computing, Memory Technologies, Spintronics, MEMs, Artificial Neural Networks, Neuromorphic Computing, Circuit Testing, Fault	Inst: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the years/semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.50 CGPA). Deptt: Master's degree in an appropriate discipline with an excellent academic record.

						Tolerance, Fail-safe Design, Microelectronics and Power Devices, Biological Neural Networks Analog and RF integrated circuits, Device, Physics and photonics, Electrical Machines and Drives, Power devices , AC and DC power converters, Electric Vehicles, Electric machine design, Wireless Power Transfer, Power Systems, Electricity Markets, Power Quality Generation, Distributed generation & Power generation from renewable sources, Smart grid.	

303	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Science	Centre for Atmospheric Sciences (CAS)	DN000831	Numerical Modeling of the Atmosphere; General circulation; Tropical Meteorology and Indian Monsoon; Land-Surface Process Modeling; Land- Atmosphere Interaction; Ocean Modeling; Coastal Processes; Ocean State Simulations and Forecasting; Storm Surges and inundation; Climate Dynamics; Climate Variability and Changes; Climate Change Detection & Attribution; Global and Regional Climate Modeling; Climate Projections; Climate Change Impacts; Paleoclimate & Climate reconstruction; Urban Climate; Chemical Transport Modelling and Air Quality Prediction, Air Pollution and Health; Aerosol Climate Interactions; Heat Island Effect: Modelling and Measurements; Fog Prediction; Numerical Methods; Renewable Energy Meteorology; Resource Assessment.	Inst: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the year/ semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.5 CGPA). Deptt: M.Tech./ M.Sc./B.Tech. (with valid GATE Score/CSIR/UGC-NET/NBHM/ICAR/ICMR/DST INSPIRE fellowship) degree in Mechanical, Civil, Chemical &Computer Science &Engineering, Physics, Chemistry, Mathematics, Statistics, Oceanography, Environmental Science, Engineering Physics, Atmospheric Science, Meteorology and related fields. For B.Tech. or equivalent the minimum eligibility is 80% marks or 8.0 CGPA. For those with M.Sc. as qualifying degree (or previous degree for those with M.Tech. as a qualifying degree), both Physics and Mathematics must be studied as a subject in the bachelor's degree. The requirement of GATE/national level exam is waived for M.Sc. graduates from IITs or integrated M.Sc. programmes of CFTIs with a CGPA of 8.0 or above.

304	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Engineering	Applied Mechanics	DN000939	(a) Design Engineering: Design Engineering, Design Method and Engineering alternatives, Reliability Engineering, Computer Aided Design, Ergonomics, Reverse Engineering, Design and Analysis of Biomedical Devices, Complaint Mechanisms and Smart Instrumentation, Bio-inspired Engineering. (b) Fluid Mechanics: Bio-fluid mechanics, Computational Aerodynamics, CFD-Computational Fluid Dynamics (includes DNS-Direct Numerical Simulation, LES-Large Eddy Simulation, DES-Detached Eddy Simulation, RANS-Reynolds Averaged Navier 0-Stokesetc.), Internal Flows, Hydrodynamic stability theory, Low-dimensional models and chaos, Micro-air Vehicles. Optical flow diagnostics (PIV-Particle Image Velocimetry and Micro PIV), Pipeline Engineering, Pollution Dispersion, Supersonic and Hypersonic Flows, Turbulence, Turbulent boundary-layer stability and control, two phase flows, Aerodynamics; Turbulent heat transfer compressible flows, Fluid-structure interaction. (c) Solid Mechanics: Large deformations, Impact mechanics, Elasticity, Piezothermoelasticity,	Inst: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the year/ semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.5 CGPA). Deptt: Master's Degree in Mechanical, Civil, Chemical, Aeronautical, Naval Architecture, Applied Mechanics, Engineering Mechanics, Engineering Analysis & Design or Design Engineering.

						Composite materials and structures plates and shells, Non-linear dynamics and chaos, Off-shore structures, Smart structures, Structural stability, Snow mechanics, Dynamic plasticity, Nano composites, Damage mechanics, Soft Materials, Structural health monitoring, Functionally graded structures, Multi-Scale modeling of nano-structures, Bio-mechanics/ cell mechanics, Cardiovascular biomechanics, Brain biomechanics, Computational surgery.	

305	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Engineering	Centre for Sensors, INstrumentation and Cyber-physical Systems Engineering (former IDDC)	DN000940	Sensors and Transducers; Electronic and optical sensors; Electronic Components and Circuits; Electronic circuit design (analog and digital); Electronic Techniques for Signal Conditioning and Interfacing; Signal and Image processing; CMOS analog and mixed signal circuits & systems for sensors; Optical Metrology; Micro-optics; Aspheric and freeform optics; Optical instrumentation; Holographic microscopy; Digital speckle pattern interferometry; Optical coherence tomography; Display Devices and Technology; Quantum optical devices; Integrated quantum technologies; Optical image processing; Machine Vision and Automation; Signal, Image and Video Processing Techniques for Non-destructive Testing; Tera Hz, InfraRed, X-ray, and Ultrasound Imaging Modalities; Precision Measurement Systems; Precision mechanics; Instrumentation and Control; Instrument Design and Simulations; Mechatronics; Embedded systems; Sensors Systems; Smart Systems	Inst: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the year/ semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.5 CGPA). Centre: Master's Degree in Instrument Technology (JID)

306	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Engineering	Energy Science & Engineering	DN000941	Internal Combustion Engines, Thermal Engineering, Solar Thermal, Power Systems, Power Electronics, Machine Drives, Control System and Devices, Instrumentation and Control, Solar Photovoltaics, Wind Energy, Hydro Power, Plasma Science and Technology, Nuclear Engineering, Energy Conservation and Management, Bio Energy, Turbo Machinery, Building Energy Management, Computational Fluid Dynamics (Thermal Fluids), Fuel Cells, and Electrical, Thermal and Electro-Chemical Energy Storage. Biomass Combustion Characteristics and Chemical Analysis Hydrogen Energy, Fuel Cells, Multiphase flow for Energy Sector	Inst: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the year/ semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.5 CGPA). Deptt: Bachelor's degree in Mechanical, Chemical, Electrical, Electrical and Electronics, Energy, Physics and Master Degree in the preferred research areas mentioned.
307	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Engineering	Biomedical Engineering	DN001080	Biomaterials, Biomechanics, Medical Imaging, and Bioinstrumentation.	Inst: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the year/ semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.5 CGPA). Deptt: Master's degree in any branch of Engineering/ Science/ Mathematics/ M.B.B.S. with 60% MD/MS with first class and B.Tech. or equivalent having above 70% are also eligible to apply for Ph.D.

308	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Engineering	Centre for Applied Research in Electronics (CARE)	DN001081	(a) Biosensors, Microelectronics and MEMS. (b) Microwave Circuits, Antennas, RF MEMS, MMICS, Device Modeling. (c) Signal Processing, Underwater and Air Acoustics Signal Processing, Speech and Audio Signal Processing, Communications, Multi-Sensor fusion.	Inst: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the year/ semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.5 CGPA). Deptt: Master's degree with the Preceding degree in appropriate area with first class throughout. Master's degree in Electrical, Electronics, or Communication Engineering or equivalent, with minimum marks: GEN: 75%, OBC: 70%, SC/ST/PH: 65%.
309	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Engineering	Centre for Automotive Research and Tribology (CART)	DN001082	Tribology: Tribology of Polymers & composites, nano-composites, ceramics and metals. Wear Mechanisms and modeling of metallic and non- metallic materials and surface engineering. Boundary and Hydrodynamic lubrication, E-HD lubrication, lubricant characterization and analysis, tribology of bearings and other machine elements. Pneumatics, conveying of bulk solids, operational problems like erosion and degradation. Maintenance Engineering and Machine Dynamics: Condition based maintenance, signature analysis, vibration, acoustic emission, temperature and wear debris monitoring techniques, maintenance planning and control, computer aided maintenance audit, reliability, availability and maintainability	Inst: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the year/ semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.5 CGPA). Deptt: Master's Degree in Engineering (Mechanical, Chemical, Industrial).

						(RAM) engineering, vibration & noise analysis and control, risk analysis and safety, non-destructive testing, residual life estimation, failure analysis, performance and dynamic study of machine elements and equipment like pumps, compressors, turbines, design for maintenance, etc. turbines, etc., Design for maintenance etc.	
310	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Engineering	Chemical Engineering	DN001083	All areas of Chemical Engineering	Inst: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the year/ semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.5 CGPA). Deptt: M.Tech. in engineering or M.Sc. in Science / B.Tech. with GATE Score

311	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Engineering	Civil Engineering	DN001084	1. Construction Engineering and Management 2. Engineering Geology 3. Environmental Engineering 4. Offshore Structures 5. Rock Engineering 6. Geotechnical and Geo-environmental Engineering 7. Structural Engineering 8. Remote Sensing 9. Transportation Engineering 10. Water Resources Engineering	Inst: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the year/ semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.5 CGPA). Deptt: 1. Construction Engineering and Management : Master's degree in Civil Engineering or Architecture or equivalent or relevant Master's degree in Engineering. 2. Engineering Geology : Master's degree in Civil Engineering or in Applied Geology or relevant Master's degree in Engineering. 3. Environmental Engineering: Master's degree in Civil or in Environmental Engineering or Chemical Engineering or Biochemical & Biotechnology or relevant Master's degree in Engineering. 4. Offshore Structures: Master's degree in Civil Engineering or relevant Master's degree in Engineering. 5. Rock Engineering : Master's degree in Civil or Mining Engineering or in Applied Geology or relevant Master's degree in Engineering. 6. Geotechnical and Geo-environmental Engineering: Master's degree in Civil Engineering or Materials Science & Engineering relevant Master's degree in Engineering. 7. Structural Engineering: Master's degree in Civil Engineering or Materials Science & Engineering relevant Master's degree in Engineering. 8. Remote Sensing: Master's degree in Civil, Agricultural or Mining Engineering or relevant Master's degree in Engineering. 9. Transportation Engineering: M.Tech. in Civil Engineering/ Transportation Engineering/ Transportation Planning, Masters in Planning (including City/ Urban/ Regional Planning). 10. Master's degree in Civil Engineering or relevant Master's degree in Engineering.

312	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Engineering	Computer Science & Engineering	DN001085	Computer Architecture, Design Automation and VLSI, HW-SW Co Design, Embedded Systems Design, Parallel Processing, Image Processing, Artificial Intelligence, Location Based Services, Computer Vision, Computer Graphics and Animation, Semantics of Programming Languages Machine Learning, Databases, Information Retrieval, Data Mining Social Network Analysis, Computer Networks, Wireless Networks, Systems and Network Security, Design and Analysis of Algorithms, Optimization, Computational Geometry, Computational and Systems Biology, Computational Logic, Operating Systems, IT for Development, Mobile Computation, Verification, Concurrency, Complier Design, Virtualization and Cloud Computing.	Inst: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the year/ semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.5 CGPA). Deptt: Master's degree in Computer Science, Electronics Engineering, Mathematics or Physics with formal background in Computer Science or MCA Excellent academic record i.e. ≥ 80% or 8.0 CGPA in qualifying degree.

313	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Engineering	Design	DN001086	Industrial Design, Product Design, Engineering Design, Computer Aided Design and Manufacturing, Design for Product Life Cycle, Usability, User Experience, Design for Wellness, Design for Sustainability, Design for Environment, Packaging Design, Visual Communication, Visual Narratives, Comics Studies, Design for Children Education, Healthcare Design, Design of Sustainable Habitats, Data Science and Design, Design of Assistive Technologies, Design for Industry 4.0., Human Factors and Ergonomics, Universal/ Inclusive Design; Social and Cultural Factors in Design; Design Research, Filmmaking, Animation, Digital Media, Game Design, Cultural Construction, Design Research.	Inst: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the year/ semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.5 CGPA). Deptt: Industrial Design, Product Design, Engineering Design, Computer Aided Design and Manufacturing, Design for Product Life Cycle, Usability, User Experience, Design for Wellness, Design for Sustainability, Design for Environment, Packaging Design, Visual Communication, Visual Narratives, Comics Studies, Design for Children Education, Healthcare Design, Design of Sustainable Habitats, Data Science and Design, Design of Assistive Technologies, Design for Industry 4.0., Human Factors and Ergonomics, Universal/ Inclusive Design; Social and Cultural Factors in Design; Design Research, Filmmaking, Animation, Digital Media, Game Design, Cultural Construction, Design Research.

314	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Engineering	Materials Science	DN001087	Synthesis of polymers, Structure-property correlation in polymers, Rheology and processing of polymers, polymers matrix composites, tribology and mechanical behavior of polymers, membranes for various applications, antifouling and ant biofouling materials. Polymer blends and alloys, biodegradable polymers, nanocomposites, hydro/cryogels for bio medical applications, surface functionalization. Structure-property correlation in advanced materials, Metal matrix composites, 3D printing, nano-scale friction and wear, Auxetic materials, Materials characterization using advanced microscopy, phase transformation, tools, functionally graded materials, nanomaterials, Advanced ceramics, high entropy alloys, materials for extreme environments, thermal barrier coatings, Alloy processing and properties, refractory metals and compounds, First principle Density Functional Theory (DFT) based material design, Micro magnetic simulations, Semiconductor nanostructures and device applications, Magnetic nanowires and magnetic tunnel junctions for	Inst: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the year/ semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.5 CGPA). Deptt: M.Tech. in Polymer Science and Engineering or Plastic & Rubber Technology or Chemical Engineering, Chemical Technology or Fiber Science & Technology or Materials Engineering, Metallurgical Engineering, Ceramic Engineering, Mechanical Engineering, or M.Sc. in Chemistry, Physics, or Materials Science.

						spintronic device applications; Organic electronics.	

315	QIP0027	Indian Institute of Technology (IIT), Delhi	Ph.D Engineering	Textile & Fibre Engineering	DN001088	Textile Engineering: Design and analysis of yarn and fabric formation systems: ring spinning, rotor spinning, friction spinning, air jet spinning, weaving, knitting, braiding, nonwovens; Structural mechanics of textile materials; Apparels and garments; comfort, handle and other functional aspects of textiles; Design and development of technical textiles; agro-textiles, geo-textiles, home textiles, textiles for filtration, medical textiles, automotive textiles, textiles for environmental protection, packaging textiles, protective textiles, sport textiles, textiles for building & construction; Fibrous composites; Textile machine design; Textile instrumentation; Modeling and simulation of textile processes and products; Management in textiles; project formulations, project appraisals, operations management, supply chain management, quality management. Fibre Science & Technology: Synthesis and characterization of advanced polymeric materials; Fibre formation processes; Modelling and simulation; Structure-property correlation; Functional and responsive polymers, smart & intelligent	Inst: In all cases, the minimum eligibility is Master's degree in Engineering/Technology or Master's degree in Science/Humanities with a minimum of 60% (6.00 CGPA) marks in aggregate (of all the year/ semesters of the qualifying examination) or equivalent grade point average (as determined by IIT Delhi). For SC/ST/PH category candidates, the minimum performance in the qualifying degree is relaxed from 60% to 55% (from 6.00 to 5.5 CGPA). Deptt: M.Tech. or Equivalent in Textile Technology, Textile Engineering, Fiber Science and Technology, Textile Chemistry/ Computer Science & Engineering/ Electronics Engineering / Electrical Engineering/ Mechanical Engineering/ Chemical Engineering/ Civil Engineering/ Biochemical Engineering/ Materials Science & Engineering/ Production Engineering/ Industrial Engineering / Biotechnology/ Apparel Engineering/ Fashion Technology/ Microbiology, Nanotechnology/ Polymer Science/ Rubber Technology. M. Sc. in Physics/ Chemistry.

						textiles; Modification of natural and synthetic fibres; Nanotechnology in Textiles; synthesis and applications of nanofibers and nanomaterials; Coated textiles; Polymer nanocomposites; Green composites; Medical textiles; Tissue engineering; Sustainability; Polymer recycling. Textile Chemical Technology: Textile chemical processing; preparatory processes, dyeing, printing and finishing; Surface functionalization; Micro and nano encapsulation; Conducting textiles; Natural dyes; Bio-active textiles; Textile ecology and environment.	

316	QIP0028	Alagappa Chettiar Government College of Engineering and Technology, Karaikudi	Ph.D Engineering	Civil Engineering	DN000296	Environmental Engineering, Structural Engineering, Construction Engineering and Management, Irrigation Water Management, Hydrology and Water Resources Engineering, Soil Mechanics and Foundation Engineering, Environmental Management, Environmental Science,Infrastructure Engineering.	M.E./M.Tech. degree in relevant field of Engineering or its equivalent degree
317	QIP0028	Alagappa Chettiar Government College of Engineering and Technology, Karaikudi	Ph.D Engineering	Electronics & Communication Engineering	DN000318	Microwave and Optical communication/Applied Electronics/Communication Engineering/Laser & Electro. Optical Engineering/VLSI Design and Embedded Systems/RF and Optical/Wireless Communication/Visible light communication.	M.E./M.Tech. degree in relevant field of Engineering or its equivalent degree
318	QIP0028	Alagappa Chettiar Government College of Engineering and Technology, Karaikudi	Ph.D Engineering	Electrical & Electronics Engineering	DN000384	Power Electronics and Drives, Power Systems Engineering, Control and Instrumentation Engineering, Electrical Machines, Embedded System Technologies, Renewable Energy system ,Electric Vehicle system, High Voltage Engineering,Embedded controller, IOT, Artificial Intelligent controller	M.E./M.Tech. degree in relevant field of Engineering or its equivalent degree
319	QIP0028	Alagappa Chettiar Government College of Engineering and Technology, Karaikudi	Ph.D Engineering	Mechanical Engineering	DN000386	Engineering Design, Robotics, Manufacturing Engineering, CAD/CAM, Mechatronics, Product Design and Development Automobile Engineering, Heat Power Engineering, Industrial Engineering, Internal	M.E./M.Tech. degree in relevant field of Engineering or its equivalent degree

						Combustion Engineering, Thermal Engineering.	
320	QIP0028	Alagappa Chettiar Government College of Engineering and Technology, Karaikudi	Ph.D Engineering	Computer Science & Engineering	DN000388	Artificial Intelligence and Machine Learning, Communication and Networking, Bio metrics and Cyber Security, Big Data Analytics Web and Mobile Technology, Cloud Computing, Network Security, Software Engineering	M.E./M.Tech. degree in relevant field of Engineering or its equivalent degree
321	QIP0028	Alagappa Chettiar Government College of Engineering and Technology, Karaikudi	Ph.D Science	Physics	DN000389	Applied physics, Theoretical Physics, Material science, Thin film technology, Nano science & Nanotechnology, Nonlinear Optics, Nonlinear Dynamics, Nuclear Physics, Quantum Mechanics, solar cell and Gas sensors.	Master's degree in the relevant discipline or its equivalent degree

322	QIP0029	Walchand College of Engineering, Sangli	Ph.D Engineering	Civil Engineering	DN000167	Civil Environmental Engineering: Water and Wastewater Treatment, Modeling of Environmental Systems, Solid Waste Management, Air Pollution, Constructed Wetlands. Civil Building Technology: Structural masonry and materials, Construction project management, Energy Efficiency in Building, Passive design in building performance. Civil Structural Engineering: Earthquake Engineering, Finite Element Analysis, Structural dynamics, Concrete technology, Structural Engineering, Design optimization, Composite material, Smart material, Structural Health Monitoring, Rehabilitation and retrofitting of structures, Nano-machines and Nano-material, Pre- stressed concrete.	Candidates seeking admission to the Ph.D. programme shall have a Master's degree or a professional degree declared equivalent to the Master's Degree by the Shivaji University or by statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions. A relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, shall be allowed for those belonging to reserved categories (SC/ST/VJNT/OBC/EWS) and/or Differently-abled candidates as per policies of the Government prescribed from time to time, or for those who had obtained their Master's degree prior to 19th September, 1991. The eligibility marks of 55% (or an equivalent grade in a point scale wherever grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedures

323	QIP0029	Walchand College of Engineering, Sangli	Ph.D Engineering	Mechanical Engineering	DN000171	Heat Power Thermal Engineering, Cryogenics, Production Engineering Mechatronics, Micromachining, Manufacturing, Design Engineering, Condition Monitoring, Industrial Engineering, Vibration and Acoustics, Non- conventional machining.	Candidates seeking admission to the Ph.D. programme shall have a Master's degree or a professional degree declared equivalent to the Master's Degree by the Shivaji University or by statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions. A relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, shall be allowed for those belonging to reserved categories (SC/ST/VJNT/OBC/EWS) and/or Differently-abled candidates as per policies of the Government prescribed from time to time, or for those who had obtained their Master's degree prior to 19th September, 1991. The eligibility marks of 55% (or an equivalent grade in a point scale wherever grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedures

324	QIP0029	Walchand College of Engineering, Sangli	Ph.D Engineering	Electrical Engineering	DN000173	Power System Analysis, Operation, Control and Protection, Power Quality Issues, Power Electronics and Drives, High Voltage Engineering, Renewable Energy Sources, Control Systems, Adaptive and Optimal Control Systems, Non Liner and Digital Control Systems, Micro-grid, and Distributed generation.	Candidates seeking admission to the Ph.D. programme shall have a Master's degree or a professional degree declared equivalent to the Master's Degree by the Shivaji University or by statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions. A relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, shall be allowed for those belonging to reserved categories (SC/ST/VJNT/OBC/EWS) and/or Differently-abled candidates as per policies of the Government prescribed from time to time, or for those who had obtained their Master's degree prior to 19th September, 1991. The eligibility marks of 55% (or an equivalent grade in a point scale wherever grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedures.

325	QIP0029	Walchand College of Engineering, Sangli	Ph.D Engineering	Electronics Engineering	DN000176	Digital Signal Processing, Electronic Communication Engineering, VLSI Design, Image Processing, Electronic System Design, Control Systems, Mobile Communication, Sensor Networks, Image Processing, Microwave Energy, Biomedical Electronics, Machine Vision.	Candidates seeking admission to the Ph.D. programme shall have a Master's degree or a professional degree declared equivalent to the Master's Degree by the Shivaji University or by statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions. A relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, shall be allowed for those belonging to reserved categories (SC/ST/VJNT/OBC/EWS) and/or Differently-abled candidates as per policies of the Government prescribed from time to time, or for those who had obtained their Master's degree prior to 19th September, 1991. The eligibility marks of 55% (or an equivalent grade in a point scale wherever grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedures.

326	QIP0029	Walchand College of Engineering, Sangli	Ph.D Engineering	Computer Science & Engineering	DN000179	Artificial Intelligence, Pattern Recognition, Machine Learning, Databases, Data Mining, Networking, Image Processing, Network Security, High Performance Computing, Cloud Computing, Computer Vision, GIS, Big Data, IoT, Soft Computing, Deep Learning, Distributed Ledgers, Object Identification and Digital Surveillance.	Candidates seeking admission to the Ph.D. programme shall have a Master's degree or a professional degree declared equivalent to the Master's Degree by the Shivaji University or by statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions. A relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, shall be allowed for those belonging to reserved categories (SC/ST/VJNT/OBC/EWS) and/or Differently-abled candidates as per policies of the Government prescribed from time to time, or for those who had obtained their Master's degree prior to 19th September, 1991. The eligibility marks of 55% (or an equivalent grade in a point scale wherever grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedures

327	QIP0029	Walchand College of Engineering, Sangli	M.Tech	Civil Engineering	DN000702	1)Civil - Structural Engineering 2) Civil - Environmental Engineering	1)Civil - Structural Engineering : B.E or B. tech in the following area Civil Engineering, Civil and Water Management Engineering, Construction Engineering, Construction Technology, Structural Engineering 2) Civil - Environmental Engineering : B.E or B. tech in the following area Civil Engineering, Civil and Water Management Engineering, Environmental Engineering, Environmental Science and Technology, Construction Technology, Environmental Science & Engineering, Environmental Science & Technology, Construction Engineering, Structural Engineering
328	QIP0029	Walchand College of Engineering, Sangli	M.Tech	Mechanical Engineering	DN000703	1) Mechanical - Heat Power Engineering 2) Mechanical - Production Engineering 3) Mechanical - Design Engineering	B. E. or B. tech in the following area : Aeronautical Engineering, Automobile Engineering, Production Engineering, Mechanical Engineering, Mechanical Engineering[Sandwich], Production Engineering[Sandwich], Metallurgical Engineering, Manufacturing Science &Technology, Manufacturing Technology, Material Science & Engineering, Material Science & Technology, Mechanical & Automation Engineering, Production Design & Engineering, Tool Engineering, Production & Industrial Engineering, Production Engineering & Design, Computer aided design, Computer aided design & Manufacturing, Mechanical Automation Engineering, Machine Tool Engineering, Aerospace Engineering, Industrial & Production Engineering, Manufacturing Engineering, Automotive Design, Material Science, Mechanical and Energy, Machine Design, Automation & Robotics, Automation Engineering, Manufacturing Engineering &Technology, AMIE - Mechanical Engineering, AMIE - Production Engineering, AMIE - Material and Mettalurgical Engineering, Mechanical Engineering Automobile, Mechanical Engineering (Auto), Automotive Technology, Robotics

329	QIP0029	Walchand College of Engineering, Sangli	M.Tech	Electrical Engineering	DN000704	1) Electrical - Power System Engineering 2) Electrical - Control System Engineering	1) Electrical - Power System Engineering : B. E or B. tech in the following area Electrical Engineering, Electrical and Electronics Engineering, Electrical Engg [Electrical and Power], Electrical Engg [Electronics and Power], Electrical and Power Engineering, Electrical and Electronics [Power System], Electronics and Power Engineering, Electrical, Electronics and Power 2) Electrical - Control System Engineering : B. E or B. tech in the following area Electrical Engineering, Electrical and Electronics Engineering, Electrical Engg [Electrical and Power], Electronics Design Technology, Electrical Engg [Electronics and Power], Electronics and Communication Engineering, Electronics and Telecommunication Engg, Electronics Engineering, Electrical and Power Engineering, Instrumentation and Control Engineering, Instrumentation Engineering, Electrical and Electronics [Power System], Electronics and Power Engineering, Electrical, Electronics and Power, Electronics and Instrumentation Engineering, Instrumentation Technology, Electronics Technology, Electronics Science and Engineering, Electronics Control Systems
330	QIP0029	Walchand College of Engineering, Sangli	M.Tech	Electronics Engineering	DN000705	Electronics Engineering	B. E. or B. tech degree in the following area Electrical Engineering, Electrical and Electronics Engineering, Electronics Design Technology, Electronics and Communication Engineering, Electronics and Telecommunication Engg, Electronics Engineering, Electronic and Communication Technology, Bio Medical Engineering, Instrumentation and Control Engineering, Instrumentation Engineering, Electronics Technology, Electrical and Electronics [Power System], Electronics and Power Engineering, Industrial Electronics, Power Electronics, Electronics product design technology, Electronics and Instrumentation Engineering, Telecommunication Engineering, Biomedical Instrumentation, Electronics Technology, Electronics Science and Engineering, Applied Electronics and Instrumentation Engineering

331	QIP0029	Walchand College of Engineering, Sangli	M.Tech	Computer Science & Engineering	DN000707	Computer Science and Engineering	B. E. or B. tech in the following area : Computer Science and Engineering, Computer Engineering, Information Technology, Computer Technology, Computer Science and Technology, Electrical Engineering, Electrical and Electronics Engineering, Electrical Engg [Electrical and Power], Electronics Design Technology, Electrical Engg [Electronics and Power], Electronics and Communication Engineering, Electronics and Telecommunication Engg, Electronics Engineering, Electronic and Communication Technology, Electrical and Power Engineering, Instrumentation and Control Engineering, Instrumentation Engineering, Computer Science, Electronics Technology, Electronics and Power Engineering, Electronics product design technology, Electronics and Instrumentation Engineering, Telecommunication Engineering, Information Technology / Computer Science, Computer Science and Systems Engineering, Information Science and Engineering, Communication Systems, Instrumentation Technology, Information Engineering, Electronics Technology, Electronics Science and Engineering, Electronics Control Systems, Electronics Information Systems, Applied Electronics and Instrumentation Engineering, Communication Engineering, Information Technology & Engineering, Computer Science and Information Technology
332	QIP0029	Walchand College of Engineering, Sangli	M.Tech	Information Technology	DN000708	Computer Science and Information Technology	B. E or B. tech degree in the following area : Computer Science and Engineering, Computer Engineering, Information Technology, Computer Science and Technology, Electrical and Electronics Engineering, Electronics and Communication Engineering, Electronics and Telecommunication Engg, Electronics Engineering, Electronic and Communication Technology, Instrumentation and Control Engineering, Instrumentation Engineering, Electronics and Instrumentation Engineering, Telecommunication Engineering, Information Science and Engineering, Communication Systems, Instrumentation Technology, Information Engineering, Electronics Technology, Applied Electronics and Instrumentation Engineering, Communication Engineering, Information Science and Engineering, Information Technology & Engineering, Communication Systems

333	QIP0030	Indian Institute of Technology (IIT), Patna	Ph.D Engineering	Computer Science & Engineering	DN001061	All areas including (but not limited to) 802.11 Wireless Network Adhoc Networks and Sensor Networks Analog EDA Big Data Computing Bioinformatics Biomedical Imaging Bio-Text Mining Blockchain and Smart Contract CAD for VLSI Cloud Computing Cloud Security Complex Networks Computational biometrics and forensics Computer Vision Consensus in Blockchain Database & Data Mining Applications Deep learning Discrete Event Modeling Distributed Systems Empathetic Conversational Artificial Intelligence and Affective Computing Energy management & Intelligent transportation systems Fault-Tolerant Computing Federated Learning Formal Methods for Analysis and Verification Hardware Security Human-Computer Interaction Image Processing Information Extraction Information Systems Security	the upper age limit is 28 years (B.Tech./B.E./M.Sc./MA/MCA/MBA) and 32 years (M.Tech./M.E./M.S./M.Phil.) to be calculated as on the last date of application and is applicable only for candidates applying in Regular and Full time category, as institute fellow. For Research/ project fellows, age limit will be as per the funding agency norms. In absence of any age criteria, the Institute norms will be followed. Upper age limit is relaxed up to 05 years in case of candidate belonging to Schedule Castes/Schedule Tribes, Women, Physically Handicapped and OBC applicants. Ph.D. in Engineering For admission to the Ph.D. Programme in Engineering Department, a candidate must satisfy one of the following criteria: A.1.1 Candidates having M.Tech./M.E. degree in a Engineering/Technology, with a minimum CPI of 6.5 or 60% of marks. A.1.2 Bachelor's degree in Engineering/Technology (from any Institute other than IITs) in a relevant area with a minimum CPI of 8.0 or 75% of marks. A.1.3. Bachelor's degree from an Indian Institute of Technology (IIT) in a relevant area with a minimum CPI of 7.0. A.1.4. Master's degree in Science in a relevant area with a minimum CPI of 7.5 or 70%. Candidates should note that if both CPI/CGPA and percentage are indicated in transcript/marksheet of the qualifying degree then only CPI/CGPA shall be taken into account for determining eligibility. Direct Admission (Waiver of Entrance Test): For candidates in Sciences, Engineering &Technology:

						IoT Security Machine Learning Machine learning Security Malware detection Medical image analysis Mobile Social Computing Modeling of social networks Multimodal Artificial Intelligence Multiobjective Optimization Natural Language Processing Online Algorithms Pattern Recognition Programming Languages Reinforcement learning Security & Privacy Service recommendation Social Networks Soft Computing Text Mining VLSI Design and Methodologies Wi-Fi Security, Wireless Networking Robotic Applications 5G Network Slicing Swarm Drones	The Institute may admit exceptionally bright students and Full-time (Institute Fellows) directly (i.e., without entrance test) into the Ph.D. program. Eligible candidates meeting one of the following criteria may be considered for a waiver of the entrance test: 1. B.Tech. from the IITs, graduated within the last five years, with a degree in the respective discipline with a CPI/CGPA of 8/10 and above. 2. Masters from the IITs/IISc, graduated within the last five years, with a degree in the respective discipline with a CPI/CGPA of 8.5/10 and above. Such a candidate has to apply online. Additionally, an email must be sent with scanned copy of the supporting documents to aracademic@iitp.ac.in There would be no admission in direct admission category in Department of Humanities and Social Sciences. Relaxation for SC/ST Candidates: Eligibility criteria will be relaxed by 5% marks or 0.5 CPI for SC/ ST applicants. Reservations: The reservation of seats in admissions for SC, ST, OBC, EWS categories and for Persons with Disability (PwD) will be as per Government of India rules. OBC (Non-creamy layer) candidates will have to produce certificate and self-declaration statement as per formats indicated at Annexure- I and II available in the website, link https://www.iitp.ac.in/acad/admission.php

334	QIP0030	Indian Institute of Technology (IIT), Patna	Ph.D Engineering	Chemical & Biochemical Egnineering	DN001062	Ambient pressure NH3 formation using heterogeneous catalysis Artificial Intelligence in Process system engineering Carbon foot printing Chemical Kinetics and Catalysis Continuous downstream processing CO2 conversion to Carbon nanotube Crystallization Data driven optimization Energy and Exergy management Food processing Process system engineering Ice-nucleation Microwave Assisted Material Processing Molecular Modeling and Simulation Modelling of viscoelastic flows Phase behaviour of confined fluid Phase change materials Photocatalyst for CO2 reduction and N2 fixation Photoelectrochemical processes for clean energy Pinch Analysis Plasma catalysis Process design and optimization Process Integration Production planning Reactive distillation Renewable energy integration Renewable Energy Sources and Their Applications plastic to fuel using renewable	the upper age limit is 28 years (B.Tech./B.E./M.Sc./MA/MCA/MBA) and 32 years (M.Tech./M.E./M.S./M.Phil.) to be calculated as on the last date of application and is applicable only for candidates applying in Regular and Full time category, as institute fellow. For Research/ project fellows, age limit will be as per the funding agency norms. In absence of any age criteria, the Institute norms will be followed. Upper age limit is relaxed up to 05 years in case of candidate belonging to Schedule Castes/Schedule Tribes, Women, Physically Handicapped and OBC applicants. Ph.D. in Engineering For admission to the Ph.D. Programme in Engineering Department, a candidate must satisfy one of the following criteria: A.1.1 Candidates having M.Tech./M.E. degree in a Engineering/Technology, with a minimum CPI of 6.5 or 60% of marks. A.1.2 Bachelor's degree in Engineering/Technology (from any Institute other than IITs) in a relevant area with a minimum CPI of 8.0 or 75% of marks. A.1.3. Bachelor's degree from an Indian Institute of Technology (IIT) in a relevant area with a minimum CPI of 7.0. A.1.4. Master's degree in Science in a relevant area with a minimum CPI of 7.5 or 70%. Candidates should note that if both CPI/CGPA and percentage are indicated in transcript/marksheet of the qualifying degree then only CPI/CGPA shall be taken into account for determining eligibility. Direct Admission (Waiver of Entrance Test): For candidates in Sciences, Engineering &Technology:

						energy sources. Robust optimization Scheduling and optimization Separation processes Stochastic optimization Sustainable chemical processing Computational Fluid dynamics Treatment of Pharmaceutical Waste Thermal management of lithium-ion batteries Wastewater Treatment using Advanced Oxidation Processes Wetting and interfacial properties of Ionic Liquid and Deep Eutectic Solvent Ambient pressure NH3 formation using heterogeneous catalysis Artificial Intelligence in Process system engineering	The Institute may admit exceptionally bright students and Full-time (Institute Fellows) directly (i.e., without entrance test) into the Ph.D. program. Eligible candidates meeting one of the following criteria may be considered for a waiver of the entrance test: 1. B.Tech. from the IITs, graduated within the last five years, with a degree in the respective discipline with a CPI/CGPA of 8/10 and above. 2. Masters from the IITs/IISc, graduated within the last five years, with a degree in the respective discipline with a CPI/CGPA of 8.5/10 and above. Such a candidate has to apply online. Additionally, an email must be sent with scanned copy of the supporting documents to aracademic@iitp.ac.in There would be no admission in direct admission category in Department of Humanities and Social Sciences. Relaxation for SC/ST Candidates: Eligibility criteria will be relaxed by 5% marks or 0.5 CPI for SC/ ST applicants. Reservations: The reservation of seats in admissions for SC, ST, OBC, EWS categories and for Persons with Disability (PwD) will be as per Government of India rules. OBC (Non-creamy layer) candidates will have to produce certificate and self-declaration statement as per formats indicated at Annexure- I and II available in the website, link https://www.iitp.ac.in/acad/admission.php

335	QIP0030	Indian Institute of Technology (IIT), Patna	Ph.D Engineering	Civil & Environmental Engineering	DN001064	Specialization: Structural Engineering Smart Material for Vibration Control Structural Engineering Structural dynamics and earthquake engineering Structural stability Structural Fire engineering Multiscale Multiphysics Modeling and Mechanics of Materials Strengthening and retrofitting of structures Specialization: Geotechnical Engineering Ground Improvement Geoenvironmental Engineering and Biogeotechnics THMC behaviour of unsaturated soil Energy Geotechnics CO2 sequestration Rock Mechanics and Underground Excavations Geotechnical Earthquake Engineering Specialization: Transportation Engineering Pavement Analysis and Design Pavement Materials Engineering Railway Engineering Traffic Engineering Traffic flow Theory Intelligent Transportation Systems Specialization: Environmental Engineering Water and Wastewater	Minimum Eligibility Criteria for Admission to Ph.D. Programme: In all the disciplines, the upper age limit is 28 years (B.Tech./B.E./M.Sc.) and 32 years (M.Tech./M.E./M.S./M.Phil.) to be calculated as on the last date of application and is applicable only for candidates applying in Regular and Full time category, as institute fellow. For Research/ project fellows, age limit will be as per the funding agency norms. In absence of any age criteria, the Institute norms will be followed. Upper age limit is relaxed up to 05 years in case of candidate belonging to Schedule Castes/Schedule Tribes, Women, Physically Handicapped and OBC applicants. A.1 Ph.D. in Engineering For admission to the Ph.D. Programme in Engineering Department, a candidate must satisfy one of the following criteria: A.1.1 Candidates having M.Tech./M.E. degree in a Engineering/Technology, with a minimum CPI of 6.5 or 60% of marks. A.1.2 Bachelor's degree in Engineering/Technology (from any Institute other than IITs) in a relevant area with a minimum CPI of 8.0 or 75% of marks. A.1.3. Bachelor's degree from an Indian Institute of Technology (IIT) in a relevant area with a minimum CPI of 7.0. A.1.4. Master's degree in Science in a relevant area with a minimum CPI of 7.5 or 70%. Candidates should note that if both CPI/CGPA and percentage are indicated in transcript/marksheet of the qualifying degree then only CPI/CGPA shall be taken into account for determining eligibility. Direct Admission (Waiver of Entrance Test): For candidates in Sciences, Engineering &Technology:

						Treatment Waste Treatment and Resource Recovery E-waste Management Removal of Micro-plastics and Emerging Contaminants from Aqueous Matrices Specialization: Hydraulics and Water Resources Engineering Open Channel Hydraulics Geoinformatics application in Water Resources Surface Water Hydrology Groundwater flow and contaminant transport	The Institute may admit exceptionally bright students and Full-time (Institute Fellows) directly (i.e., without entrance test) into the Ph.D. program. Eligible candidates meeting one of the following criteria may be considered for a waiver of the entrance test: 1. B.Tech. from the IITs, graduated within the last five years, with a degree in the respective discipline with a CPI/CGPA of 8/10 and above. 2. Masters from the IITs/IISc, graduated within the last five years, with a degree in the respective discipline with a CPI/CGPA of 8.5/10 and above. Such a candidate has to apply online. Additionally, an email must be sent with scanned copy of the supporting documents to aracademic@iitp.ac.in There would be no admission in direct admission category in Department of Humanities and Social Sciences. Relaxation for SC/ST Candidates: Eligibility criteria will be relaxed by 5% marks or 0.5 CPI for SC/ ST applicants. Reservations: The reservation of seats in admissions for SC, ST, OBC, EWS categories and for Persons with Disability (PwD) will be as per Government of India rules. OBC (Non-creamy layer) candidates will have to produce certificate and self-declaration statement as per formats indicated at Annexure- I and II available in the website, link https://www.iitp.ac.in/acad/admission.php

336	QIP0030	Indian Institute of Technology (IIT), Patna	Ph.D Engineering	Electrical Engineering	DN001066	Power Electronics Electric Drives Power Systems Smart Grid Power System Protection Power System Stability Control System Semiconductor Device and Circuits, Design and Fabrication Optoelectronic Devices Sensor Solar cell Photodetectors Semiconductor Device and Circuits for Low Power and Neuromorphic Computing VLSI and Embedded System Radio Frequency Integrated Circuits (RFIC) Analog Integrated Circuits (AIC) Wireless Sensor Networks Internet of Things (IoT) Molecular Communications Machine Learning Deep Learning Digital Signal Processing Digital Image Processing Digital Video Processing Video Surveillance Multimedia Communication Tele-medicine Biomedical Signal and Image Processing Neuroscience Neuro-congnition Wearable Healthcare Monitoring mm-Wave Antennas for 5G and Beyond	Minimum Eligibility Criteria for Admission to Ph.D. Programme: In all the disciplines, the upper age limit is 28 years (B.Tech./B.E./M.Sc.) and 32 years (M.Tech./M.E./M.S./M.Phil.) to be calculated as on the last date of application and is applicable only for candidates applying in Regular and Full time category, as institute fellow. For Research/ project fellows, age limit will be as per the funding agency norms. In absence of any age criteria, the Institute norms will be followed. Upper age limit is relaxed up to 05 years in case of candidate belonging to Schedule Castes/Schedule Tribes, Women, Physically Handicapped and OBC applicants. A.1 Ph.D. in Engineering For admission to the Ph.D. Programme in Engineering Department, a candidate must satisfy one of the following criteria: A.1.1 Candidates having M.Tech./M.E. degree in a Engineering/Technology, with a minimum CPI of 6.5 or 60% of marks. A.1.2 Bachelor's degree in Engineering/Technology (from any Institute other than IITs) in a relevant area with a minimum CPI of 8.0 or 75% of marks. A.1.3. Bachelor's degree from an Indian Institute of Technology (IIT) in a relevant area with a minimum CPI of 7.0. A.1.4. Master's degree in Science in a relevant area with a minimum CPI of 7.5 or 70%. Candidates should note that if both CPI/CGPA and percentage are indicated in transcript/marksheet of the qualifying degree then only CPI/CGPA shall be taken into account for determining eligibility. Direct Admission (Waiver of Entrance Test): For candidates in Sciences, Engineering &Technology:

						High Gain Beam Scanning Metasurface Antennas Digital Metasurface and Applications in 5G and Beyond (IRS) Metamaterial Absorber for Stealth Application SDR Based Radar for Detection and Ranging Wireless Communication 5G and Beyond 6G and Signal Processing for Communication and Wireless Communication Optical Communication Photonics for Artificial Intelligence Optical Fiber based Sensing	The Institute may admit exceptionally bright students and Full-time (Institute Fellows) directly (i.e., without entrance test) into the Ph.D. program. Eligible candidates meeting one of the following criteria may be considered for a waiver of the entrance test: 1. B.Tech. from the IITs, graduated within the last five years, with a degree in the respective discipline with a CPI/CGPA of 8/10 and above. 2. Masters from the IITs/IISc, graduated within the last five years, with a degree in the respective discipline with a CPI/CGPA of 8.5/10 and above. Such a candidate has to apply online. Additionally, an email must be sent with scanned copy of the supporting documents to aracademic@iitp.ac.in There would be no admission in direct admission category in Department of Humanities and Social Sciences. Relaxation for SC/ST Candidates: Eligibility criteria will be relaxed by 5% marks or 0.5 CPI for SC/ ST applicants. Reservations: The reservation of seats in admissions for SC, ST, OBC, EWS categories and for Persons with Disability (PwD) will be as per Government of India rules. OBC (Non-creamy layer) candidates will have to produce certificate and self-declaration statement as per formats indicated at Annexure- I and II available in the website, link https://www.iitp.ac.in/acad/admission.php

337	QIP0030	Indian Institute of Technology (IIT), Patna	Ph.D Engineering	Mechanical Engineering	DN001067	Design: Computational Mechanics (FEM/XFEM) Condition Monitoring of Gear Box and Bearing Continuum Mechanics Cyclic Plasticity Fatigue and Fracture Mechanics Mechatronics Micro Electromechanical (MEMs) Devices Robotics Smart Materials and Devices Tribological Machine Element Design Vacuum Tribology Bio-Medical Device Design, Interfacial Rheology and Tribology molecular modelling Manufacturing: Additive Manufacturing Advanced Metallic Materials Cyber Physical Machine Tools Digital Manufacturing Finite Element Modeling of the Welding Processes Friction Stir Welding/Processing Green manufacturing In situ Analysis of Manufacturing Processes Mechanical Micromachining Non-traditional Micromachining Sheet Metal Forming Surface Engineering Thermal and Fluids: Artificial Intelligence and Machine Learning Tools for Heat Transfer Problems	the upper age limit is 28 years (B.Tech./B.E./M.Sc./MA/MCA/MBA) and 32 years (M.Tech./M.E./M.S./M.Phil.) to be calculated as on the last date of application and is applicable only for candidates applying in Regular and Full time category, as institute fellow. For Research/ project fellows, age limit will be as per the funding agency norms. In absence of any age criteria, the Institute norms will be followed. Upper age limit is relaxed up to 05 years in case of candidate belonging to Schedule Castes/Schedule Tribes, Women, Physically Handicapped and OBC applicants. Ph.D. in Engineering For admission to the Ph.D. Programme in Engineering Department, a candidate must satisfy one of the following criteria: A.1.1 Candidates having M.Tech./M.E. degree in a Engineering/Technology, with a minimum CPI of 6.5 or 60% of marks. A.1.2 Bachelor's degree in Engineering/Technology (from any Institute other than IITs) in a relevant area with a minimum CPI of 8.0 or 75% of marks. A.1.3. Bachelor's degree from an Indian Institute of Technology (IIT) in a relevant area with a minimum CPI of 7.0. A.1.4. Master's degree in Science in a relevant area with a minimum CPI of 7.5 or 70%. Candidates should note that if both CPI/CGPA and percentage are indicated in transcript/marksheet of the qualifying degree then only CPI/CGPA shall be taken into account for determining eligibility. Direct Admission (Waiver of Entrance Test): For candidates in Sciences, Engineering &Technology:

						Biofluid Dynamics Biomicrofluidics Biophysical Aerodynamics Boiling Heat Transfer Bubble Acoustics Condensation Heat Transfer Computational Fluid Dynamics Energy Fluid-structure Interaction Hydrodynamic Stability Hypersonic Microfluidics and BIOMENS Micro-nanostructured Surface Fabrication Rarefied Gas Flows Solar Thermal	The Institute may admit exceptionally bright students and Full-time (Institute Fellows) directly (i.e., without entrance test) into the Ph.D. program. Eligible candidates meeting one of the following criteria may be considered for a waiver of the entrance test: 1. B.Tech. from the IITs, graduated within the last five years, with a degree in the respective discipline with a CPI/CGPA of 8/10 and above. 2. Masters from the IITs/IISc, graduated within the last five years, with a degree in the respective discipline with a CPI/CGPA of 8.5/10 and above. Such a candidate has to apply online. Additionally, an email must be sent with scanned copy of the supporting documents to aracademic@iitp.ac.in There would be no admission in direct admission category in Department of Humanities and Social Sciences. Relaxation for SC/ST Candidates: Eligibility criteria will be relaxed by 5% marks or 0.5 CPI for SC/ ST applicants. Reservations: The reservation of seats in admissions for SC, ST, OBC, EWS categories and for Persons with Disability (PwD) will be as per Government of India rules. OBC (Non-creamy layer) candidates will have to produce certificate and self-declaration statement as per formats indicated at Annexure- I and II available in the website, link https://www.iitp.ac.in/acad/admission.php

338	QIP0030	Indian Institute of Technology (IIT), Patna	Ph.D Engineering	Metallurgical & Materials Engineering	DN001069	Plasma Spray Coating, Mechanical Properties of Materials, Friction stir processing and welding, Metal and Ceramic Matrix nano composites, Tribology of Materials, Process-structure-property Relationship, Solid State Chemistry, Materials Chemistry, Nanoparticles for Energy, Structural and Functional Applications, Structure- Property correlation of Dielectric, Ferroelectric, Multiferroic and other energy conversion Materials, Flash sintering of ceramics, Microstructure - property correlation in ceramics, Polymer blends and alloys, Polymer nanocomposites, Nanofillers, Hybrid nanofillers, Carbonaceous nanofillers like carbon dots and graphene	the upper age limit is 28 years (B.Tech./B.E./M.Sc./MA/MCA/MBA) and 32 years (M.Tech./M.E./M.S./M.Phil.) to be calculated as on the last date of application and is applicable only for candidates applying in Regular and Full time category, as institute fellow. For Research/ project fellows, age limit will be as per the funding agency norms. In absence of any age criteria, the Institute norms will be followed. Upper age limit is relaxed up to 05 years in case of candidate belonging to Schedule Castes/Schedule Tribes, Women, Physically Handicapped and OBC applicants. Ph.D. in Engineering For admission to the Ph.D. Programme in Engineering Department, a candidate must satisfy one of the following criteria: A.1.1 Candidates having M.Tech./M.E. degree in a Engineering/Technology, with a minimum CPI of 6.5 or 60% of marks. A.1.2 Bachelor's degree in Engineering/Technology (from any Institute other than IITs) in a relevant area with a minimum CPI of 8.0 or 75% of marks. A.1.3. Bachelor's degree from an Indian Institute of Technology (IIT) in a relevant area with a minimum CPI of 7.0. A.1.4. Master's degree in Science in a relevant area with a minimum CPI of 7.5 or 70%. Candidates should note that if both CPI/CGPA and percentage are indicated in transcript/marksheet of the qualifying degree then only CPI/CGPA shall be taken into account for determining eligibility. Direct Admission (Waiver of Entrance Test): For candidates in Sciences, Engineering &Technology:

							The Institute may admit exceptionally bright students and Full-time (Institute Fellows) directly (i.e., without entrance test) into the Ph.D. program. Eligible candidates meeting one of the following criteria may be considered for a waiver of the entrance test: 1. B.Tech. from the IITs, graduated within the last five years, with a degree in the respective discipline with a CPI/CGPA of 8/10 and above. 2. Masters from the IITs/IISc, graduated within the last five years, with a degree in the respective discipline with a CPI/CGPA of 8.5/10 and above. Such a candidate has to apply online. Additionally, an email must be sent with scanned copy of the supporting documents to aracademic@iitp.ac.in There would be no admission in direct admission category in Department of Humanities and Social Sciences. Relaxation for SC/ST Candidates: Eligibility criteria will be relaxed by 5% marks or 0.5 CPI for SC/ ST applicants. Reservations: The reservation of seats in admissions for SC, ST, OBC, EWS categories and for Persons with Disability (PwD) will be as per Government of India rules. OBC (Non-creamy layer) candidates will have to produce certificate and self-declaration statement as per formats indicated at Annexure- I and II available in the website, link https://www.iitp.ac.in/acad/admission.php

339	QIP0030	Indian Institute of Technology (IIT), Patna	M.Tech	Computer Science & Engineering	DN001075	Computer Science & Engineering	*Reservation of Seats: As per Govt. of India rules. Eligibility Criteria for Admission to M.Tech. Programme: I. REGULAR & FULL TIME The programme is open to candidates of all categories with Bachelor's Degree in Engineering / Technology / M Sc or equivalent professional degrees (AMIE, etc.) and having a valid GATE score. All regular category candidates (except those having B.Tech. degrees from an IIT with a minimum CPI of 8.0) must be GATE qualified with valid GATE score. Candidates seeking admission to M.Tech. Programme of the Institute shall have to possess a minimum of 60% marks (or a CGPA of 6.5 in 10 point scale) for General/OBC/EWS categories and 55% marks (or a CGPA of 6.0 in 10 point scale) for SC/ST categories in the final qualifying examination. All selected candidates have to produce the certificate with regard to the marks secured in the final qualifying examination by 31-10-2022. Candidates should note that if both CPI/CGPA and percentage are indicated in transcript/marksheet of the qualifying degree then only CPI/CGPA shall be taken into account for determining eligibility. Reservation of Seats is as per Govt. of India rules. OBC (Non-creamy layer) candidates will have to produce certificate and self-declaration statement, whenever required before admission, as per prescribed formats indicated at Annexure- I and II available in the website, link https://www.iitp.ac.in/acad/admission.php Additional Conditions For Candidates Still To Appear In Qualifying Examinations Candidates still to appear in their qualifying degree examinations may also apply, provided they appear in all their qualifying degree examinations and complete all requirements for their degrees before date of registration to M.Tech programme at IIT Patna in July 2022. If selected, such candidates shall be admitted provisionally, and they will have to furnish the results of their qualifying degree examinations latest by 31-10-2022. Further, they must fulfill the minimum

							requirements of marks/CGPA/CPI, and other conditions like valid GATE score etc., as mentioned under eligibility criteria for respective programmes. Failure to fulfill any of these requirements, shall automatically result in cancellation of admission. Selection Procedure Selection is based on performance in GATE for Regular and Full time category this year. For other categories (Project Staff, Part-time and Sponsored), written test/interview shall be conducted. The eligibility and the GATE papers for the M.Tech. programmes are given below: B.Tech./B.E. degree in Computer Science/Information Technology and a valid GATE score in CS. II. SPONSORED An applicant employed in an industry or any other recognized organization/institution with at least two years of experience is eligible for admission to the M.Tech. programmes provided the applicant is sponsored by the employer. Marks/CGPA/CPI criteria in the final qualifying exam will be same as prescribed for regular & full time category. For sponsored applicants, GATE score is not mandatory and they are not eligible for assistantship. Candidate applying for Sponsored Full-Time categories must be a regular employee of the sponsoring organization with at least 2(two) years of professional experience in the respective field. Selection of these candidates is based on performance in Written Test and/or Personal Interview of short-listed candidates. Such applicants must keep ready duly endorsed NOC before the last date of application and produce it whenever required in the prescribed format: Form I, available in website, link https://www.iitp.ac.in/acad/admission.php henever required in the prescribed format: Form III, available in website, link https://www.iitp.ac.in/acad/admission.php III. PART-TIME A student in this category is a professionally employed person (including the staff of IIT Patna), who pursues the M.Tech

							Program, while continuing the duties of his/her service. The Institute does not provide any assistantship to such a student. Marks/CGPA/CPI criteria in the final qualifying exam will be same as prescribed for regular & full time category. GATE score is not mandatory. Selection of these candidates is based on performance in Written Test and/or Personal Interview of short-listed candidates. Such applicants must keep ready duly endorsed NOC from employer before the last date of application and produce it whenever required in the prescribed format: Form III, available in website, link https://www.iitp.ac.in/acad/admission.php

340	QIP0030	Indian Institute of Technology (IIT), Patna	M.Tech	Electrical Engineering	DN001076	Communication System Engineering, VLSI and Embedded Systems & Power and Control	Eligibility Criteria for Admission to M.Tech. Programme: I. REGULAR & FULL TIME The programme is open to candidates of all categories with Bachelor's Degree in Engineering / Technology / M Sc or equivalent professional degrees (AMIE, etc.) and having a valid GATE score. All regular category candidates (except those having B.Tech. degrees from an IIT with a minimum CPI of 8.0) must be GATE qualified with valid GATE score. Candidates seeking admission to M.Tech. Programme of the Institute shall have to possess a minimum of 60% marks (or a CGPA of 6.5 in 10 point scale) for General/OBC/EWS categories and 55% marks (or a CGPA of 6.0 in 10 point scale) for SC/ST categories in the final qualifying examination. All selected candidates have to produce the certificate with regard to the marks secured in the final qualifying examination by 31-10-2022. Candidates should note that if both CPI/CGPA and percentage are indicated in transcript/marksheet of the qualifying degree then only CPI/CGPA shall be taken into account for determining eligibility. Reservation of Seats is as per Govt. of India rules. OBC (Non-creamy layer) candidates will have to produce certificate and self-declaration statement, whenever required before admission, as per prescribed formats indicated at Annexure- I and II available in the website, link https://www.iitp.ac.in/acad/admission.php Additional Conditions For Candidates Still To Appear In Qualifying Examinations Candidates still to appear in their qualifying degree examinations may also apply, provided they appear in all their qualifying degree examinations and complete all requirements for their degrees before date of registration to M.Tech programme at IIT Patna in July 2022. If selected, such candidates shall be admitted provisionally, and they will have to furnish the results of their qualifying degree examinations latest by 31-10-2022. Further, they must fulfill the minimum requirements of marks/CGPA/CPI, and other conditions like valid GATE score etc., as mentioned under eligibility criteria

							for respective programmes. Failure to fulfill any of these requirements, shall automatically result in cancellation of admission. Selection Procedure Selection is based on performance in GATE for Regular and Full time category this year. For other categories (Project Staff, Part-time and Sponsored), written test/interview shall be conducted. The eligibility and the GATE papers for the M.Tech. programmes are given below: 1. B.Tech./B.E. degree in Electrical Engineering/Electronics & Communication and a valid GATE score in EC. (for Communication System) 2. B.Tech./B.E./B.Sc.(Engineering) degree in Electrical/Electronics/Communication/Instrumentations Engineering/Computer Science & Engineering with Valid GATE score in one of EE,EC,IN,CS discipline. OR M.Sc. (Physics/Electronics) with valid GATE score in EC, IN. (for VLSI & Embedded Systems) 3. B.Tech in Electrical/Electrical and Electronics/Control and Instrumentation Engineering with a valid GATE score in EE, IN. (for Power and Control) II. SPONSORED An applicant employed in an industry or any other recognized organization/institution with at least two years of experience is eligible for admission to the M.Tech. programmes provided the applicant is sponsored by the employer. Marks/CGPA/CPI criteria in the final qualifying exam will be same as prescribed for regular & full time category. For sponsored applicants, GATE score is not mandatory and they are not eligible for assistantship. Candidate applying for Sponsored Full-Time categories must be a regular employee of the sponsoring organization with at least 2(two) years of professional experience in the respective field. Selection of these candidates is based on performance in Written Test and/or Personal Interview of short-listed candidates. Such applicants

							must keep ready duly endorsed NOC before the last date of application and produce it whenever required in the prescribed format: Form I, available in website, link https://www.iitp.ac.in/acad/admission.php henever required in the prescribed format: Form III, available in website, link https://www.iitp.ac.in/acad/admission.php III. PART-TIME A student in this category is a professionally employed person (including the staff of IIT Patna), who pursues the M.Tech Program, while continuing the duties of his/her service. The Institute does not provide any assistantship to such a student. Marks/CGPA/CPI criteria in the final qualifying exam will be same as prescribed for regular & full time category. GATE score is not mandatory. Selection of these candidates is based on performance in Written Test and/or Personal Interview of short-listed candidates. Such applicants must keep ready duly endorsed NOC from employer before the last date of application and produce it whenever required in the prescribed format: Form III, available in website, link https://www.iitp.ac.in/acad/admission.php *Reservation of Seats: As per Govt. of India rules.

341	QIP0030	Indian Institute of Technology (IIT), Patna	M.Tech	Mechanical Engineering	DN001077	Mechanical Engineering	*Reservation of Seats: As per Govt. of India rules. Eligibility Criteria for Admission to M.Tech. Programme: I. REGULAR & FULL TIME The programme is open to candidates of all categories with Bachelor's Degree in Engineering / Technology / M Sc or equivalent professional degrees (AMIE, etc.) and having a valid GATE score. All regular category candidates (except those having B.Tech. degrees from an IIT with a minimum CPI of 8.0) must be GATE qualified with valid GATE score. Candidates seeking admission to M.Tech. Programme of the Institute shall have to possess a minimum of 60% marks (or a CGPA of 6.5 in 10 point scale) for General/OBC/EWS categories and 55% marks (or a CGPA of 6.0 in 10 point scale) for SC/ST categories in the final qualifying examination. All selected candidates have to produce the certificate with regard to the marks secured in the final qualifying examination by 31-10-2022. Candidates should note that if both CPI/CGPA and percentage are indicated in transcript/marksheet of the qualifying degree then only CPI/CGPA shall be taken into account for determining eligibility. Reservation of Seats is as per Govt. of India rules. OBC (Non-creamy layer) candidates will have to produce certificate and self-declaration statement, whenever required before admission, as per prescribed formats indicated at Annexure- I and II available in the website, link https://www.iitp.ac.in/acad/admission.php Additional Conditions For Candidates Still To Appear In Qualifying Examinations Candidates still to appear in their qualifying degree examinations may also apply, provided they appear in all their qualifying degree examinations and complete all requirements for their degrees before date of registration to M.Tech programme at IIT Patna in July 2022. If selected, such candidates shall be admitted provisionally, and they will have to furnish the results of their qualifying degree examinations latest by 31-10-2022. Further, they must fulfill the minimum

							requirements of marks/CGPA/CPI, and other conditions like valid GATE score etc., as mentioned under eligibility criteria for respective programmes. Failure to fulfill any of these requirements, shall automatically result in cancellation of admission. Selection Procedure Selection is based on performance in GATE for Regular and Full time category this year. For other categories (Project Staff, Part-time and Sponsored), written test/interview shall be conducted. The eligibility and the GATE papers for the M.Tech. programmes are given below: B.Tech./B.E. in Aerospace, Aeronautical, Automobile, Production, Manufacturing or Mechanical Engineering and a valid GATE score in AE, ME and PI. II. SPONSORED An applicant employed in an industry or any other recognized organization/institution with at least two years of experience is eligible for admission to the M.Tech. programmes provided the applicant is sponsored by the employer. Marks/CGPA/CPI criteria in the final qualifying exam will be same as prescribed for regular & full time category. For sponsored applicants, GATE score is not mandatory and they are not eligible for assistantship. Candidate applying for Sponsored Full-Time categories must be a regular employee of the sponsoring organization with at least 2(two) years of professional experience in the respective field. Selection of these candidates is based on performance in Written Test and/or Personal Interview of short-listed candidates. Such applicants must keep ready duly endorsed NOC before the last date of application and produce it whenever required in the prescribed format: Form I, available in website, link https://www.iitp.ac.in/acad/admission.php henever required in the prescribed format: Form III, available in website, link https://www.iitp.ac.in/acad/admission.php III. PART-TIME A student in this category is a professionally employed person

							(including the staff of IIT Patna), who pursues the M.Tech Program, while continuing the duties of his/her service. The Institute does not provide any assistantship to such a student. Marks/CGPA/CPI criteria in the final qualifying exam will be same as prescribed for regular & full time category. GATE score is not mandatory. Selection of these candidates is based on performance in Written Test and/or Personal Interview of short-listed candidates. Such applicants must keep ready duly endorsed NOC from employer before the last date of application and produce it whenever required in the prescribed format: Form III, available in website, link https://www.iitp.ac.in/acad/admission.php

342	QIP0030	Indian Institute of Technology (IIT), Patna	M.Tech	Civil & Environmental Engineering	DN001078	Civil Engineering, Structural Engineering and Geotechnical Engineering	*Reservation of Seats: As per Govt. of India rules. Eligibility Criteria for Admission to M.Tech. Programme: I. REGULAR & FULL TIME The programme is open to candidates of all categories with Bachelor's Degree in Engineering / Technology / M Sc or equivalent professional degrees (AMIE, etc.) and having a valid GATE score. All regular category candidates (except those having B.Tech. degrees from an IIT with a minimum CPI of 8.0) must be GATE qualified with valid GATE score. Candidates seeking admission to M.Tech. Programme of the Institute shall have to possess a minimum of 60% marks (or a CGPA of 6.5 in 10 point scale) for General/OBC/EWS categories and 55% marks (or a CGPA of 6.0 in 10 point scale) for SC/ST categories in the final qualifying examination. All selected candidates have to produce the certificate with regard to the marks secured in the final qualifying examination by 31-10-2022. Candidates should note that if both CPI/CGPA and percentage are indicated in transcript/marksheet of the qualifying degree then only CPI/CGPA shall be taken into account for determining eligibility. Reservation of Seats is as per Govt. of India rules. OBC (Non-creamy layer) candidates will have to produce certificate and self-declaration statement, whenever required before admission, as per prescribed formats indicated at Annexure- I and II available in the website, link https://www.iitp.ac.in/acad/admission.php Additional Conditions For Candidates Still To Appear In Qualifying Examinations Candidates still to appear in their qualifying degree examinations may also apply, provided they appear in all their qualifying degree examinations and complete all requirements for their degrees before date of registration to M.Tech programme at IIT Patna in July 2022. If selected, such candidates shall be admitted provisionally, and they will have to furnish the results of their qualifying degree examinations latest by 31-10-2022. Further, they must fulfill the minimum

							requirements of marks/CGPA/CPI, and other conditions like valid GATE score etc., as mentioned under eligibility criteria for respective programmes. Failure to fulfill any of these requirements, shall automatically result in cancellation of admission. Selection Procedure Selection is based on performance in GATE for Regular and Full time category this year. For other categories (Project Staff, Part-time and Sponsored), written test/interview shall be conducted. The eligibility and the GATE papers for the M.Tech. programmes are given below: B.Tech/B.E. degree or equivalent in Civil, Infrastructure, Construction Engineering with valid GATE score in CE. II. SPONSORED An applicant employed in an industry or any other recognized organization/institution with at least two years of experience is eligible for admission to the M.Tech. programmes provided the applicant is sponsored by the employer. Marks/CGPA/CPI criteria in the final qualifying exam will be same as prescribed for regular & full time category. For sponsored applicants, GATE score is not mandatory and they are not eligible for assistantship. Candidate applying for Sponsored Full-Time categories must be a regular employee of the sponsoring organization with at least 2(two) years of professional experience in the respective field. Selection of these candidates is based on performance in Written Test and/or Personal Interview of short-listed candidates. Such applicants must keep ready duly endorsed NOC before the last date of application and produce it whenever required in the prescribed format: Form I, available in website, link https://www.iitp.ac.in/acad/admission.php henever required in the prescribed format: Form III, available in website, link https://www.iitp.ac.in/acad/admission.php III. PART-TIME A student in this category is a professionally employed person (including the staff of IIT Patna), who pursues the M.Tech

							Program, while continuing the duties of his/her service. The Institute does not provide any assistantship to such a student. Marks/CGPA/CPI criteria in the final qualifying exam will be same as prescribed for regular & full time category. GATE score is not mandatory. Selection of these candidates is based on performance in Written Test and/or Personal Interview of short-listed candidates. Such applicants must keep ready duly endorsed NOC from employer before the last date of application and produce it whenever required in the prescribed format: Form III, available in website, link https://www.iitp.ac.in/acad/admission.php

343	QIP0030	Indian Institute of Technology (IIT), Patna	M.Tech	Metallurgical & Materials Engineering	DN001079	Materials Science & Engineering	*Reservation of Seats: As per Govt. of India rules. Eligibility Criteria for Admission to M.Tech. Programme: I. REGULAR & FULL TIME: The programme is open to candidates of all categories with Bachelor's Degree in Engineering / Technology / M Sc or equivalent professional degrees (AMIE, etc.) and having a valid GATE score. All regular category candidates (except those having B.Tech. degrees from an IIT with a minimum CPI of 8.0) must be GATE qualified with valid GATE score. Candidates seeking admission to M.Tech. Programme of the Institute shall have to possess a minimum of 60% marks (or a CGPA of 6.5 in 10 point scale) for General/OBC/EWS categories and 55% marks (or a CGPA of 6.0 in 10 point scale) for SC/ST categories in the final qualifying examination. All selected candidates have to produce the certificate with regard to the marks secured in the final qualifying examination by 31-10-2022. Candidates should note that if both CPI/CGPA and percentage are indicated in transcript/marksheet of the qualifying degree then only CPI/CGPA shall be taken into account for determining eligibility. Reservation of Seats is as per Govt. of India rules. OBC (Non-creamy layer) candidates will have to produce certificate and self-declaration statement, whenever required before admission, as per prescribed formats indicated at Annexure- I and II available in the website, link https://www.iitp.ac.in/acad/admission.php Additional Conditions For Candidates Still To Appear In Qualifying Examinations Candidates still to appear in their qualifying degree examinations may also apply, provided they appear in all their qualifying degree examinations and complete all requirements for their degrees before date of registration to M.Tech programme at IIT Patna in July 2022. If selected, such candidates shall be admitted provisionally, and they will have to furnish the results of their qualifying degree examinations latest by 31-10-2022. Further, they must fulfill the minimum requirements of marks/CGPA/CPI, and other conditions like valid GATE score etc., as mentioned under eligibility criteria for respective programmes. Failure to fulfill any of these requirements, shall automatically result in cancellation of admission. Selection Procedure: Selection is based on

							performance in GATE for Regular and Full time category this year. For other categories (Project Staff, Part-time and Sponsored), written test/interview shall be conducted. The eligibility and the GATE papers for the M.Tech. programmes are given below: B.Tech./B.E. degree in Metallurgy, Ceramic, Polymer Science /Technology, Plastics Science/Technology, Rubber Science/Technology, Mechanical Engineering, Chemical Engineering/Technology, Nanotechnology, Materials Science/ Engineering OR MSc./Equivalent in Physics, Applied Physics, Chemistry, Applied Chemistry, Polymer Science/Technology, Plastics Science/Technology , Rubber Science, Chemical Engineering/Technology, Nanotechnology, Materials Science/ Engineering. All candidates must have valid GATE score in one of these GATE paper codes MT, CH, ME, PH, CY and XE (only candidates who opted for either Materials Science or Polymer Science and Engineering section). II. SPONSORED: An applicant employed in an industry or any other recognized organization/institution with at least two years of experience is eligible for admission to the M.Tech. programmes provided the applicant is sponsored by the employer. Marks/CGPA/CPI criteria in the final qualifying exam will be same as prescribed for regular & full time category. For sponsored applicants, GATE score is not mandatory and they are not eligible for assistantship. Candidate applying for Sponsored Full-Time categories must be a regular employee of the sponsoring organization with at least 2(two) years of professional experience in the respective field. Selection of these candidates is based on performance in Written Test and/or Personal Interview of short-listed candidates. Such applicants must keep ready duly endorsed NOC before the last date of application and produce it whenever required in the prescribed format: Form I, available in website, link https://www.iitp.ac.in/acad/admission.php whenever required in the prescribed format: Form III, available in website, link https://www.iitp.ac.in/acad/admission.php

344	QIP0030	Indian Institute of Technology (IIT), Patna	Ph.D Science	Physics	DN001112	Optics and Photonics: Ultrafast Spectroscopy & Biophysics, Applied Optics (optical signal processing, information security), Digital Holography, Biophotonics, Nano-optics, Nanophotonics, Quantum Optics (Theory + Experiment) High Energy Physics: High Energy Physics Phenomenology Condensed Matter Physics: Multiferroics, Magnetic materials, Nanostructured materials, Magnetocaloric materials, Electrocaloric materials, Heusler alloys, Solid State Cooling, Nanomaterials for Energy and Sensing, High-Temperature Superconductors, Nanoscale device applications based on atomic switch technology, Renewable Energy Materials & Devices, EMI Shielding, Ferroelectrics & Dielectrics, Organic electronic devices, Nanoelectronics, Spintronics, 2D Materials Computational atomic Physics: e-scattering, photoionization electronic structure calculation strong field ionization	Minimum Eligibility Criteria for Admission to Ph.D. Programme: In all the disciplines, the upper age limit is 28 years (B.Tech./B.E./M.Sc.) and 32 years (M.Tech./M.E./M.S./M.Phil.) to be calculated as on the last date of application and is applicable only for candidates applying in Regular and Full time category, as institute fellow. For Research/ project fellows, age limit will be as per the funding agency norms. In absence of any age criteria, the Institute norms will be followed. Upper age limit is relaxed up to 05 years in case of candidate belonging to Schedule Castes/Schedule Tribes, Women, Physically Handicapped and OBC applicants. A.2 Ph.D. in Science For admission to the Ph.D. Programme in Science departments, a candidate must satisfy one of the following criteria: A.2.1 M.Phil. or Master's degree in Science in a relevant area with a minimum CPI of 6.5 or 60% of marks. A.2.2 Master's degree in Engineering/Technology in a relevant area with a minimum CPI of 6.5 or 60% of marks A.2.3 Bachelor's degree in Engineering/Technology from an Indian Institute of Technology (IIT) in a relevant area with a minimum CPI of 7.0. A.2.4 Bachelor's degree in a related area in Engineering/Technology (from any Institute other than IITs/IISc) in a relevant area with a minimum CPI of 8.0 or 75% of marks. Candidates should note that if both CPI/CGPA and percentage are indicated in transcript/marksheet of the qualifying degree then only CPI/CGPA shall be taken into account for determining eligibility. Direct Admission (Waiver of Entrance Test): For candidates in Sciences, Engineering &Technology:

							The Institute may admit exceptionally bright students and Full-time (Institute Fellows) directly (i.e., without entrance test) into the Ph.D. program. Eligible candidates meeting one of the following criteria may be considered for a waiver of the entrance test: 1. B.Tech. from the IITs, graduated within the last five years, with a degree in the respective discipline with a CPI/CGPA of 8/10 and above. 2. Masters from the IITs/IISc, graduated within the last five years, with a degree in the respective discipline with a CPI/CGPA of 8.5/10 and above. Such a candidate has to apply online. Additionally, an email must be sent with scanned copy of the supporting documents to aracademic@iitp.ac.in There would be no admission in direct admission category in Department of Humanities and Social Sciences. Relaxation for SC/ST Candidates: Eligibility criteria will be relaxed by 5% marks or 0.5 CPI for SC/ ST applicants. Reservations: The reservation of seats in admissions for SC, ST, OBC, EWS categories and for Persons with Disability (PwD) will be as per Government of India rules. OBC (Non-creamy layer) candidates will have to produce certificate and self-declaration statement as per formats indicated at Annexure- I and II available in the website, link https://www.iitp.ac.in/acad/admission.php

345	QIP0030	Indian Institute of Technology (IIT), Patna	Ph.D Science	Chemistry	DN001113	Organic, Inorganic, Physical, Theory, Biochemistry/Biomaterials, Polymer and Materials Chemistry	Minimum Eligibility Criteria for Admission to Ph.D. Programme: In all the disciplines, the upper age limit is 28 years (B.Tech./B.E./M.Sc.) and 32 years (M.Tech./M.E./M.S./M.Phil.) to be calculated as on the last date of application and is applicable only for candidates applying in Regular and Full time category, as institute fellow. For Research/ project fellows, age limit will be as per the funding agency norms. In absence of any age criteria, the Institute norms will be followed. Upper age limit is relaxed up to 05 years in case of candidate belonging to Schedule Castes/Schedule Tribes, Women, Physically Handicapped and OBC applicants. A.2 Ph.D. in Science For admission to the Ph.D. Programme in Science departments, a candidate must satisfy one of the following criteria: A.2.1 M.Phil. or Master's degree in Science in a relevant area with a minimum CPI of 6.5 or 60% of marks. A.2.2 Master's degree in Engineering/Technology in a relevant area with a minimum CPI of 6.5 or 60% of marks A.2.3 Bachelor's degree in Engineering/Technology from an Indian Institute of Technology (IIT) in a relevant area with a minimum CPI of 7.0. A.2.4 Bachelor's degree in a related area in Engineering/Technology (from any Institute other than IITs/IISc) in a relevant area with a minimum CPI of 8.0 or 75% of marks. Candidates should note that if both CPI/CGPA and percentage are indicated in transcript/marksheet of the qualifying degree then only CPI/CGPA shall be taken into account for determining eligibility. Direct Admission (Waiver of Entrance Test): For candidates in Sciences, Engineering &Technology:

							The Institute may admit exceptionally bright students and Full-time (Institute Fellows) directly (i.e., without entrance test) into the Ph.D. program. Eligible candidates meeting one of the following criteria may be considered for a waiver of the entrance test: 1. B.Tech. from the IITs, graduated within the last five years, with a degree in the respective discipline with a CPI/CGPA of 8/10 and above. 2. Masters from the IITs/IISc, graduated within the last five years, with a degree in the respective discipline with a CPI/CGPA of 8.5/10 and above. Such a candidate has to apply online. Additionally, an email must be sent with scanned copy of the supporting documents to aracademic@iitp.ac.in There would be no admission in direct admission category in Department of Humanities and Social Sciences. Relaxation for SC/ST Candidates: Eligibility criteria will be relaxed by 5% marks or 0.5 CPI for SC/ ST applicants. Reservations: The reservation of seats in admissions for SC, ST, OBC, EWS categories and for Persons with Disability (PwD) will be as per Government of India rules. OBC (Non-creamy layer) candidates will have to produce certificate and self-declaration statement as per formats indicated at Annexure- I and II available in the website, link https://w

346	QIP0030	Indian Institute of Technology (IIT), Patna	Ph.D Science	Mathematics	DN001114	Reliability Estimation Survival Analysis Estimation under Censored Data Statistical Inference Numerical Analysis Moving Mesh Methods Singular Perturbation A posteriori Error Estimates ordinary differential equation (ODE) partial differential equation (PDE) Integral Equations Fractional Order Equations Nonlinear Problems Black Scholes Equations Mathematical Finance Nonlinear Programming Vector Variational Inequalities; Differential Manifolds Rings and Modules Algebraic Coding Theory Algorithmic graph theory Theory of Inregral Transforms Monotone Iterative Techniques Non standard Finite difference techniques Existence and Uniqueness of Nonlinear Boundary Value Problems Biomathematics Mathematical sequence design Dynamical Systems Mathematical Control Theory, Optimal Control PolynomiaL identities on rings, Differential geometry	Minimum Eligibility Criteria for Admission to Ph.D. Programme: In all the disciplines, the upper age limit is 28 years (B.Tech./B.E./M.Sc.) and 32 years (M.Tech./M.E./M.S./M.Phil.) to be calculated as on the last date of application and is applicable only for candidates applying in Regular and Full time category, as institute fellow. For Research/ project fellows, age limit will be as per the funding agency norms. In absence of any age criteria, the Institute norms will be followed. Upper age limit is relaxed up to 05 years in case of candidate belonging to Schedule Castes/Schedule Tribes, Women, Physically Handicapped and OBC applicants. A.2 Ph.D. in Science For admission to the Ph.D. Programme in Science departments, a candidate must satisfy one of the following criteria: A.2.1 M.Phil. or Master's degree in Science in a relevant area with a minimum CPI of 6.5 or 60% of marks. A.2.2 Master's degree in Engineering/Technology in a relevant area with a minimum CPI of 6.5 or 60% of marks A.2.3 Bachelor's degree in Engineering/Technology from an Indian Institute of Technology (IIT) in a relevant area with a minimum CPI of 7.0. A.2.4 Bachelor's degree in a related area in Engineering/Technology (from any Institute other than IITs/IISc) in a relevant area with a minimum CPI of 8.0 or 75% of marks. Candidates should note that if both CPI/CGPA and percentage are indicated in transcript/marksheet of the qualifying degree then only CPI/CGPA shall be taken into account for determining eligibility. Direct Admission (Waiver of Entrance Test): For candidates in Sciences, Engineering &Technology:

							The Institute may admit exceptionally bright students and Full-time (Institute Fellows) directly (i.e., without entrance test) into the Ph.D. program. Eligible candidates meeting one of the following criteria may be considered for a waiver of the entrance test: 1. B.Tech. from the IITs, graduated within the last five years, with a degree in the respective discipline with a CPI/CGPA of 8/10 and above. 2. Masters from the IITs/IISc, graduated within the last five years, with a degree in the respective discipline with a CPI/CGPA of 8.5/10 and above. Such a candidate has to apply online. Additionally, an email must be sent with scanned copy of the supporting documents to aracademic@iitp.ac.in There would be no admission in direct admission category in Department of Humanities and Social Sciences. Relaxation for SC/ST Candidates: Eligibility criteria will be relaxed by 5% marks or 0.5 CPI for SC/ ST applicants. Reservations: The reservation of seats in admissions for SC, ST, OBC, EWS categories and for Persons with Disability (PwD) will be as per Government of India rules. OBC (Non-creamy layer) candidates will have to produce certificate and self-declaration statement as per formats indicated at Annexure- I and II available in the website, link https://www.iitp.ac.in/acad/admission.php

347	QIP0030	Indian Institute of Technology (IIT), Patna	Ph.D Humanities	Humanities and Social Science	DN001115	Economics Macroeconomic Reforms Trade and investment Microeconomics Labour Economics Development Economics English Gender Studies Indian English Fiction Migration and Diaspora Studies Digital Humanities South Asian Fiction Linguistics Sociolinguistics Cognitive Linguistics General LinguisticsForensic Linguistics Management Applied Psychology Human Resource Management Industrial and Organizational Psychology Organizational Behavior	Minimum Eligibility Criteria for Admission to Ph.D. Programme: In all the disciplines, the upper age limit is 28 years (B.Tech./B.E./M.Sc./MA/MCA/MBA) and 32 years (M.Tech./M.E./M.S./M.Phil.) to be calculated as on the last date of application and is applicable only for candidates applying in Regular and Full time category, as institute fellow. For Research/ project fellows, age limit will be as per the funding agency norms. In absence of any age criteria, the Institute norms will be followed. Upper age limit is relaxed up to 05 years in case of candidate belonging to Schedule Castes/Schedule Tribes, Women, Physically Handicapped and OBC applicants. A.3 Ph.D. in Humanities and Social Sciences For admission to the Ph.D. Programme in the department of Humanities and Social Sciences (HSS), a candidate must satisfy one of the following criteria: A.3.1 M.Phil.or Master's degree in Arts/Commerce/Science in a relevant area with a minimum of 55%marks or equivalent. A.3.2 Master's degree in Engineering/Technology/Design in a relevant area with a minimum CPI of 6.5 or 60% marks. A.3.3 Bachelor's degree from an Indian Institute of Technology (IIT) in a relevant area with a minimum CPI of 7.0. A.3.4 Bachelor's degree in Engineering/Technology (from any Institute other than IITs/IISc) in a relevant area with a minimum CPI of 7.5 or 70% marks. Candidates should note that if both CPI/CGPA and percentage are indicated in transcript/marksheet of the qualifying degree then only CPI/CGPA shall be taken into account for determining eligibility. Direct Admission (Waiver of Entrance Test): For candidates in Sciences, Engineering &Technology:

							The Institute may admit exceptionally bright students and Full-time (Institute Fellows) directly (i.e., without entrance test) into the Ph.D. program. Eligible candidates meeting one of the following criteria may be considered for a waiver of the entrance test: 1. B.Tech. from the IITs, graduated within the last five years, with a degree in the respective discipline with a CPI/CGPA of 8/10 and above. 2. Masters from the IITs/IISc, graduated within the last five years, with a degree in the respective discipline with a CPI/CGPA of 8.5/10 and above. Such a candidate has to apply online. Additionally, an email must be sent with scanned copy of the supporting documents to aracademic@iitp.ac.in There would be no admission in direct admission category in Department of Humanities and Social Sciences. Relaxation for SC/ST Candidates: Eligibility criteria will be relaxed by 5% marks or 0.5 CPI for SC/ ST applicants. Reservations: The reservation of seats in admissions for SC, ST, OBC, EWS categories and for Persons with Disability (PwD) will be as per Government of India rules. OBC (Non-creamy layer) candidates will have to produce certificate and self-declaration statement as per formats indicated at Annexure- I and II available in the website, link https://www.iitp.ac.in/acad/admission.php

348	QIP0030	Indian Institute of Technology (IIT), Patna	M.Tech	Mechanical Engineering and Electrical Engineering	DN001121	Mechatronics	Eligibility Criteria for Admission to M.Tech. Programme: I. REGULAR & FULL TIME The programme is open to candidates of all categories with Bachelor's Degree in Engineering / Technology / M Sc or equivalent professional degrees (AMIE, etc.) and having a valid GATE score. All regular category candidates (except those having B.Tech. degrees from an IIT with a minimum CPI of 8.0) must be GATE qualified with valid GATE score. Candidates seeking admission to M.Tech. Programme of the Institute shall have to possess a minimum of 60% marks (or a CGPA of 6.5 in 10 point scale) for General/OBC/EWS categories and 55% marks (or a CGPA of 6.0 in 10 point scale) for SC/ST categories in the final qualifying examination. All selected candidates have to produce the certificate with regard to the marks secured in the final qualifying examination by 31-10-2022. Candidates should note that if both CPI/CGPA and percentage are indicated in transcript/marksheet of the qualifying degree then only CPI/CGPA shall be taken into account for determining eligibility. Reservation of Seats is as per Govt. of India rules. OBC (Non-creamy layer) candidates will have to produce certificate and self-declaration statement, whenever required before admission, as per prescribed formats indicated at Annexure- I and II available in the website, link https://www.iitp.ac.in/acad/admission.php Additional Conditions For Candidates Still To Appear In Qualifying Examinations Candidates still to appear in their qualifying degree examinations may also apply, provided they appear in all their qualifying degree examinations and complete all requirements for their degrees before date of registration to M.Tech programme at IIT Patna in July 2022. If selected, such candidates shall be admitted provisionally, and they will have to furnish the results of their qualifying degree examinations latest by 31-10-2022. Further, they must fulfill the minimum requirements of marks/CGPA/CPI, and other conditions like valid GATE score etc., as mentioned under eligibility criteria

							for respective programmes. Failure to fulfill any of these requirements, shall automatically result in cancellation of admission. Selection Procedure Selection is based on performance in GATE for Regular and Full time category this year. For other categories (Project Staff, Part-time and Sponsored), written test/interview shall be conducted. The eligibility and the GATE papers for the M.Tech. programmes are given below: B.Tech./B.E. degree in Mechanical / Production /Aerospace/ Electrical/ Electronics & Communication/ Instrumentation Engineering or MSc in Electronics and Instrumentation and valid GATE score in ME, PI, AE, EE, EC, IN, PH, XE . II. SPONSORED An applicant employed in an industry or any other recognized organization/institution with at least two years of experience is eligible for admission to the M.Tech. programmes provided the applicant is sponsored by the employer. Marks/CGPA/CPI criteria in the final qualifying exam will be same as prescribed for regular & full time category. For sponsored applicants, GATE score is not mandatory and they are not eligible for assistantship. Candidate applying for Sponsored Full-Time categories must be a regular employee of the sponsoring organization with at least 2(two) years of professional experience in the respective field. Selection of these candidates is based on performance in Written Test and/or Personal Interview of short-listed candidates. Such applicants must keep ready duly endorsed NOC before the last date of application and produce it whenever required in the prescribed format: Form I, available in website, link https://www.iitp.ac.in/acad/admission.php henever required in the prescribed format: Form III, available in website, link https://www.iitp.ac.in/acad/admission.php III. PART-TIME A student in this category is a professionally employed person

							(including the staff of IIT Patna), who pursues the M.Tech Program, while continuing the duties of his/her service. The Institute does not provide any assistantship to such a student. Marks/CGPA/CPI criteria in the final qualifying exam will be same as prescribed for regular & full time category. GATE score is not mandatory. Selection of these candidates is based on performance in Written Test and/or Personal Interview of short-listed candidates. Such applicants must keep ready duly endorsed NOC from employer before the last date of application and produce it whenever required in the prescribed format: Form III, available in website, link https://www.iitp.ac.in/acad/admission.php *Reservation of Seats: As per Govt. of India rules.

349	QIP0030	Indian Institute of Technology (IIT), Patna	M.Tech	Mathematics and Computer Science & Engineering	DN001122	Mathematics and Computing	Eligibility Criteria for Admission to M.Tech. Programme: I. REGULAR & FULL TIME The programme is open to candidates of all categories with Bachelor's Degree in Engineering / Technology / M Sc or equivalent professional degrees (AMIE, etc.) and having a valid GATE score. All regular category candidates (except those having B.Tech. degrees from an IIT with a minimum CPI of 8.0) must be GATE qualified with valid GATE score. Candidates seeking admission to M.Tech. Programme of the Institute shall have to possess a minimum of 60% marks (or a CGPA of 6.5 in 10 point scale) for General/OBC/EWS categories and 55% marks (or a CGPA of 6.0 in 10 point scale) for SC/ST categories in the final qualifying examination. All selected candidates have to produce the certificate with regard to the marks secured in the final qualifying examination by 31-10-2022. Candidates should note that if both CPI/CGPA and percentage are indicated in transcript/marksheet of the qualifying degree then only CPI/CGPA shall be taken into account for determining eligibility. Reservation of Seats is as per Govt. of India rules. OBC (Non-creamy layer) candidates will have to produce certificate and self-declaration statement, whenever required before admission, as per prescribed formats indicated at Annexure- I and II available in the website, link https://www.iitp.ac.in/acad/admission.php Additional Conditions For Candidates Still To Appear In Qualifying Examinations Candidates still to appear in their qualifying degree examinations may also apply, provided they appear in all their qualifying degree examinations and complete all requirements for their degrees before date of registration to M.Tech programme at IIT Patna in July 2022. If selected, such candidates shall be admitted provisionally, and they will have to furnish the results of their qualifying degree examinations latest by 31-10-2022. Further, they must fulfill the minimum requirements of marks/CGPA/CPI, and other conditions like valid GATE score etc., as mentioned under eligibility criteria

							for respective programmes. Failure to fulfill any of these requirements, shall automatically result in cancellation of admission. Selection Procedure Selection is based on performance in GATE for Regular and Full time category this year. For other categories (Project Staff, Part-time and Sponsored), written test/interview shall be conducted. The eligibility and the GATE papers for the M.Tech. programmes are given below: M.Sc. in Mathematics/Statistics/Mathematics & Computing or Equivalent or B.Tech./B.E. degree in Computer Science/IT/ECE/Aerospace Engineering/Maths & Computing or Equivalent and a valid GATE score in MA, CS, EC. II. SPONSORED An applicant employed in an industry or any other recognized organization/institution with at least two years of experience is eligible for admission to the M.Tech. programmes provided the applicant is sponsored by the employer. Marks/CGPA/CPI criteria in the final qualifying exam will be same as prescribed for regular & full time category. For sponsored applicants, GATE score is not mandatory and they are not eligible for assistantship. Candidate applying for Sponsored Full-Time categories must be a regular employee of the sponsoring organization with at least 2(two) years of professional experience in the respective field. Selection of these candidates is based on performance in Written Test and/or Personal Interview of short-listed candidates. Such applicants must keep ready duly endorsed NOC before the last date of application and produce it whenever required in the prescribed format: Form I, available in website, link https://www.iitp.ac.in/acad/admission.php III. PART-TIME A student in this category is a professionally employed person (including the staff of IIT Patna), who pursues the M.Tech Program, while continuing the duties of his/her service. The Institute does not provide any assistantship to such a student. Marks/CGPA/CPI criteria in the final qualifying exam will be same as prescribed for regular & full time category. GATE

							score is not mandatory. Selection of these candidates is based on performance in Written Test and/or Personal Interview of short-listed candidates. Such applicants must keep ready duly endorsed NOC from employer before the last date of application and produce it whenever required in the prescribed format: Form III, available in website, link https://www.iitp.ac.in/acad/admission.php *Reservation of Seats: As per Govt. of India rules.

350	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Architecture and Planning	DN000542	Architecture, Urban and rural planning, Built Environment including urban design and landscape design, Building science and architecture, Energy and architecture planning, Architectural Climatology, Ecology in relation to architecture and planning, Art in relation to architecture	(i) Bachelor's Degree in Architecture or Planning followed by Master's Degree in any specialization. (ii) Bachelor's Degree in Civil Engineering followed by Master's Degree in any specialization of Planning. (iii) B.Arch./ B. Planning.

351	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Chemical Engineering	DN000545	Transport Processes: Transport phenomena, Fluid dynamics, Fluidization Engg., Packed beds, Slurry transport, Boiling and condensation, Mixing phenomena, Gas-liquid-solid mass transfer. Adsorption, Catalysis and Reaction Engg., Process Intensification, Membrane separation process, Flow of emulsions, Heat integrated Distillation. Computer Aided Process Plant Design: Modeling and simulation of Chemical processes. Analysis and optimization of chemical process systems, Heat exchanger networks. Distillation columns. Catalytic reactors and Monolithic converters, Design of chemical equipment, Applied numerical methods, Dynamics and control of chemical processes and equipment, PC-based instrumentation and control, Process Integration, CFD. Industrial Pollution Abatement: Environment pollution control strategies, Modeling and simulation of pollution control systems. Modeling of dispersion of air and water pollutants. Treatment methodologies for air pollution and wastewater systems, Hazardous waste management. Risk analysis & hazard management.	B.Tech./M.Tech. or equivalent in Chemical Engineering/Chemical Technology/Allied disciplines in Engineering

						Energy Engineering: Design of energy efficient equipment and Energy conservation in chemical process industries, Bioenergy and Biomass energy systems. Biochemical Engineering and Down Stream Processing: Biochemical Engg., Design, Simulation and control of bioreactors, Biogasification. Bioseparation.	

352	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Science	Chemistry	DN000546	Analytical; Inorganic; Organic; Physical: Asymmetric synthesis; Bioanalytical chemistry; Bioinorganic chemistry; Biophysical chemistry; Chemical biology; Chemical kinetics; Coordination chemistry; Development of low cost carbon alternatives for waste water management; Electroanalytical chemistry; Electrochemical sensors and chemical sensors; Electrochemistry; Electronic structure calculations and molecular dynamics simulations; Enantiomeric resolution of pharmaceutically important compounds; Enantioselective catalysis; Environmental chemistry; Epoxidation of olefinic compounds; Evolution and origin of life; Extraction chromatography; Extraction, separation and recovery of metal ions; Heterogeneous catalysis; Inorganic biochemistry; Kinetics and nanomaterials; Liquid chromatography; Macrocycles; Main group chemistry; Metal speciation in environment; Metal-based drugs; Materials modification; Nanomaterials for biomedical and environmental applications; Neutron activation analysis; Organic electrochemistry; Organic materials for OLED and photovoltaic applications; Organic reaction mechanism;	M.Sc. or equivalent degree in Chemistry / Physics / Applied Chemistry / Industrial Chemistry / Pharmaceutical Chemistry / Biochemistry or B.Tech in Polymer Technology / Chemical Science and Technology/Chemical Engineering. (or) BS Degree (4-year) in Chemistry/ Chemical Sciences/ Physics/ Physical Sciences.

						Organic synthesis of biological interest molecules and new methodology in organic synthesis; Organometallics (Ru, Si and Sn); Photochemistry; Protein sequencing; Size and shape effects of nanomaterials on their physico-chemical properties; Supramolecular chemistry; Synthesis of heterocyclic compounds; Synthetic polymers/membranes/membrane electrodes; Syntheses of porphyrinoids for material applications; Solid state and materials chemistry; Statistical mechanics of polymers; Rational drug design; Multi component synthesis; Microwave assisted organic synthesis; Theoretical chemistry.	

353	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Civil Engineering	DN000547	Environment Engineering - Environmental Pollution, Optimization of distribution network, water and wastewater quality assessment and treatment alternatives, Industrial wastewater treatment, air pollution modeling, abatement and control device, EIA & control water quality modeling, interdisciplinary problems. Geotechnical Engineering – Behavior of shallow and deep foundations under static and dynamic loading, Problems of rock mechanics and Underground Space Technology, Static and Dynamic Soil Structure Interaction, Expansive soil, Reinforced earth, Ground Improvement Engineering. Hydraulics Engineering - Sediment transport & Alluvial stream dynamics. Open channel flows, Wind tunnel studies on Turbulence, Boundary layer and Drag, Ground water hydrology, Ground water flow and transport modeling, Water resources, Surface hydrology, Computational Hydraulics, Irrigation Engineering, Environmental Hydraulics. Geomatics Engineering - Surveying: Plane, Geodetic and	(i) Bachelor's degree in Civil Engineering. (ii) Bachelor's degree in Civil Engineering and Master's degree in research areas relevant to the different groups of the Department (Environmental, Geomatics, Geotechnical, Hydraulics, Structural and Transportation). (iii) Bachelor's degree in any branch of engineering with Master's degree in relevant research areas of the above groups of Civil Engineering, having mathematics at the Bachelor's level. (iv) Bachelor's / Master's degree in any branch of engineering but having 8 years of work experience in the research areas relevant to the above groups of the department. (v) For Geomatics Engineering group, MCA (with mathematics as one of the subjects in Bachelor's level) shall also be eligible for applying.

						GPS, Photogrammetry-close range, analytical and digital, Geodesy-Geometrical, Physical, Mathematical and Satellite, Remote Sensing-Optical and microwave, Hyperspectral, SAR interferometry, Digital image processing, AI soft computing Fuzzy theory, GIS, Web GIS Applications. Structural Engineering - Performance Based Design of Concrete/Metal Structures, Risk and Reliability Analysis, Nonlinear Computational Mechanics, Nano-mechanics, Soft Computing and Structural Optimization, Strength and Deformation Characteristics of Reinforced Concrete/Masonry/Structural Steel, High Rise Building Systems, Behavior of Bridge Systems, Laminated Composites and Sandwiched Structures, Thin Walled Structures, Smart Structures, Steel Concrete Composites, Concrete Mechanics, Concrete Durability, Special Concretes, Sustainable Concrete, Recycled aggregate concrete Damage Assessment and Structural Health Monitoring, Retrofit and Rehabilitation of Structures, Structures Subject to Extreme Loads (Wind, Earthquake, Impact, Blast and Fire).	

						Transportation Engineering - Highway material characterization for pavements, Reinforced flexible pavements, modified binders, composite pavements, pavement management systems, low cost pavements, mixed traffic flow modeling and simulation, highway capacity, Environmental impact assessment, mass transportation systems analysis, Rural Urban and Regional Transport Planning, Road Traffic Safety, Intelligent Transport System, GIS applications.	

354	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Design	DN000548	Product design, Visual design, Sustainable design, Innovation and Entrepreneurship, Design Thinking, Intellectual property development and its management.	(i) M.Des / M.Tech / M.Arch OR (ii) Bachelor's degree in Design followed by Master's Degree in any specialization. OR (iii) MIM / Master's in Management / MBA or equivalent OR (iv) Master's degree in Science / Bachelor Degree in Engineering / Technology / Architecture may be considered for research areas consistent with the academic background and special interests.
355	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Earth Sciences	DN000549	Geology: Engineering Geology; Environmental Geology; Geochemistry and Petrology; Geotechnical Investigation; Ore Geology; Petroleum Geology; Remote Sensing and GIS; Sedimentology; Stratigraphy and Paleontology; Structural Geology; Waste Disposal. Geophysics: Engineering Geophysics; Exploration Geophysics; Geodynamics; Seismology; Solid Earth Geophysics; Mathematical modeling and Inversion; Geoelectromagnetism.	M.Sc. / M.Sc.Tech / M.Tech. / MS/ Integrated M.Tech./ Integrated M.Sc. degree in Geology / Geophysics / Applied Geology / Applied Geophysics / Geological Technology / Geophysical Technology / Geosciences / Applied Geosciences / Petroleum Geology / Petroleum Geophysics/ Earth Sciences.

356	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Earthquake Engineering	DN000550	Structural Dynamics: Dynamic analysis and design of structures like buildings, dams, bridges and nuclear power plants, Finite & element methods, Static and dynamic nonlinear analysis, Constitutive modeling, Computer aided analysis, Soil-Structure and fluid-structure interaction, Seismic base isolation, Seismic risk analysis, Random vibration theory and probabilistic design methods, Shake table and pseudo dynamic testing of structure and structural components, System identification, Structural response control / Performance Based Design, Seismic Vulnerability and Risk analysis. Soil Dynamics: Analytical and experimental studies on dynamic soil properties, Seismic analysis and design of foundations, Wave propagation and ground response analysis, Liquefaction studies using laboratory and field tests, numerical modeling. Nonlinear constitutive models of soils, Finite element dynamic analysis of embankment dams, Dynamic soil-structure interaction analysis, Pile and well foundations for dynamic loads, Machine foundations, Model	(i) B.Tech. / M.Tech. or equivalent degree in Civil Engineering/ Earthquake Engineering. (ii) M.Sc. / M.Tech. in Geophysics/ Physics / Mathematics / Geology for research areas in Engineering Seismology and Seismotectonics.

						studies using geotechnical centrifuge for static and dynamic loads, Dynamic earth pressure and retaining walls, Soil improvement techniques, Reinforced earth and geotextiles for seismic loads, Field exploration using SPT, Wave propagation, Block vibration, Cross bore hole and SASW tests. Engineering Seismology and Seismotectonics: Microearthquake investigations, Estimation of earthquake source parameters, Seismotectonic modeling, Attenuation characteristics, Strong motion seismology, Broadband seismology, Finite-difference method and study of local site effects, Numerical and empirical ground motion prediction, Estimation of response spectra and design spectra, Probabilistic and deterministic seismic hazard assessment, Vulnerability and Risk Assessment, Seismic microzonation, Remote sensing/GIS/SAR based studies, Pattern Recognition, Earthquake Early Warning Systems.	

357	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Electrical Engineering	DN000551	Power electronics, Electrical drives and their control, Electrical machines analysis and computer-aided design, Power Quality, Embedded Systems, Condition Monitoring of Rotating Electrical Machines, Power Systems Stability, State Estimation, Security, Reliability, Optimization, Expert Systems, Application of neural networks and Artificial Intelligence Techniques, Distribution System Automation, Relaying, Distribution system reforms and bench marking HV engineering, Automatic Generation Control, Restructured Power Systems, Measurement techniques, Smart and intelligent transducer, process instrumentation & control, Power system instrumentation, Applications of digital signal processing, AI & ANN Techniques in Instrumentation, Biomedical Instrumentation, Analysis and modeling of bioelectrical signals and systems, Medical Signals & Image Processing, Operations research, Reliability engg., Optimal scheduling, System modeling, Simulation and analysis, Model reduction techniques, Micro processor and microcomputer based systems for measurement, Monitoring, operation and control,	(i) B.Tech. / M.Tech. or equivalent degree in Electrical Engineering. (ii) B.Tech. / M.Tech. or equivalent degree in Electronics and Communication/ Electronics/ Instrumentation/ Electronics and Instrumentation / Instrumentation and Control Engineering. (iii) Al related specializations including B.Tech. / M.Tech. or equivalent degree in Computer Science/ M.Sc. (Maths)/ M.Sc. (Physics).

						Robotics, Control and optimization.	
358	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Electronics & Communication Engineering	DN000553	Communication Systems RF & Microwave Engineering Microelectronics and VLSI	(i) ME. / M.Tech. in Microelectronics / VLSI / Microwaves / Communication Systems / Control Systems / Instrumentation / Circuits & Systems or equivalent. (ii) B.E. / B.Tech. in Electronics & Communication / Electrical Engg./ Computer Science & Engg. or equivalent. (iii) M.Sc. in Physics / Instrumentation / Electronics. (iv) B.Tech + M.Tech. in Computer Science.

359	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Computer Science & Engineering	DN000554	Computer Science and Engineering	(i) M.E. / M.Tech. in Information Technology/ Computer Science & Engg. / Software Engg./ AI and Data Science or equivalent. Or (ii) M.Tech. / ME in Electrical Engineering/ Electronics and Communications Engineering or equivalent. Or (iii) B.E. / B.Tech. in Computer Sc. & Engg. / Information Technology Mathematics and Computing or equivalent. Or (iv) Five years integrated BS-MS in mathematics and computing or equivalent.
360	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Centre of Excellence in Disaster Mitigation & Management	DN000555	• Natural/Manmade Hazards and Impact Assessment • Hazard Monitoring, Prediction & Microzonation • Data Processing Techniques & Models	(i) M. Tech. in Disaster Mitigation and Management, Civil Engineering, Geomatics Engineering, Mechanical and Industrial Engineering, Chemical Engineering, Computer Science and Engineering, M. Arch. & M. Planning, or equivalent. Or (ii) M. Tech. in Geological Technology, Geophysical Technology, Earth System Science and Engineering, Atmospheric-Oceanic Science and Technology, Biosciences and Bioengineering, or equivalent (with Bachelors in Engineering, or Technology, or Sciences with Mathematics as a subject at least in one semester.) Or (iii) M. Sc. in Disaster Management, Geology, Geophysics, Atmospheric and Ocean Sciences, Physics, Mathematics, Environmental Sciences, Biosciences, Biotechnology or equivalent (with Bachelors in Sciences with Mathematics as a subject at least in one semester. Or (iv) M.B.A. or M.C.A. (with Bachelors in Engineering, or Technology, or Sciences with Mathematics as a subject at least in one semester.)
361	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Humanities	Humanities and Social Science	DN000556	English, Economics, Psychology and Sociology	(i) M.A. or equivalent degree. (ii) Master's degree in Science/Graduate Degree in Engineering / Technology with 60% marks (or equivalent grade) may be considered for research areas consistent with the academic background and special interests.

362	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Hydrology	DN000557	Analysis of hydrological extremes, Stochastic hydrology, Reservoir operation, System analysis of water resources, Conjunctive use, Hydraulic and hydrologic routing, Hydrogeology Contaminant transport through open channels and porous media, Surface and ground water pollution assessment, Water quality modeling Remediation of aquatic systems, Water and Wastewater Treatment.	(i) Master's degree in any of the following or equivalent research areas relevant to the department a) Civil Engg. / Agricultural Engg. / Hydrology / Environmental Engg. / Water Resources /Chemical Engg. b) Geology / Geophysics / Soil Science / Forestry or Natural Resources/ Atmospheric Sciences/ Environmental Sciences/ Disaster Mitigation & Management; with Mathematics at Bachelor's level.
363	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Hydro & Renewable Energy	DN000558	Small Hydro Energy and other Renewable Energy Development. Environmental management of Rivers and Lakes	(i) B.Tech. / M. Tech. or equivalent in Civil / Electrical / Mechanical / Industrial / Chemical / Electronics / Computer / Agricultural / Environmental / Biotechnology/ Instrumentation Engineering or Equivalent and related disciplines. (ii) M.Sc. in disciplines consistent with research areas of the department.
364	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Institute Instrumentation Centre	DN000559	Centre houses modern facilities for advanced materials processing and characterization. The facilities include well-established Nanoscience Lab., which consists of state of the art nanomaterials synthesis facilities (Physical vapour deposition (PVD) Technique for Nano-materials synthesis.).	M.Sc. / M.Tech. in Physics, Applied Physics, Material Science, Chemistry, Electronics & Nanotechnology

365	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Management Studies	DN000560	International Marketing, Service Marketing, Marketing Management, Strategic Management, Health Care Management, Managing Non Profit Organizations, Supply Chain Management, Human Resources Management, Organizational Behavior, Knowledge Management, Financial Accounting and Management, Quality Management, Fuzzy Mathematics, Nonlinear Dynamics and Chaos, Mathematics Finance, Statistical Field Theory, Quantum Information Theory and Quantum Computing, Optimization, General Management including Indian Philosophy Vedic Values, Rural Management & Marketing, Education Business Management, Management Teaching Management, Family Owned Businesses, Bottom of the Pyramid Markets & Business Opportunity Development.	(i) B.E. / B.Tech. or equivalent, M.E. / M.Tech. or equivalent qualifications. (ii) M.Sc. / M.Com. (iii) Master's in Management/M.B.A. or equivalent.

366	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Science	Mathematics	DN000561	Elasticity and Vibration, Fracture Mechanics, Fluid Mechanics, Computational Fluid Dynamics, Bio-Mathematics, Numerical Analysis, Operations Research, reliability Theory, Control Computer Applications, Image Processing, Computer Graphics, Summability Theory, Approximation Theory, Statistics, Computerized Tomography, Abstract Algebra, Applied Algebra, Cryptography, Complex Analysis, Mathematical Modeling, Robotics & Control, Symbolic Computation, Theory of Differential Equations, Special Functions.	(i) M.A. / M.Sc. / M.Tech. / Int. M.Sc. (5 years) in Mathematics / Applied Mathematics / Industrial Mathematics / Statistics / Operations Research / Applied Operations Research / Mathematics and Computing or equivalent. (ii) M. Stat. / M. Math. (iii) B.Tech. in Maths and Computing / B.S. Maths (4 years) from IITs / IISc.

367	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Mechanical & Industrial Engineering	DN000563	Machine Design Engineering: Machine Design: Computational Mechanics, Computer Aided Design, Experimental Stress Analysis, Fracture Mechanics, Noise Control and Vibrations, Robotics and Control, Solid Mechanics, Tribology, Rotor Bearing Dynamics, Vehicle Dynamics. Machine Diagnostics, Machine Dynamics, Instrumentation & Control, Machanics of Composites, Bio-Mechanics, MEMS/NEMS, Composite and Smart Structures. Production and Industrial Engineering Systems: Computer Aided Process Planning, Computer Aided Manufacturing, Manufacturing Systems, Metal Casting, Machine Tools and Metal Cutting, Product Design & Development, Unconventional Machining Processes, Advanced Manufacturing, Supply Chain Management, Quality and Reliability Engineering, Processing of Composites, Surface Engineering, ARC Stability Analysis, Design of Weld Joints, Welding Metallurgy, Fracture Mechanics of Weld Joints, Weld Surfacing, Thermal Spraying. Thermal Engineering: Experimental Fluid Mechanics,	(i) B.Tech. / M.Tech. degree or equivalent degree in Mechanical / Industrial / Production Engg. (ii) B.Tech. / M.Tech. degree in Aerospace / Chemical / Civil /Computer/Electrical/ Electronics/ Materials/ Metallurgical Engg./ Biotechnology/ Nanotechnology and other research areas consistent with the academic background and special interests.

						Micro & Nano Fluidics, Bio Fluidics, Fuel Cell, Combustion and IC Engines, Computational Fluid Dynamics, Energy Systems, Heat Transfer, Thermal Contact Couductance, Refrigeration and Air-Conditioning, Solar Energy, Turbo-Machines, Design of Thermal System, Two-Phase Flow and Heat Transfer Fire Dynamics Erosion Wear.	

368	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Metallurgical & Materials Engineering	DN000565	Development of Ferrous and Non ferrous Materials, Solidification and P/M Processing of Materials, Mechanical Processing of Materials, Direct reduction process, Aqueous and hot Corrosion, Nano materials and Composites. Tribology of materials, Advanced Welding Technologies and joining of dissimilar materials, Adhesive joining, Fatigue and fracture of materials, Electro Ceramics and Structural Ceramics, Energy Storage Materials, Surface modification and Coatings, Structure property correlation, Polymer technologies etc.	(i) B.Tech./ M.Tech. degree in Metallurgy / Materials Science and Engineering/ Ceramic Engineering/ Polymer Engineering or equivalent. (ii) B.Tech./ M.Tech. degree in Mechanical Engineering/ Production Engineering/ and allied disciplines. (iii) B.Tech. / M.Tech. in Biotechnology/ Bioengineering with Mathematics at the undergraduate level. (iv) M.Sc. in Materials Science/ Physics/ Chemistry and allied streams with Mathematics at the Undergraduate level.
369	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Mehta Family School for Data Science and Artificial Intelligence	DN000566	Machine Learning and Deep Learning, Data Mining and Big Data, Analytics, Text, Image and Video Analytics, Natural Language, Processing, Soft Computing, Application of Mathematical Methods, Application of Statistical Methods, Decision Support Systems, Robotics, IoT and Sensors, Any other research areas relevant to AI and DS.	(i) M.Tech. / M.E. or equivalent OR (ii) Bachelor's Degree in Science/ Mathematics/ Statistics / Operations Research/ Actuarial Science followed by Master's Degree in any specialization. OR (iii) MIM/ Masters in Management / M.B.A. /M.Arch. or equivalent with Mathematics/ Statistics at graduation level. OR (iv) MBBS followed by M.D./M.S. or equivalent.

370	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Science	Physics	DN000569	Atmospheric Physics, Atomic and Molecular, Physics, Fibre Optics and Photonics, Laser Physics, Condensed Matter Physics, Nuclear Physics, Thin Film Devices ,High Energy and Particle Physics.	(i) M.Sc. in Physics / Applied Physics or equivalent. (ii) M.Sc. in Chemistry / Mathematics / Biophysics / Geophysics / Computer Science / Electronics or equivalent, provided Physics was a subject at B.Sc. level. (iii) B.Tech. in Electrical / Electronics / Chemical / Metallurgical / Nanotechnology / Engineering Physics or equivalent. (iv) M.Tech. (Solid State Electronics Material), M.Tech. (Photonics), M.Tech. (Nanotechnology), M.Tech (Applied Optics), M.Tech. (Optoelectronics and Optical Communication) or equivalent. (v) Integrated M.Sc. in Photonics or equivalent.
371	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Paper Technology	DN000570	Pulp Processing, Non-wood fiber pulping, Secondary fiber pulping, Recycling, Paper Making, Paper Properties, Printing, Energy Management, Chemical Recovery, Environmental Science & Engineering, Industrial Chemistry, Pollution free bleaching, Modelling of Process Systems, Wood Chemistry, Electronics, Instrumentation and communication, Biotechnology, Nanotechnology	(i) M.Sc. /M.S. (Science/Engineering) . (ii) BE / B.Tech / M.E. / M.Tech. in any branch of engineering or equivalent.
372	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Applied Mathematics and Scientific Computing	DN000572	Degradation of materials, Microbial Corrosion, Coating, Nanomaterials, Nanoscience, Energy Storage devices, Li-battery, Super Capacitor and Fuel Cell, Fuel Cells, Theoretical Physics, Superconductivity, Nanomagnets, Materials Chemistry, Applied Mathematics, Industrial Mathematics, Optimization, Cloud Computing, English, Humanities.	(i) M.A. / M.Sc. / Int. M.Sc. (5Years) in Mathematics/ Applied Mathematics/ Industrial Mathematics/ Statistics/ Operations Research/ Mathematics and Computing or equivalent. (ii) B.E. / B.Tech./ M.E. / M.Tech. in any branch of Engineering / B.S. Maths and Computing (4 years) or equivalent

373	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Centre for Transportation Systems	DN000573	Urban Transportation Policy and Research, Environmental Analysis of Transportation Systems, GPS and GIS Applications in Transportation Systems, Optimization of Public Transport Operations, Economic Appraisal of Transport Systems, Multiplier Effect, Project Management, and Inter modal Transportation.	M.Tech. / M.Arch. / M.Planning / M.Des. / MBA or equivalent degree in Civil Engg. / Mechanical Engg / Industrial Engg. / Production Engg. / Computer Science & Engg. / Chemical Engg. / Infrastructure Systems/ Biotechnology / Architecture / Planning / Urban Engg. / Business Administration /Automobile Engg. / Mechatronics Engg.
374	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Water Resources Development & Management	DN000575	Water Resources Planning, Design, Development and Management (Hydropower, Water Supply, Flood, Control, Irrigation), Surface and Ground Water Hydrology, Environmental Impact Assessment, Water Quality Modeling, Hydraulic and Hydrologic Design Modeling, River Engineering, System Analysis, Interbasin Transfer, Basin Planning and Development, Irrigation Water Management, Agricultural Crop Planning, Natural Resources Management using Remote Sensing and GIS.	(i) B.E. /B. Tech. /M.E. /M.Tech. in Civil /Agricultural / Environment / Electrical/ Mechanical /Chemical / Computer/ Electronics Engineering /Architecture and Planning or equivalent degree consistent with research areas of the Department. (ii) M.Sc. Degree in Agricultural Science / Natural (Land and Water) Science / Environmental Science or equivalent consistent with research areas of the Department along with mathematics at bachelor's level.

375	QIP0031	Indian Institute of Technology (IIT), Roorkee	Ph.D Engineering	Centre for Photonics and Quantum Technology (CPQCT)	DN000768	Photonics and Quantum Communication:Fiber and Integrated Optics, Nanophotonics, Semiconductor Photonics, Phase Change Photonic Materials and Device, Optical wireless communication, FSO System Optical Interconnects, Optical Logic, THz Photonics Optical Memories, Specialty Optical Fibers, Space Division Multiplexing, Orbital Angular Momentum Modes Optical Fiber Amplifiers, Nonlinear Optics Ultra short pulse propagation in meta-materials and fibers, Liquid Crystal Guided Wave Photonics, Plasmonics, Quantum plasmonics, Spoof Plasmonics Graphene Plasmonics, Integrated Circuits for THz Wireless Communication, Fiber Sensors, Plasmonic Sensors, SERS, SEF, EOT, SEIRA, ESP-LSP Coupling based sensors, Optoelectronics: LED and thin film solar cells, Optical Properties of Wide Band Gap Semiconductor, Random Lasers, Light Interaction with Nanostructured media, Optical angular momentum of optical beams and pulses, tailoring light in all its degrees of freedom, Quantum Optics, EIT, Quantum Computation and Quantum Information, Quantum effects in	(i) M.Tech in Electronics/Electronics and Communication/Computer Science / Electrical/Photonics/Optoelectronics and Optical Communication/ Applied Optics, or equivalent. (ii) M.Sc. in Physics / Applied Physics/Electronics/Photonics/Computer Science or equivalent. (iii) BS-MS in Physics/B.S. (4 years) / Applied Physics or equivalent. (iv) Integrated M.Sc. in Physics/ Photonics or equivalent. (v) B.Tech. in Electronics/Electronics and Communication/Computer Science, Electrical/ Engineering Physics or equivalent.

						few-body systems, Quantum computing Quantum Biology and Biomimetics, Quantum Photocell Quantum Computing, Quantum Random Number Generators.	

376	QIP0032	National Institute of Technology (NIT), Manipur	Ph.D Engineering	Civil Engineering	DN000001	Water Resources (Hydrology & Channel Hydraulics): Hydrological Modelling &Water Balance Analysis, Climate Change Hydrodynamics, Geospatial Applications in Hydrology & Water Resources, Flood Modelling & Forecasting, Fluvial Hydraulics/Sediment Transport. Structural Engineering: Seismic Analysis and Design, Non-Linear Seismic Response of Structures, Seismic Control by Passive and Semi-Active Dampers. GIS & Remote Sensing: Geospatial Applications, Human Security and Geospatial Intelligence, 3D GIS, Geohazards, Mobile Mapping. Environmental Engineering. [#Proficiency in usage of modules/softwares: MIKE-SHE/HYDRO/EcoLAB, TOPMODEL, HEC-HMS, JAMS-2000; STAAD-Pro, ETABS, SAP; ArcGIS, ENVI+IDL, ERDAS IMAGINE, LPS, etc desired as per specialization.]	Master Degree in Engineering/Technology (or equivalent degree) with a minimum 6.5 CPI/CGPA or minimum 60% marks from a recognized University/Institute; GATE/NET qualified candidates preferred. OR M.Sc./M.S. in the specified areas (GIS & Remote Sensing, GeoInformatics, Earth Science/Geology, Natural Resources, Environmental Science, Computer Science, Electronics) with a minimum 6.5 CPI/CGPA or minimum 60% marks from a recognized University/Institute; GATE/NET qualified candidates preferred. OR Bachelor Degree in Engineering/Technology with an excellent academic record, with a minimum 7.5 CPI/CGPA or 70% of marks from a recognized University/Institute with valid GATE/NET score.
377	QIP0032	National Institute of Technology (NIT), Manipur	Ph.D Engineering	Computer Science & Engineering	DN000002	Elliptic curve cryptography, speech processing, Information security, artificial intelligence and data mining, , Medical Image Processing, Forgery Detection, Information Security, Machine Learning,	Master Degree in Engineering/Technology or equivalent in IT/CSE or in an appropriate area with a minimum 6.5 CPI/CGPA or 60% marks from a recognized University/Institute. OR Bachelor Degree in Engineering/Technology with an excellent academic record, with a minimum 7.5 CPI/CGPA or 70% of marks from a recognized University/Institute and a valid GATE score.

378	QIP0032	National Institute of Technology (NIT), Manipur	Ph.D Engineering	Electrical Engineering	DN000003	Propulsion Drive System for Electric Vehicles using Wide Band gap Semiconductor Devices (i.e. GaN & SiC), Battery Charging System, Wireless Power Transfer Systems, Dynamic Wireless Charging, High-Efficiency Power Converters, Soft Switching, Multi-port Converters, Single-Active Bridge (SAB), and Dual Active Bridge (DAB) Converters, Magnetic Levitation System, DC-DC Converter Control, Sliding Mode Control, Event-Triggered Control, Time-delay Systems, Non-Fragile Controller and Observer, Renewable energy planning , soft computing applications, Power System operation and control	Master Degree in Engineering/Technology or equivalent in an appropriate area with a minimum 6.5 CPI/CGPA or 60% marks from a recognized University/Institute. OR Bachelor Degree in Engineering/Technology with an excellent academic record, with a minimum 7.5 CPI/CGPA or 70% of marks from a recognized University/Institute and a valid GATE score.
379	QIP0032	National Institute of Technology (NIT), Manipur	Ph.D Engineering	Electronics & Communication Engineering	DN000004	Wireless Communication, Signal Processing, VLSI Design, Analog Circuit Design, Microwave, Communication system and signal processing	Master Degree in Engineering/Technology or equivalent in an appropriate area with a minimum 6.5 CPI/CGPA or 60% of marks. OR Bachelor Degree in Engineering/Technology or MSC in related area with an excellent academic record, with a minimum 7.5 CPI/CGPA or 70% of marks from a recognized University/Institute and a valid GATE score.

380	QIP0032	National Institute of Technology (NIT), Manipur	Ph.D Engineering	Mechanical Engineering	DN000005	Electronic Cooling, Two-phase fluid flow and heat transfer, LES on Dimples surface, Film cooling in supersonic flow, Design of Bio-enabled structures, High Performance Computational Modelling of Engineered Systems, Multi-disciplinary Design Optimization, Cybersecurity in design and manufacturing, Additive manufacturing of complex and composite materials, Anti-reverse engineering technologies, Artificial Intelligence, Application in Manufacturing, Fabrication, Characterization and Machining of Composites, Micro manufacturing, Nano-materials, Application of Optimization techniques, IC Engine Optimization, Renewable Energy, Alternate fuels.	Master Degree in Engineering/Technology or equivalent in an appropriate area with a minimum 6.5 CPI/CGPA or 60% marks. OR Bachelor Degree in Engineering/Technology with an excellent academic record, with a minimum 7.5 CPI/CGPA or 70% of marks from a recognized University/Institute and a valid GATE score.
381	QIP0033	Tezpur University, Assam	Ph.D Engineering	Computer Science & Engineering	DN000049	Data mining, Image processing/ Computer vision and Geometry/Bioinformatics/ SDN, NFV, IoT/Speech Processing/ NLP/ Pattern recognition/ Machine learning, Computer Vision/ ML, V2X, Tactile internet/ ML, Trust and Reputation, EDM/ Data Mining/ Network security, Bioinformatics, / CRN, 5g/6G, Optical network, SDN/ Wireless network.	M.Tech. in Computer Science/ I.T./ Electronics or MCA/M.Sc. in Computer Science/ I.T. or B.E. / B.Tech. with 75% marks in aggregate or equivalent CGPA with a valid GATE Score. Minimum two recommendation letters from the institute/ University from where B.E./B.Tech. degree was obtained.

382	QIP0033	Tezpur University, Assam	Ph.D Engineering	Electronics & Communication Engineering	DN000050	Robotics, Biomedical Signal Processing/Image Processing, Computer Vision, Deep learning-based signal and image analysis, Biomedical signal Processing/Bioelectronics/Semiconductor Devices Flexible Electronics/Neuro-engineering, Bioelectronics/ Semiconductor Devices, Simulation and Modeling/ Bio-sensors, Quantum Technology/Machine learning for smart Sensing, Sensors/ Sensor and Nanotechnology/ Vehicular electronics, Bio-electronic Devices.	M.E. / M.Tech. / M.Sc. Engg. / M.S. in Electronics/ Communication/ Electronics Design/ Electrical/ Instrumentation/ Control/ Microwave/ Biomedical/ Bioelectronics/ Biotechnology/ Computer Science/ Information Technology. or M.Sc. in Electronics/ Physics/ Applied Mathematics. MCA with Physics, Chemistry and Mathematics in Bachelor's degree, MBBS with MD/ MS degree. OR B.E. / B.Tech. with 75% marks in aggregate or equivalent CGPA with a valid GATE Score. Minimum two recommendation letters from the institute/ University from where B.E./ B.Tech. degree was obtained.
383	QIP0033	Tezpur University, Assam	Ph.D Engineering	Food Engineering and Technology	DN000110	Functional Foods and Food Chemistry/Food Packaging, Food Processing waste utilization/ Food process engineering	M.Tech. / M.E. /Integrated M. Tech. in Food Engineering and Technology/Food and Dairy related other programme/Mechanical Engineering/Chemical Engineering/Bio-Process/Bio-chemical/Biotechnology, or M.Sc. and Integrated M.Sc. in Food Engineering and Technology/Food and Dairy related other programme/ Applied Microbiology/Microbiology/Bio-Chemistry/ Chemistry/ Biotechnology/Bioscience and Informatics, or, B.E./B.Tech. (in Food Engineering and Technology/ Food and Dairy related other programme) with 75% marks in aggregate or equivalent CGPA with valid GATE Score). Minimum two recommendation letters from the institute/University from where B.E./B.Tech. degree was obtained.

384	QIP0033	Tezpur University, Assam	Ph.D Engineering	Energy	DN000111	Energy Management, Bio-energy, IoT for Biogas/ Biofuels, Bio-energy, Catalytic transformation of Biofuels, Energy-Environment/ Building Energy, Biomass Energy/ Hybrid energy system, Grid integration, instrumentation and control, waste management/ Fuel Cell, Green Hydrogen, Battery Supercapacitor, Hybrid UAV based air quality monitor/ Solar Energy, Photovoltaic, Energy Systems, Solar Hybrid Systems/ Heating & Ventilation, Radiant System, Ground Source Heat	M.Sc. / M.E. / M.Tech. degree in Energy Technology/ Energy Management/Energy related Engineering and Technology/Physics/ Chemistry/Agriculture Allied subjects.
385	QIP0033	Tezpur University, Assam	Ph.D Engineering	Civil Engineering	DN000698	Geotechnical Engineering/ Environmental Engineering/ Transportation Engineering	(a) M.E./M.Tech. /M.Sc. (Engg.) in Civil Engg. or allied areas or (b) M.Sc. in relevant discipline with minimum 70% marks in aggregate or equivalent CGPA or (c) B.E. / B.Tech. with 75% marks in aggregate or equivalent CGPA with a valid GATE Score. Minimum two recommendation letters from the institute /University from where B.E./B.Tech. degree was obtained.
386	QIP0033	Tezpur University, Assam	Ph.D Engineering	Electrical Engineering	DN000699	Sensor Fabrication for Application in Food Industry, IOT & health monitoring Green Energy Sensor/ Control System, Smart energy system, chaos, IOT, Waste water Purification/ Renewable Energy, Power System, Electronic Drives, Electric Vehicles/ Power Electronics & Drives Micro grid/ Smart Grid.	ME/M.Tech. in any relevant discipline of Engineering or MBBS with MD/MS or M.Sc. in any relevant Science discipline, or B.E./B.Tech. with 75% marks aggregate orc equivalent CGPA with a valid GATE Score and minimum two recommendation letters from the Institute or University from where B.E. /B.Tech. degree was obtained.

387	QIP0033	Tezpur University, Assam	Ph.D Engineering	Mechanical Engineering	DN000701	Design and Analysis of Heat Exchangers, Thermodynamic modelling and optimization of (i) Solar thermal power and cooling systems (ii) Gas turbine based combined power systems with steam Rankine, organic Rankine and Kalina as bottoming cycles (iii) vapour absorption cooling systems/Optimum design of Structures and systems using evolutionary algorithms with special emphasis to multi-Objective Combinatorial optimization problems/Solar Thermal Energy Applications, Drying Technology Including Solar Hybrid Drying, Thermal Energy Storage/ Solar Thermal Energy storage Material Characterization/ Thermal Engineering, Heat Transfer System/ Rehabilitation robotics-Prosthetic Hand, Single Objective and Multi- objective Optimization Facility Layout Problem, Mechatronics/ Stress Analysis, Plasticity, Autofrettage, Fracture Mechanics.	M.E. / M.Tech. / M.Sc. (Engg.) in Mechanical Engineering or any other relevant Engineering branches including Chemical Engineering and Materials Science Engineering. Or, M.Sc Degree in any relevant discipline with CSIR-UGC JRF/NET Qualified certificate or a valid GATE score. Candidates other than those with M.Sc. Mathematics must have studied Mathematics up to BSc level. Or, B.E. / B.Tech degree with 75% marks in aggregate or equivalent CGPA with valid GATE Score. Minimum two recommendation Letters from the Institute /University from where B.E./B.Tech degree was obtained.
388	QIP0033	Tezpur University, Assam	M.Tech	Computer Science & Engineering	DN000987	NA	B.E./B.Tech. or equivalent Bachelor's degree in Computer Science and Engineering or MCA with minimum 50% aggregate marks or equivalent grade point.
389	QIP0033	Tezpur University, Assam	M.Tech	Civil Engineering	DN000988	NA	B.E./B.Tech. in Civil Engineering with minimum 50% aggregate marks or equivalent grade point, where applicable.

390	QIP0033	Tezpur University, Assam	Ph.D Management	Management Studies	DN000998	Human Resource Management, Organization Behaviour/ accounting, taxation, social Development Issues/ Tourism Marketing Management/ Finance, Green Finance, FinTech, agriculture Finance, Stock Market/ Tourism, Logistic & Supply Chain Management, Intellectual Property Management, Community Conserved Areas.	M.B.A. , M.Com. , M.A. / M.Sc. in Economics, M.A. in Psychology/ Sociology/Social Work/ Cultural Studies, MCA , M.T.M. / M.T.A. FCA/ FCS/ FICWA.
391	QIP0033	Tezpur University, Assam	M.Tech	Energy Technology	DN000999	NA	B.E./B.Tech. or equivalent Bachelor's degree in Mechanical/ Electrical/ Electronics/ Instrumentation/ Chemical/ Agricultural/ Energy Engineering / Civil/ Petroleum/ Material Science/ Engineering Physics/ Renewable Energy. Or M.Sc. in Physics/ Chemistry/ Material Science/ Engineering Physics/ Engineering Science/ Polymer Science/ Renewable Energy/ Energy/ Nanoscience/ M.Voc. in Renewable Energy with minimum 50% aggregate marks or equivalent grade point. **
392	QIP0033	Tezpur University, Assam	M.Tech	Bioelectronics	DN001000	NA	B.E./B.Tech. or equivalent Bachelor's degree in Electronics and Communication Engineering/ Instrumentation/ Chemical Engineering/ Computer Science and Engineering/ Electrical Engineering/ Biomedical Engineering/ Bioengineering/ Neuroengineering/ Genetic Engineering/ Biotechnology or M.Sc. in Biotechnology/ Biochemistry/ Chemistry/ Polymer Science/ Physics/ Electronics/ Nano Science and Technology/ Instrumentation or MBBS with minimum 50% aggregate marks or equivalent grade point.
393	QIP0033	Tezpur University, Assam	M.Tech	Electronics Design and Technology	DN001001	NA	B .E./B.Tech. or equivalent Bachelor's degree in Electronics/ Electrical/ Instrumentation Engineering or M.Sc. in Electronics/ Instrumentation/ Physics (Electronics as specialization) with minimum 50% aggregate marks or equivalent grade point.

394	QIP0033	Tezpur University, Assam	M.Tech	Information Technology	DN001002	NA	B.E./B.Tech. or equivalent Bachelor's degree in Computer Science and Engineering/ Information Technology/ Electronics and Communication Engineering/any other allied Discipline, or MCA or its equivalent degree, or M.Sc. in Computer Science/ Information Technology/ Electronics/ Mathematics/ Statistics with minimum 50% aggregate marks or equivalent grade point. Candidates selected under GATE should have a valid GATE score in Computer Science.
395	QIP0033	Tezpur University, Assam	M.Tech	Food Engineering and Technology	DN001003	NA	B.E./B.Tech. /M.Sc. in Food Engineering and/or Technology/ Agricultural Engineering/ Chemical Engineering and/or Technology/ Dairy Engineering and/or Technology with minimum 50% aggregate marks or equivalent grade point. Also, candidates must have Mathematics at 10+2 standard with minimum 50% marks or equivalent grade point or as a subsidiary subject in the specified degree programmes.
396	QIP0033	Tezpur University, Assam	M.Tech	Mechanical Engineering	DN001004	1. Machine Design and 2. Thermo Fluids	B.E./B.Tech. or equivalent Bachelor's degree in Mechanical/ Aerospace/ Automobile Engineering or in any other relevant engineering discipline with minimum 50% aggregate marks or equivalent grade point.
397	QIP0034	Harcourt Butler Technical University, Kanpur	Ph.D Engineering	Civil Engineering	DN000442	Structural Engineering Geo-technical Engineering Water Resources Engineering Environmental Engineering	M. Tech. / M. E. Degree in relevant discipline with a minimum of 60 % marks or equivalent CGPA/CPI. or B. Tech. degree with minimum 75% marks with 2 years professional experience. Note: A relaxation of 5% of marks in minimum qualifying marks is permissible (without grace marks) to candidates belonging to SC / ST / OBC-NCL / PwD categories for admissions to Ph.D. programmes.
398	QIP0034	Harcourt Butler Technical University, Kanpur	Ph.D Engineering	Mechanical Engineering	DN000444	Mechanical Design Thermal Engineering Manufacturing Industrial Engineering Material Science	M. Tech. / M. E. Degree in relevant discipline with a minimum of 60 % marks or equivalent CGPA/CPI. or B. Tech. degree with minimum 75% marks with 2 years professional experience. Note: A relaxation of 5% of marks in minimum qualifying marks is permissible (without grace marks) to candidates belonging to

							SC / ST / OBC-NCL / PwD categories for admissions to Ph.D. programmes.
399	QIP0034	Harcourt Butler Technical University, Kanpur	Ph.D Engineering	Chemical Engineering	DN000447	Process Engineering and Design Reaction Engineering and Catalysis Biofuels Energy Conservation and Management Process Modelling and Simulation Multi Objective Optimization Nano Technology Petroleum Refining Engineering and Petrochemicals Polymerization Engineering Corrosion Engineering Material Science and Engineering Environmental Engineering	M. Tech. / M. E. Degree in relevant discipline with a minimum of 60 % marks or equivalent CGPA/CPI. or B. Tech. degree with minimum 75% marks with 2 years professional experience. Note: A relaxation of 5% of marks in minimum qualifying marks is permissible (without grace marks) to candidates belonging to SC / ST / OBC-NCL / PwD categories for admissions to Ph.D. programmes.
400	QIP0034	Harcourt Butler Technical University, Kanpur	Ph.D Engineering	Electronics Engineering	DN000449	Signal Processing Communication Image Processing Computer Networks Antenna RF Systems VLSI Implementation of DSP System	M. Tech. / M. E. Degree in relevant discipline with a minimum of 60 % marks or equivalent CGPA/CPI. or B. Tech. degree with minimum 75% marks with 2 years professional experience. Note: A relaxation of 5% of marks in minimum qualifying marks is permissible (without grace marks) to candidates belonging to SC / ST / OBC-NCL / PwD categories for admissions to Ph.D. programmes.

401	QIP0035	Indian Institute of Technology (IIT), Kanpur	Ph.D Engineering	Chemical Engineering	DN000402	Transport phenomena, Chemical Reaction Engineering, Applied Kinetics and Catalysis, Thermodynamics, Membrane Separation Processes, Process Systems Development, Computer Aided Design, Optimization and Control, Petroleum Engineering, Polymer Science & Engineering, Environmental Pollution & Control, Adsorption, Safety and Reliability, Dynamics of Nonlinear Systems, Colloids and Interface Engineering, CFD, Rheology, Non-Newtonian Fluid Mechanics, Nanotechnology, Numerical Methods for Engineers ,Mathematical Methods in Chemical Engineering, Modeling and Simulation in Chemical Engg., Bioinformatics, Modeling and Simulation of Separation Processes. Molecular Simulation, Granular Mechanics.	First class Master's degree in Chemical Engineering or equivalent.

402	QIP0035	Indian Institute of Technology (IIT), Kanpur	Ph.D Engineering	Aerospace Engineering	DN000408	Aerodynamics: Experimental Aerodynamics, High Speed Jets, Acoustics, Unsteady Aerodynamics * Flapping Wing, Transition & Turbulence, Hypersonic Aerodynamics, Microfludics, CFD/High performance Computing, Flow Control, Wind Energy & Design, Fluid Structure Interactions. Flight Mechanics and Control: Design & Control, Missile Guidance & Control, Flight Testing, Instrumentation & Parameter Estimation, Unmanned & Autonomous Air Vehicle, Space Dynamics. Propulsion: Experimental & Computational Combustion, Emissions, Liquid Atomization, Turbomachinery, Intake Aerodynamics, Thrust Vectoring, Electric Propulsion. Fundamentals of Combustion, Applied Compressible Flows, Aircraft propulsion. Structures, Structural Dynamics & Aeroelasticity: Material Characterization, Composite Materials and Smart Structures, Structural Dynamics and Stochastic Modeling, Aeroelasticity, Helicopter Theory (Dynamics &	Master's degree in: (1) Engineering (Aeronautical, Aerospace, Mechanical, Civil, Chemical, Naval Architecture Electronics). OR (2) Science with a minimum of 3 years of relevant R&D experience in Aerospace Engineering

						Aerodynamics), Structural Design & Optimization, Damage Modeling, Design and Dynamics of Autonomous Micro and Mini Air Vehicles, Wind Turbines.	

403	QIP0035	Indian Institute of Technology (IIT), Kanpur	Ph.D Engineering	Computer Science & Engineering	DN000411	Algorithms: Randomized, Graph Theoretic, Number Theoretic, Data Streaming algorithms, Algorithmic game theory. Systems: Computer Architecture, VLSI testing, Software Architecture, Internet Technologies, Distributed and Mobile Computing, Data bases, Programme Analysis, Compilers and optimization, Cyber Security, Cyber Physical Systems, Embedded Systems, Robotics, Database Technology. Theory: Complexity, Information Theoretic Complexity, Algebraic Computation, Computational arithmetic & Geometry, Quantum Computing, Computational Game Theory, Logic for CS, Cryptography. Artificial Intelligence: Machine Learning and Probabilistic Reasoning, NLP, Bioinformatics, Intelligent Tutoring, Game theory and Multi-agent Systems, Computer Vision, Graph database and data mining.	First class Master's degree in Engineering Must possesses adequate Computer Science background. (Note: Outstanding candidates)

404	QIP0035	Indian Institute of Technology (IIT), Kanpur	Ph.D Science	Chemistry	DN000460	Inorganic: Bio-inorganic chemistry, Main group chemistry, lanthanide chemistry, Molecular spintronics, Metalla-supramolecular chemistry, Organometallic chemistry, Catalysis, Inorganic materials. Organic: Organic Synthesis, Enantioselective synthesis, Bio-organic chemistry, Chemical biology, Medicinal Chemistry, Organic photochemistry, Photocatalysis, Organic materials, Organometallic catalysis, Small molecule therapeutics, High-energy-density materials, Soft matter. Physical: Molecular Spectroscopy, Spectroscopy of nanoparticles and surfaces, Biological nanoparticles, Plasmonic photocatalysis, Quantum statistical mechanics, Chemistry at surfaces, Computational chemistry/materials, Molecular dynamics simulations, Bio-physical chemistry, Chemical kinetics, Magnetic resonance, Mass spectrometry, Physical photochemistry, Ultrafast spectroscopy, Functional materials.	High second-class Master's degree in Chemistry Note: Candidates must have Bachelor's degree with Chemistry and preferably Mathematics as one of the subjects.

405	QIP0035	Indian Institute of Technology (IIT), Kanpur	Ph.D Science	Mathematics	DN000635	Algebraic geometry, Commutative Algebra, Complex Analysis & Operator Theory, Computational Acoustics and Electromagnetics, Computational Fluid Dynamics, Differential Equations, Functional Analysis & Operator Theory Harmonic Analysis, Homological Algebra, Image Processing, Mathematical Biology, Number Theory & Arithmetic Geometry, Numerical Analysis and Scientific Computing, Operator Algebra, Representation Theory, Set Theory and Logic, Several Complex Variables, Topology and Geometry, Tribology Bayesian Nonparametric Methods, Data Mining in Finance, Econometric Modelling, Entropy Estimation and Applications, Environmental Statistics, Estimation in Restricted Parameter Space, Game Theory, Machine Learning and Statistical Pattern Recognition, Markov chain Monte Carlo, Non-Parametric and Robust Statistical methods, Optimal Experimental Design, Ranking and Selection Problems, Regression Modelling, Robust Estimation in Nonlinear Models, Rough Paths and Regularity structures, Spatial statistics, Statistical Signal Processing,	Minimum Master's degree in Mathematics or Statistics, with at least 55% marks or equivalent.

						Step-Stress Modelling, Stochastic Partial Differential Equations, Theory of Stochastic Orders and Aging and Applications	

406	QIP0035	Indian Institute of Technology (IIT), Kanpur	Ph.D Science	Physics	DN000636	Atomic and Molecular Physics, Astrophysics , Biological and Statistical Physics, Biological and Statistical Physics, Biophotonics, Computational Physics, Condensed Matter Physics, Cosmology, Dynamical Systems and Turbulence, Fiber optics, Ion Beams and Nuclear Physics Techniques, Laser Cooling and Trapping, Light-Matter Nonlinear Optics, Particle Physics, Photonics of Micro and Nano Structured Materials, Plasma Physics Plasma Interaction, QCD and Lattice Gauge Theories, Quantum Phase Transition, Quantum Field Theory, String Theory and Quantum Gravity, AdS/CFT, Hydrodynamics, Quantum Optics, Quantum Computing and Information, Soft matter physics, Quantum materials.	First class Master's degree in Physics or first class Master's degree in a related subject or first class Bachelor's degree in a related branch of Engineering.

407	QIP0035	Indian Institute of Technology (IIT), Kanpur	Ph.D Engineering	Material Science and Engineering	DN000680	Heat and Mass Transfer in Metallurgical System, Process Design and Development in Extractive Metallurgy, Optimization, Electro-deposition, Physical Metallurgy, Alloy Development Thermodynamics and Kinetics of Phase Transformations, Heat Treatment, Solidification, Mechanical Processing, Steel Making, Processing and Advanced Structural Steel, Processing-Structure-Property Relations, Nanostructural Materials, Microstructural Characterization and Stereology, Textures in materials, Environmental Degradation of Materials, Corrosion, Powder Metallurgy, Structural Ceramics and Composite, Tribology, Welding, Magnetic Materials, Electromagnetic Materials, Thin Film Technology, Opto-Electronic Materials and Devices, Ferroelectric Ceramics, Electronic Materials, Organic semiconductor, Display Materials and Technologies, Bio-materials. Multiferroic Materials & Thin films, Clean energy,	B.E./ B.Tech. degree and a M.E./ M.Tech degree in Metallurgical or Materials Engineering, Materials Science, Ceramic Engineering, Nano-science, Nano-technology, Mechanical, Electronics. Minimum 60% marks or a CPI of 6.0/10 in B.E./ B/ Tech. & Minimum 70% marks or a CPI of 7.0/10 in M.E./M.Tech. OR M.Sc. and M.E./M.Tech. Degree in Metallurgical or Materials Engineering, Materials Science, Ceramic Engineering, Nano-science, Nano-technology, Mechanical, Electronics. Minimum 60% marks or a CPI of 6.0/10 in B.Sc. and M. Sc.& Minimum 70% marks or a CPI of 7.0/10 in M.E./M.Tech.

						Photovoltaic and energy materials & devices. Thermoelectric materials and devices, High entropy alloys, Recovery of metallic values from waste, Iron making	
408	QIP0035	Indian Institute of Technology (IIT), Kanpur	Ph.D Engineering	Nuclear Engineering & Technology	DN000721	Reactor Safety, Numerical Methods, Radiation Measurements and Nuclear Instrumentation, Rector Analysis and Design, Non-Invasive Imaging, NDT, Computed Tomography.	First Class Master's degree in any branch of Engg,. Preferably with some knowledge in Nuclear Engineering or equivalent.

409	QIP0035	Indian Institute of Technology (IIT), Kanpur	Ph.D Engineering	Mechanical Engineering	DN000722	Solid Mechanics: Composite Materials, Fracture Mechanics, Multi-scale Simulation, Stress Waves, Non-Destructive Testing, Large Deformation, Elasto-Plastic Analysis, Impact-Contact Problems, Smart Structures-Materials and System, Micro electro- Mechanical Systems. Computer Aided Design, Kinematics and Dynamics of Machinery, Vibration, Friction and Wear, Lubrication, Rapid Prototyping, Rapid Tooling, Reverse Engineering, Compliant Mechanisms, Granular Media, Crystal Physics, Noise and Acoustics, Non-Linear dynamics and Control. Fluid Mechanics: Flow Control, Turbulence, Wake Dynamics, Experimental Techniques, Computational Fluid Dynamics, Computerized Tomography, Transport in Hierarchical Porous Media, Hydrodynamic Instability, Micro Fluidics, Wave Mechanics, Natural Flows, PIV/LDV/Optical Techniques for flow analyses Thermal Sciences: Computational Heat Transfer, Heat Pipes and Thermosyphons, Drop-wise Condensation, Solar Desalination, Electronics Cooling, Gas Turbine Blade Cooling, Turbo Machinery, Emission from IC Engines, Biofuels, Hydrogen	First class or equivalent Master's Degree in Mechanical Engineering. Note: (i) In exceptional cases applicants with first class Master's degree in other branches of Engg. may also considered. (ii) Candidates with first class Degree in Production Engg. Are eligible for admission only to Manufacturing Science Stream.

						Technology, Flames, Spray Combustion, Portable Energy Storage, Energy, Storage Material, Micro Scale Heat Transfer, Natural Convection. Manufacturing Sciences: Additive manufacturing, Unconventional Machining, Design of Machine Tools, Computer Aided Manufacturing, Computer Integrated Manufacturing System, Casting and Solidification, Nanotechnology, Bio mems and materials, Computational Material Science, Conventional metal operations/machining like cutting and forming. Robotics and Automation: Manipulator Design, Kinematics and Dynamics, Motion and Path Planning, Collision Avoidance and Navigation, Sensor Based Intelligent Robotics, Industrial Robotics, Intelligent Control, System, Human Machine Interface, Flexible Manipulators, Compliant Mechanisms.	

410	QIP0035	Indian Institute of Technology (IIT), Kanpur	Ph.D Engineering	Industrial Engineering & Management	DN000723	Services Management, Management of Technology, Innovation and Entrepreneurship, Marketing Management, Branding, Consumer Research, Manufacturing, Operations and Supply Chain, Quantitative Methods & Decision Making, Organizational Behavior, Human Resource Management, Business Economics, Infrastructure and Public Systems, Corporate Governance, Finance, Risk Management and Insurance, Financial Markets and Models, Enterprise Information and Knowledge Systems, Leadership, Ethics, Strategic Management, Business Policy, Energy Economics, Policy and Regulation etc. Intellectual Property Management, Sustainability, Project Management, Business Process Management, E-Governance, Information Systems, Change Management, Business Analysis. Operations Research; Operations Management and Big- Data. Energy and Climate Modeling, Product Design and Development, Industrial Systems Engineering and Simulation, Artificial intelligence and machine learning applications in business and finance, Banking and financial services, Energy-	(i) A master's degree in management or relevant disciplines in engineering / technology with marks / CPI not below the specified minimum. or a bachelor's degree in engineering or science (4-year programme) with a minimum of 75 percent marks/7.5 CPI. or A master's degree in science/arts/commerce/chartered accountancy while satisfying each of the following three criteria: (a) a minimum of 65 percent marks/6.5 CPI in the master's degree, (b) first division in bachelor's degree, and (c) JRF/95 percentile or higher in GATE/CAT/GMAT/NET or any other national level examination. (ii) A valid GATE score is required for the candidates with a bachelor's degree in Engineering, except in the case of candidates with bachelor's degree in Engineering from the centrally funded Technical Institutes (CFTIs). The candidates with master's degree in science/arts/commerce must either have a valid GATE/CAT/GMAT score or must have qualified for/in JRF/NET.

						environment-climate policy modelling, Public policy, Power sector/market development.	
411	QIP0035	Indian Institute of Technology (IIT), Kanpur	Ph.D Engineering	Electrical Engineering	DN000745	Power Systems Engineering/Signal Processing, Communications and Networking/Microelectronics and VLSI/RF and Microwaves Engineering/Photonics/Control & Automation.	Master's Degree in Electrical Electronics or Communication Engg. or equivalent.

41 2	QIP0035	Indian Institute of Technology (IIT), Kanpur	Ph.D Engineering	Photonics Science & Engineering	DN000750	Ultrafast spectroscopy, Bio-medical applications of lasers, Femto second Pulse Shaping, Femtosecond optical tweezers Nonlinear Spectroscopy, Coherent Control, Multiphoton Imaging, Quantum Computing, Quantum Optics, Imaging in Complex Media & Biological Tissues, Interferometric Tomography, Laser & Rainbow Schliern, Imaging Growth of Protein Crystals, Quantum Cryptography, Nonlinear Fibre-Optics, Optical Fiber Communication, Electromagnetics and RF, Opto-Electronics, Semiconductor Device & Lasers, Mill metric & Microwave Circuits, Nonlinear Optics, Photonic Band Gap Structures, Laser Ranging, Laser imaging and cross-section, Flash and scanning laser applications, Digital Holography, Particle Image Velocimetry, Laser Schlieren, Experimental Stress Analysis, Smart Materials, Development and analysis of reconstruction algorithms for nonlinear tomography, Shape-based	Master's degree in any branch of Engg. or Master's degree in Science with some exposure to Optics or Photonics. Engineering degree holders with a Bachelor degree can also apply if they have the requisite CPI of 8.0 and have studied in a CFTI.

						tomography, Numerical solutions to partial differential equations in electromagnetic, Subsurface imaging, Quantitative Phase Imaging, Optical Metrology, Applied Signal Processing, Fringe Analysis, Biophotonics, Fiber and integrated optics , Infrared and terahertz frequency sensors, Long-period gratings, Fiber optic Bragg gratings, Plasmonics and Metamaterials Nanophotonic and plasmonic devices for application in optical communication and sensing.	

413	QIP0035	Indian Institute of Technology (IIT), Kanpur	Ph.D Science	Materials Science	DN000808	Chemical sensors Transport and reactions Microfluidics Micro/nano, Fabrication Semiconductor devices. Synthesis and Characterization of Nanomaterials, Layer-by-Layer Assembly, Bioimaging, Drug Delivery, Photoelectrochemical Water Splitting, Growth Mechanism of Nanomaterials. Electrochemical, reaction and separation engineering. Materials for solar cell, fuel cell, lithium battery, water purification, high performance structural composites, and detection and destruction of cancer cell. Microwave imaging, characterization and non-destructive testing. RF and Microwave Sensors. Artificial Dielectrics and Metamaterials. Microwave material processing. Electromagnetic scattering: direct and inverse problems. Design of Microwave Filters using the inverse scattering procedure. Electromagnetic modeling of metal powder compacts, specialized composites and meta-materials. Interaction Of electromagnetic waves with biological tissues. Computational electromagnetics. Organic Semiconductor and	M.E., M.Tech., M.Sc. (Engineering) Degree in Materials Science or equivalent branch of Engineering technology; or B.E., B.Tech., (Engineering) with a minimum of marks or Cumulative Point Index (CPI) of 7.5/10 in any relevant branch of Engineering/ technology, or degree in an allied area with Exceptional academic records

						Energy Storage/ Conversion Materials. Materials for Flexible Electronics and sensors. Multiferroics and other novel oxides. Study of structural, magnetic and other properties for various application susing optical spectroscopy (Raman, IR, Photo luminescence) and other probes.	

414	QIP0035	Indian Institute of Technology (IIT), Kanpur	Ph.D Humanities	Humanities and Social Science	DN000811	English Literature: American Literature, British Literature, Common wealth Literature, Ethnic Literatures, European Literature, Indian Writing in English, Literary Movements, Literary Theory, Teaching of Literature, Post Colonial Studies, Indian Literature, Translation Studies, Literature and the Environment, Posthumanism, Gender Studies. Linguistics: Linguistic Theory, Cognitive Linguistics, Computational Linguistics, Communication studies, Sociolinguistics, Applied Linguistics and English Language Teaching, First and Second Language acquisition, Linguistic typology, Field Linguistics, Historical Linguistics. English Language Teaching: Teaching methodology, Curriculum development, Language testing. Fine Arts: Art Appreciation, Art Education, Art-History, Indian Art, Painting, Film and Media Studies Philosophy: Epistemology, Metaphysics, Ethics, Social and Political Philosophy, Twentieth Century Philosophy, Logic, Philosophy of Science,	55% marks in Master's degree in the respective area with consistently good academic record.

						Philosophy of Language, Philosophy of Social Sciences, Indian Philosophy, Philosophy of Mind, Philosophy of Cognitive Science, Philosophical Aesthetics, Philosophy of Religion. Psychology: Social Cognition, Personality, Experimental Social Psychology, Organizational Behavior, Human Cognitive Processes, Consumer Psychology, Cross-cultural Psychology, Health Psychology and Neuropsychology, Cultural Issues in Psychology, Disaster Mental Health, Perception & action, embodied cognition, Psycholinguistics, Attention, Bilingualism & Executive Control, Lateralization of Cognitive Functions. Sociology: Sociology of Religion, Urban Sociology, Social Demography, Environmental Sociology, Sociology of Development, Science, Technology and Society, Social Movements, Third Sector Non-government and Voluntary development Organization, Human Rights, Social Gerontology, Sociology of Education and Disability Studies. Mobility Studies, Border Studies, New Media Studies.	

415	QIP0035	Indian Institute of Technology (IIT), Kanpur	Ph.D Engineering	Civil Engineering	DN000812	1. Environmental Engineering 2. Geoinformatics 3.Geotechnical Engineering. 4. Hydraulics &Water Resources Engineering 5. Structural Engineering 6. Transportation Engineering 7.Infrastructure Engineering and Management	1. B.Tech/M.Sc in any discipline and M.Tech in Environmental Engineering. Candidates with M.Sc. degree must have mathematics as one of the subjects at the 10+2 level for Specialization at S. No. 1. 2. M.Tech / M.E. degree in Civil/Mining/Electrical/Computer Science Engg./Electronics Engg./ Information Technology/Aerospace/Mechanical/Agriculture or M.Tech/M.Sc. degree in Geography, Geology, Geophysics/ Physics/ Mathematics/ Environmental Sciences. Candidates with M.Sc. degree must have mathematics as one of the subjects at the B. Sc. level. for Specialization at S. No. 2. 3. M.Tech / M.E. degree in Civil Engineering for Specialization at S. No.3. 4. M.Tech / M.E. degree in Civil/ Mechanical/Aerospace/Agricultural Engineering for Specialization at S. No. 4. 5. M. Tech /M. E. degree in Civil Engineering for Specialization at S. No. 5. 6. M. Tech / M.E. degree in Civil Engineering. Candidates with Master's degree in other transportation-related engineering specializations will also be considered provided they have done their Bachelor's degree in Civil Engineering for Specialization at S. No. 6. 7. Master’s degree in Civil Engineering for Specialization at S. No. 7.

416	QIP0035	Indian Institute of Technology (IIT), Kanpur	Ph.D Science	Economics	DN000853	Industrial Organization and Policy, Environmental Economics, Environmental Impact Assessment, Development Economics & Policy, Microeconomics, Inter-Industry Economics, Project Evaluation/BCA, Regional Economics, Macroeconomic Theory & Policy, Monetary Economics, Managerial Economics, Transport Economics, Law and Economics, Heath Economics. Econometrics, Applied Econometrics, Game Theory, Political Economics, Mathematica Economics and Optimizational, International Economics. Agricultural Economics & Policy, Behavioral Economics, Financial Economics, International Finance & Commodity Derivatives & Risk Modelling.	55% marks in Master's degree in the respective area with consistently good academic record.

417	QIP0036	Indian Institute of Technology (IIT), Bombay	Ph.D Engineering	Chemical Engineering	DN000206	BMCH01 : Process Systems Engineering: Process Simulation, Optimization, Process Integration and Scheduling, Energy Conservation and Optimal Resource Management. Artificial Intelligence and Mathematical Modelling, Multi-scale Modelling, Systems Identification and Process Safety Analysis, Nonlinear control, fault diagnosis. Biotechnology & Bio-Systems Engineering : Metabolic & Genetic Engineering, Bio-separations, Bio-informatics, Systems Biology, Drug Discovery, Enzymology, Bioprocess Development, Bio-fuels. Materials Engineering : Polymer materials, Polymer Reaction Engineering Polymer Processing, Polymer Physics, Polyurethane , Rubber, Polymer Rheology, Ceramics, Polymer Biomaterials, Drug Deliver, Food Engineering Microscopy Nano-composites, Statistical Thermodynamics, and Supercritical Fluids. Catalysis & Reaction Engineering : Catalysis, Multiphase Reaction, Bio-reaction Engineering and Reactor Modelling. Process intensification & reactive distillation, micro-reactors.	Master's degree in Engg./ Technology or Bachelor's degree in Engg./ Tech. or Master's degree in Science disciplines consistent with the research areas of the departments.

						Transport, Colloids & Interface Science : Granular flows. Power Mixing, Membrane Separations, Rheology of Complex Fluids, Colloids, Sol-gels, Emulsions & Foams, Paints and Coatings, Microstructural Engineering, Aerosols, Electro-hydrodynamics, Fluid Mechanics & Stability, Computational Fluid Dynamics, Heat & Mass transfer, Porous media, and Surfactants, micro-fluidics. Energy and Environment: Climate change, Coal Gasification, Energy Integration, Green Engineering, Renewable Resources, Waste Management, Pollution Control, Air Pollution Prediction & Control, and sustainability studies. Thermodynamics and Molecular Simulations: Properly prediction through molecular simulation, fuel cell, catalytic properties, biological systems, and polymers.	

418	QIP0036	Indian Institute of Technology (IIT), Bombay	Ph.D Engineering	Aerospace Engineering	DN000241	BMAE01 : Aerodynamics Dynamics and Control Aerospace Propulsion Aerospace Structures	i) M.Tech./ M.E. or equivalent degree in Aerospace Engineering OR in other branches of engineering relevant to the research areas in the department (ii) B.Tech./B.E. or equivalent degree in Aerospace Engineering OR in other branches of engineering relevant to the research areas in the department OR M.Sc. or equivalent degree in Mathematics OR Physics OR in other specializations relevant to the research areas in the department.
419	QIP0036	Indian Institute of Technology (IIT), Bombay	Ph.D Science	Chemistry	DN000298	BMCY01: Theoretical/ Computational Chemistry – Main Group - Transition Metal Chemistry. Organometallics – Electrochemistry/ Conducting Polymers – Ultrafast Spectroscopy – Organic Synthesis – Peptide Synthesis, Enzyme Mechanism = Homogeneous/ Heterogeneous Catalysis – Physical inorganic Chemistry – Protein Folding. Theoretical Organic Chemistry – Photochemistry, Photobiology – Statistical Mechanics – Chemical & Biosensors, Single Molecule Spectroscopy, Structural Biology, Bioorganic, Bioorganic and Biophysical chemistry. Biological Thermodynamics.	M.Sc. or equivalent degree in Chemistry/ Bio-chemistry/ Bio-technology. Candidates with Master's degree in science must have valid GATE scores to become eligible for the Teaching/ Research Assistantship provided by the Institute.

420	QIP0036	Indian Institute of Technology (IIT), Bombay	Ph.D Engineering	Environmental Science & Engineering	DN000303	BMEV01 : Air Quality Management and Pollution Control, Environmental & Water Resources Systems Modelling, Solid and Hazardous Waste Management, Water and Wastewater Treatment, Reuse and Management.	i. M.Tech./M.E. or equivalent degree in Aeronautical/Aerospace Engineering, Agricultural Engineering, Atmospheric Science, Chemical Engineering, Civil Engineering, Energy Science & Engineering, Biotechnology, Environmental Science & Engineering, Mechanical Engineering, Metallurgical Engineering & Materials Science, Mining Engineering. ii. B.Tech./B.E. or equivalent degree in Aeronautical/Aerospace Engineering, Agricultural Engineering, Atmospheric Science, Chemical Engineering, Civil Engineering, Energy Science & Engineering, Biotechnology, Environmental Science & Engineering, Mechanical Engineering, Metallurgical Engineering & Materials Science, Mining Engineering. OR M.Sc. or equivalent degree in Atmospheric Science, Biochemistry, Biotechnology, Chemistry, Earth Sciences, Environmental Toxicology, Environmental Science, Meteorology, Microbiology, Physics, Public Health & Statistics. Mathematics at 10+2 level is a mandatory requirement.

421	QIP0036	Indian Institute of Technology (IIT), Bombay	Ph.D Science	Mathematics	DN000319	BMMA01 : Algebra: Commutative Algebra, Hilbert functions, Blowup algebras, Local cohomology, Hopf, Algebras, Coxter Groups. Homological algebra, Gorenstein rings. Analysis : Functional Analysis, Operator Theory, unbounded subnormals, Hilbert modules, Numerical Functional Analysis, Approximate Solutions of operator equations and eigen value problems, Spline Theory, Numerical Functional Analysis, Real Analysis, Mean periodic functions, Generalized integrals. Several Complex Variables. Harmonic Analysis on LIE Groups Combinatorics: Combinatorics, Posets, Generating functions, Polyhedral Combinatorics.,Extremal Combinatorics, Probabilistic methods, Design theory, Arithmetic and Boolean circuit complexity, Randomness and Lower bounds, Explicit constructions of pseudorandom combinatorial objects. Geometry and Topology : Algebraic Geometry and Combinatorics, Schubert varieties, Linear codes, Varieties over finite fields, Algebraic Topology, Operads, Differential Geometry, Harmonic Manifolds,	First Class Master degree in Maths/ Statistics/ Computer Science

						Algebraic & Differential Topology, Topology of Matrix varieties. Stable homotopy theory, Algebraic -theory, Combinatorial Topology. Number Theory : Number Theory, Automorphic Forms, Representation theory of p-adic groups. Representations of Algebraic Groups, L-functions, Converse Theorems. PDE and Numerical Analysis : Numerical Analysis, Applied Mathematics, Finite Element Methods, Finite volume methods. Hyperbolic systems of quasilinear partial differential equations, Non-linear waves, Partial Differential Equations, Shock waves in hyperbolic systems of conservation laws, partial integro-differential equations, Visco-elastic fluid-flow problems, Control of PDEs Statistics and Probability : Statistical Data mining, Computational Biology, Biostatistics, Bioinformatics, Probabilistic optimization problems in Molecular Biology, Reliability Theory, Industrial Statistics, Construction of reliability test plans, Statistical Inference, Geostatistics, Modeling bivariate distributions, Stochastic Differential Game	

						Theory, Risk-sensitive control theory, Stochastic control Mathematical Finance, Applied Probability, Poisson and compound Poisson approximations, Estimation after selection, Reliability test plan. Statistical signal processing, Time series analysis, Reliability analysis, High dimensional multivariate analysis, Non-Parametric curve estimation, Statistical machine learning. Large dimensional random matrices, Free probability, Extreme value theory and Statistics.	

422	QIP0036	Indian Institute of Technology (IIT), Bombay	Ph.D Engineering	Energy Science & Engineering	DN000320	BMEN01 : Energy Efficiency / Improving Conventional Energy Systems: heat pumps, energy integration, process integration for resource optimization, population balance modeling, pinch analysis development of techniques for optimization of utility systems, demand side management/load management in the power sector, variable speed drives, power generation and systems planning, energy management and auditing, efficient motor drive systems, electronic ballasts, static var compensators, illumination control, power electronics in energy efficient systems, electric vehicles, boilers and fluidised bed combustion, exhaust heat recovery, cogeneration, building energy management, efficient air conditioning systems, IC engines, combustion, exhaust after-treatment systems, oil-water separation and wax deposition in petroleum flow, pipeline shut-in and restart processes, bulk and interfacial rheology, gas hydrates, thermal management of living spaces Renewables: coal gasification, biomass gasifiers : design, development and testing, liquid fuels from biomass, industrial solar thermal concentrators, Stirling engine systems, testing	M.Tech. Degree in any of the following branches of Engineering: Aeronautical/ Aerospace, Chemical, Civil, Electrical, Mechanical, Metallurgical, Energy Studies. M.Sc. in Chemistry/ Physics/ Mathematics with a good academic record

						of solar collectors and systems, passive solar architecture, development of PV cells, thin film solar cells, perovskite solar cells, flexible PV devices, reliability and performance of PV, characterization, modelling, and simulation of defects and degradation in solar cells and modules, thermal non-destructive evaluation by infrared thermography, grid integration of distributed and decentralized energy resources, smartgrids, microgrids, converter topologies and control, hybrid systems for rural electrification, wind energy, low cost solar driers, fuel cells, solar photovoltaic concentrator, development of engines for SVO, biodiesel, dual fuelling etc., biodiesel manufacturing processes, complex fluid dynamics for granular materials and multiphase flows, molecular dynamic simulation of particulate flows Energy Storage Devices and Systems : Li-ion and Na-ion batteries: electrode materials, electrolyte, fabrication, metal sulfur batteries for EVs and stationary applications, commercial scale battery prototyping research and analysis, thermal management of batteries, flow battery	

						modelling and design, supercapacitors, materials for hydrogen storage, hydrogen storage systems, thermal management in metal hydride beds, applications of metal hydride based hydrogen storage systems, carbon nano-tubes for hydrogen storage Nuclear : nuclear safety, nuclear waste management, thermal hydraulics research, computer simulation models for analysis of transients in pressurized heavy water reactor, advanced numerical methods for neutron diffusion and fluid flow, two phase flow modeling, nuclear thermal hydraulics and safety, analytical solution of multilayer heat conduction problems	

423	QIP0036	Indian Institute of Technology (IIT), Bombay	Ph.D Engineering	Earth Sciences	DN000322	BMES01 : Active Tectonics and Tectonics, Cooperative and Joint Inversion of Geophysical Data, Electromagnetism, Economic Geology, Earthquake Seismology, Engineering Geology, Geochronology and Thermochronology, Exploration Seismology, Geochemistry, Geomagnetism, Geomechanics, Geophysical Signal Processing, Geostatistics, GPS and Geodesy, Gravity and Magnetics, Ichnology, Igneous Petrology, Isotope Geology, Metamorphic Petrology, Micropalaeontology, Mineralogy, Numerical modeling in Geophysics, Ore Petrology and Ore Deposit Modeling, Organic Geochemistry, Petroleum Geology, Petrophysics, Remote Sensing and GIS, Sedimentology, Stratigraphy, Structural Geology, Volcanology, Vertebrate Palaeonology.	1) M. Tech. /M.Phil. (2-year degree) or equivalent degree in Geology, Geophysics, or in any other related Geosciences field. 2) M.Sc. or equivalent in Geology, Geophysics, or in any other related Geosciences field. 3) M.Sc. or equivalent degree in Physics, Chemistry, Mathematics, Oceanography, Life Sciences, Marine Sciences, Atmospheric Sciences or equivalent and having Geology/Physics/Mathematics /Chemistry at the Bachelors level as principal subjects.

424	QIP0036	Indian Institute of Technology (IIT), Bombay	Ph.D Engineering	School of Management	DN000407	i. Accounting ii. Corporate Competitiveness iii. Decision Sciences iv. Economics & Policy v. Entrepreneurship vi. Finance vii. General Management viii. Human Resource Management ix. Information Systems x. Intellectual Property Rights xi. International Business xii. Management of Information Technology xiii. Marketing Management xiv. Operations and Supply Chain Management Xv. Organization Behaviour xvi. Project Management xvii. Quality Management xviii. Statistics and Operations Research xix. Strategy and Business Policy xx. Technology Management	At least one of the following criteria must be met: (i) B.E/B.Tech or equivalent degree with 60% marks/6.5 CPI (55% marks/6.0 CPI for SC/ST) and at least two years of work experience and qualified in GATE/UGCNET (Lectureship)/UGC JRF/CSIRNET (Lectureship/ CSIRJRF or having CAT/ GMAT/ GRE score within the last five years. (ii) Master of Management /ME / M.Tech /M.Phil/2 years MBA or 2 year PG Diploma in Management from any institute recognized by a Government body (AICTE / UGC/AIU) with 60% marks/6.5 CPI (55% marks/ 6.0 CPI for SC/ST). (iii) Executive MBA of at least one year duration from IITs/IIMs or any institute recognized by a Government body (AICTE/ UGC / AIU) with 60% marks/6.5 CPI (55% marks/ 6.0 CPI for SC/ST). (iv) M.Sc/M.A/ M.Com/LLM/MCA or equivalent degree with 60% marks/6.5 CPI (55% marks/6.0 CPI for SC/ST) at post graduation level and qualified in GATE/UGCNET (Lectureship)/UGC JRF/CSIRNET Lectureship/CSIRJRF or having CAT/ GMAT/ GRE taken within the last five years. (v) Chartered Accountants and Company Secretaries with 60% marks/ 6.5 CPI (55% marks/ 6.0 CPI for SC/ST) in the preceding degree/Bachelors Degree (B.Com/ BA/B.Sc.) Criteria for awarding Teaching Assistantship and other application categories are as per the guidelines mentioned in section A.6 of this Brochure. Note : You are required to submit a research proposal (1500 words) on a topic of your interest in place of Statement of Purpose. The proposal should contain a) problem identification, b) brief review of literature, and c) methodology. Applications without research proposal will not be considered.

425	QIP0036	Indian Institute of Technology (IIT), Bombay	Ph.D Engineering	Electrical Engineering	DN000410	BMEE01: Communication Engineering : Communication Systems, Communication Networks and Internet, Computational Electromagnetics, Image Processing and Computer Vision, Microwaves, RF and Antennas, Multimedia Systems, Optical Communication and Photonics, Signal Processing, Speech Processing, Wireless and Mobile Communication, Information Theory and Coding, Magnetic Resonance Imaging, Machine Learning and Data Science BMEE02 : Control & Computing : Linear systems Theory, Optimal Control & Optimization, Modeling and Identification of Dynamical Systems, Control of Distributed Parameters Systems, Non-Linear Systems, Modern Filter & Network Theory, Behavioral Systems Theory, Computational Methods in Electrical Engineering Software and System Reliability Cryptography and Security, GPU-based Computing. BMEE03 : Power Electronics & Power Systems : FACTS, HVDC and Power Quality, Distributed Generation, Power System Restructuring, Wide Area Measurements and System Protection, EMI/ EMC, Coupled	I. For General category students and/ or for students where no concession in academic performance is called for eligibility requires meeting ANY ONE of the following criteria as regards performance in the qualifying degree. 1. a minimum of 60 percent marks in the final academic year of the programme. 2. a minimum of 60 percent marks in aggregate or as specified by the university (any one of them) 3. a first class as specified by the university. 4. a minimum CPI of 6.0 on the scale of 10; with corresponding proportional requirements when scales are other than on 10 – for example, on a scale of 8, the minimum will be 4.8 For Students from the SC/ST category the corresponding criteria are: 1. a minimum of 55 percent marks in the final academic year of the programme 2. a minimum of 55 percent marks in aggregate or as specified by the university (any one of them) 3. a first class as specified by the University. 4. a minimum CPI of 5.5 on the scale of 10; with corresponding proportional requirements when the scales are other than on 10 – for example, one a scale of 8, the minimum will be 4.4 II. The qualifying degrees are as following B.E/B.Tech/M.E./ M.Tech. in Biomedical Engineering, Computer Science, Computer Science and Engineering, Computer Engineering, Electrical Engineering, Electronics Engineering, Telecommunications Engineering, Instrumentation Engineering, Engineering Physics, Materials Science and Engineering. Master of Science (M.Sc) or equivalent degree in Mathematics, Physics, Electronics/Electronic Sciences III. The admission of a student as a Ph.D Candidate shall be

						Field computations, Electrical Machines; Modeling, Analysis, Design and Control, Special Machines, Power Electronic Converters, Electric Drives, Power Electronics for Non-Conventional Energy Sources, Reliability in Power Systems and Power Electronic Systems, Smart Grids for Energy Harvesting, Electric Vehicles BMEE05 : Electronics Systems : Electronic Instrumentation, Signal Processing Applications, Speech and Audio Processing, Bio-medical Electronics, Embedded System Design. BMEE06 : Integrated Circuit & System: . Secured microprocessors, GNSS receivers, Software defined networking and radio, high performance computing . Integrated Circuits (ICs) & Systems for AI/ML, IoT sensor networks, sensing and control for quantum systems . Algorithmic digital design and synthesis tools, algorithm to RTL and algorithm to layout . Analog/Mixed-Signal ICs and Systems for Wireless and Wireline communications	confirmed only after he/she has successfully completed the prescribed coursework with CPI 8.00 and above.

						. RF/Microwave ICs and Silicon Photonics for 5G and Beyond . High-Speed ICs for Optical Data Centre Interconnects BMEE07 : Solid State Devices • Non-volatile memory technologies (Flash, RRAM, FERAM, MRAM, etc.) • Device Fabrication (CMOS, Solar cells, Detectors, etc.) • Theory, modeling, and simulation of Electronic devices • Novel materials and devices (III-V, Graphene, 2D, etc.) • Spintronics, Quantum Computing, Quantum sensing, and related technologies • Photonics, MEMS, Neuromorphic Engineering • Photovoltaics - c-Si, Organics, Perovskite, quantum dots, etc. • Reliability of semiconductor devices and systems (e.g., Solar panels, PV systems) • Nanoscale energy conversion • Flexible devices and sensors (bio, chemical, and quantum) • Light emitting diodes (III-Nitride UV) and photodetectors (quantum dot, etc) • Wide Bandgap Power Devices	

426	QIP0036	Indian Institute of Technology (IIT), Bombay	Ph.D Engineering	Centre For Studies In Resources Engineering	DN000446	BMSR01 : I) Application Area a) Water Resources b) Terrain Evaluation, Land-use planning and monitoring c) Digital Agriculture d) Mineral Exploration e) Natural Hazard of Droughts, Heatwaves, Desertification, Landslide, Avalanche, Earthquake, Tsunami etc. f) Marine Resources and Ecology g) Snow, Glaciers and Atmosphere h) Applications of Microwave Remote Sensing II) Theoretical Areas i) Digital Image Processing ii) Digital Photogrammetry and Cartography iii) Geospatial Technologies iv) SAR Interferometry and Polarimetry v) Passive microwave radiometry vi) Planetary remote sensing vii) Mineral Systems and Geological Studies viii) Global Positioning Systems ix) Climate Change Studies 1) The actual available Ph.D. topics for a particular round of admissions and the corresponding preferred	Candidates M.Tech/ ME or B.Tech/ B.E. or M.Sc. First Class or 60% marks (55% for SC/ST) in any of the following branches: • Agricultural Engineering • Civil Engineering • Computer Science and Engineering • Electronics & Communication Engg. • Electrical Engineering • Geology & Geophysics • Information Technology • Mathematics • Mining Engineering • Physics • Environmental Engg. • Architecture and Town Planning • Geoinformatics Geomatics (GI)

						engineering/science disciplines for each topic specified by the concerned faculty members will be posted on CSRE webpage http://www.csre.iitb.ac.in and applicants may visit the same to identify the matching topics at the time of submitting the application. 2) The application should include the following in addition to what is already included in the standard application form: a) Applicant's Statement of purpose stating at least one topic from list of topics offered. b) Applicant's Curriculum vitae covering • List of courses taught by the applicant during the last three years relevant to the research topic of his/her interest • List of M.E./M.Tech. projects supervised by the applicant during the last three years relevant to the topic of his/her interest • List of training programmes attended by the applicant in the last three years relevant to the topic of his/her interest • List of publications of the applicant in peer refereed	

						journals / refereed conferences relevant to his/her topic of interest. • Any awards / recognition won by the applicant for work in areas relevant to his/her topic of research • Title of applicant's M.Tech./ME dissertation topic or B.Tech./BE/M.Sc. Final year project topic and abstract Applicants with M.Sc. must have studied Mathematics at least till 10+2 level; Mathematics during B.Sc. desirable.	

427	QIP0036	Indian Institute of Technology (IIT), Bombay	Ph.D Engineering	Mechanical Engineering	DN000654	BMME01 : Thermal and fluid Engineering: Convective and Radiative Heat Transfer, Two-Phase Flow, Bio-heat transfer, Whole-field optical measurements, Heat transfer enhancement, Electronic cooling, Numerical Techniques, Combustion and Flames, Petrol and Diesel Engines, Gas Turbine, Nuclear Engineering, Reactor Neutronics Reactor Heat Transfer, Fluid Mechanics, Fluid Machinery, Turbulence, Compressible flows, Geo-physical flows, Micro Fluidics, Rarefied gas flow, Porous media, Fluid-structure interaction, Fuel Cells, Computational Fluid Dynamics, Refrigeration, AC Systems, Cryogenics, Heat Pumps, Cryogenic heat exchangers, cryocoolers, green transport refrigeration, Non-equilibrium thermodynamics, Bio-microdevices. BMME02 : Design Engineering: Stress Analysis using Analytical and Numerical Methods, Studies of Failure Due to Fatigue and Fracture, Fracture Mechanics, Application of Finite and Boundary Element Methods, System Modeling, Control and Automation, Kinematics, Machine Dynamics, Synthesis of Mechanisms, Robotics, Mechatronics, Tribology Design	First Class (or 60% minimum) and (55% for SC / ST) in the qualifying degree in the various branches of Engineering such as Mechanical Engg./ Production Engineering/ Industrial Engineering./ Aerospace Engineering/ Chemical Engineering., Metallurgical Engg, Civil (Structural) Engineering/ Automobile Engineering/ Applied Mechanics. Engineering/ Mechatronics Engg./ Instrumentation & Controls. Engg./ Laser Technology, Engineering, Materials Technology, Biomechanics. M.Tech from IITs with CPI >= 8.5 can be directly called for the interviews.

						of Elements and Systems, Optimization, CAD, Interactive Graphics, Vibration, Noise and Acoustics, MEMS, Vehicles Dynamics, Smart Materials and Structures, NDT. BMME03 : Manufacturing Engineering: Machining, casting, Welding, Forming, Tool design, Modeling and Simulation of Manufacturing Processes and Systems, Manufacturing Automation and Control, CAD/CAM/CIM, Feature Based Modeling, Computer Aided Process Planning, Intelligent Product Design and Manufacturing, Application of AI in Manufacturing, Supply Chain Modeling, Manufacturing Analytics, Reliability Engineering, Maintenance Planning, Logistics, Micromachining, Microsystems Fabrication, Sensors and Actuators, Packaging, Deformation Science, Computational Mechanics, Integrated Computational Materials Engineering, Multiscale Modeling, Additive Manufacturing, Sustainable manufacturing, Powder Metallurgy, Electric Vehicles, Modeling and simulation of multi-scale phenomena in materials processing, Experimental studies of	

						materials (nano and micro scale involving advanced microscopy).	

428	QIP0036	Indian Institute of Technology (IIT), Bombay	Ph.D Engineering	Industrial Engineering and Operations Research	DN000667	BMIO01 : The group is interested in research related to modeling, quantitative analysis and optimal resource allocation from decision problems in deterministic and stochastic contexts. Broad areas of application are in supply chains, logistics, transport including railways, manufacturing systems, finance, services, infrastructure and other industrial systems; application of quantitative methods in quality and maintenance management systems; development and application of decision support, intelligent and knowledge-based systems. The specific problems of research interests include: production planning, scheduling and control systems; management of inventories in production, distribution and service systems; industrial scheduling, facilities planning, project management, quality management, materials management and productivity management; Data Analytics & Data Management Supply chain analysis, reverse logistics, closed-loop supply chains and RFID applications, product variety management. Operations Research	a) First class Master's degree in any branch of Engineering with adequate exposure to Industrial Engg. and Operations Research. b) First class M.Sc. in Mathematics, Statistics or Operations Research with excellent academic record. c) First Class Bachelor’s degree in any branch of Engineering with an excellent academic record.

						applications in management of technology and resource allocation; Convex optimization; mixed-integer programmeming; Markov decision processes; optimal control in deterministic and stochastic systems; (differential) game theory; applications of game theory; modeling and simulation of supply chains, manufacturing and service systems; theory and applications of distributed and hybrid simulations, discrete event and system dynamics simulations; applied stochastic models; scheduling and control of railways and other transport operations; time tabling of services, crew and vehicle scheduling for transport operations; optimization and design problems arising from e-commerce, including auctions and mechanism design for electronic exchanges; risk analysis and contract design; revenue management; quantitative models for financial engineering. Supervised learning & Unsupervised Learning; Online & reinforcement Learning. Development and applications of modern information systems for managing manufacturing, supply chain and service organizations. Deep Learning, Longitudinal data analysis, Kernel methods.	

						The IEOR programme is unique in its contemporary flavor, with new courses in Financial Engineering, Supply Chain Management, Game Theory, Markov decision process, System Dynamics, Machine Learning. Services Management, Manufacturing systems to name a few. The programme is equally strong in background building, with updated courses in Optimization Techniques, Stochastic Models, Simulation, and Knowledge-based systems.	
429	QIP0036	Indian Institute of Technology (IIT), Bombay	Ph.D Science	Physics	DN000688	BMPH01 : Condensed Matter Physics (Experimental and Theoretical) BMPH03 : Photonics and Spectroscopy (Experimental and Theoretical) BMPH04 : High Energy Physics (Experimental and Theoretical) BMPH06 : Statistical Physics (Theory) Biophysics/Nonlinear dynamics/Soft matter Physics (Experimental and Theoretical) BMPH07 : Astronomy/Cosmology/Gravity (Experimental and Theoretical)	In all cases the minimum eligibility is a First Class or equivalent (Min. 60%) Master's Degree in Engineering/ Technology (55% for SC/ST) OR a First Class or equivalent (Minimum 60%) Master's degree in Science (55% for SC/ST) or a First Class or equivalent (Min.60%) in Bachelor's degree in Engineering/ Technology (55% for SC/ST).

430	QIP0036	Indian Institute of Technology (IIT), Bombay	Ph.D Engineering	Systems and Control Engineering	DN000692	BMSC01 : *Systems Theory:* PDEs, mechanics, dynamical systems, optimization, game theory, systems theory, probabilistic methods, information theory, AI and learning theory *Control Theory:* optimal, robust, stochastic, adaptive, linear and nonlinear, geometric, quantum, embedded *Robotics and Automated Systems:* air-ground-water-space vehicles, drones, industrial automation, autonomous systems, reconfigurable and flexible structures *Connected and Information Systems:* networked systems, social systems, multi-agent systems, quantum systems, analytics and data science, internet-of-things All applicants are advised to look at the faculty webpage (https://www.sc.iitb.ac.in/coreFaculty.html) and the corresponding research areas before applying.	First Class or 60% marks (55% marks for SC/ST), as specified in the General Eligibility Criterion, in the qualifying degree with any one of the following: (i.) M.Tech./M.E. or equivalent degree in any branch of Engineering (ii). B.Tech./B.E. or equivalent degree in any branch of Engineering OR M.Sc. Or equivalent degree in Mathematics or Physics Candidates interested in pursuing a Ph.D. should identify and communicate with atleast a couple of faculty members of the group with whom their research interests match. The names of these faculty members should preferably be mentioned in the application form. This is a pre-requisite for short-listing

431	QIP0036	Indian Institute of Technology (IIT), Bombay	Ph.D Engineering	Computer Science & Engineering	DN000706	BMCS01 : Computer Graphics, Computer Vision, Image Understanding and Retrieval, Database and Information Systems, Hypertext Mining and Information Retrieval, Data Dissemination Networks, Programmeming Languages and Compilers, Computer Networks, Performance Modeling and Distributed Systems, Algorithms, Combinatorics, Graph Theory, Artificial Intelligence, Natural Language Processing, Machine Learning, Software Engineering, Formal Specification, Design and Verification of Biologically Inspired Computing, Logic and Automata Theory, Real Time and Embedded Systems, Computer Security and Cryptopgraphy.	M.E / M.Tech. in CS&E with at least 60% marks or M.E /M.Tech. in any branch with 5 years teaching experience in CS&E.
432	QIP0036	Indian Institute of Technology (IIT), Bombay	Ph.D Engineering	IDC School of Design	DN000709	Some of the specific areas include: 1. Biomimetics 2. Cinema 3. Cognitive & Physical Ergonomics 4. Comics Studies 5. Data Visualization 6. Design for Craft 7. Design for Health 8. Design Forecasting / Design for Future 9. Play and Game Design 10. Human-Computer Interaction 11. Human Factors and Sociotechnical Systems	Eligibility Criteria and Qualifying Degree for PhD admission (any of the following): 1. MDes / MTech / MPhil (2year course) / MFA / MArch / MURP / MA (Design) / Postgraduate Diploma in Design (2year course), or equivalent degree with First Class or 60% marks (55% marks for SC/ST) as specified in the General Eligibility Criterion. 2. Any other Masters degree with First Class or 60% marks (55% marks for SC/ST) as specified in the General Eligibility Criterion; has demonstrated competence in design-related areas and has substantial design-related work. 3. BDes / BTech / BArch / BFA / Undergraduate Diploma in Design, or equivalent degree with First Class or 60% marks (55% marks for SC/ST) as specified in the General Eligibility Criterion, and has demonstrated competence in design-

						12. Human-Machine Interaction / Human-Automation Interaction 13. Immersive Media Design (VR/AR/XR) 14. Information Design 15. Design Innovation and Entrepreneurship 16. Instruction Design 17. Interaction Design 18. Mobility Design / Future Mobility / Vehicle Form and Aesthetics 19. Systems Thinking and Design 20. Typography / Calligraphy / Type Design 21. Visual Language & Storytelling 22. Participatory Innovation / Co-Design 23. Mobility devices for special needs	related areas. Eligibility Criteria for TA/TAP/RA/RAP: a. Candidates in Eligibility Criteria 1 are eligible for TA/TAP/RA/RAP. b. Candidates in Eligibility Criteria 2 and 3 will be eligible for TA/TAP/RA/RAP if they also have a valid CEED / GATE score.
433	QIP0036	Indian Institute of Technology (IIT), Bombay	Ph.D Humanities	Humanities and Social Science	DN000738	BMHS01: English :- Narratology; Intertextuality; Victorian Novel; Indian Writing in English; Films and Disnarration; Women's Studies; Autobiography Studies; "Crisis" in English Studies; African American Writing; Morpho-Syntax; Linguistic Theory; First Language Acquisition; Endangered Languages Documentation; The Partition of 1947; the 'Turbulent 40s' in Bengal; South Asian Fiction-in English; and in	i) Master's degree in Arts/Commerce or equivalent degree in allied subjects with a minimum of 55% marks (50% for SC/ST). OR ii) Master's Degree in Engineering/ Technology or equivalent degree, with First class or 60% marks(55% marks for SC/ST). OR iii) Bachelor's degree in Engineering/Technology with First class or 60% marks (55% marks for SC/ST). OR

						Translation; Postcolonial Theory and Literature; Feminist Theory and Women's Writing; Cultural Studies; Feminist Theory; Literary Theory; Film Studies; Regional Literatures; and Cultures in India; Environmental Sociology; Social and Environmental Movements; Environmental Politics with a focus on Social inequality and Natural Resource Conflicts especially in Rural India; Issues of Livelihood and Problems of Marginalized Class and Political Ecology; Adaptation Studies; Shakespeare and Renaissance Drama; European Literature; 19th Century Bengali Literature; Literature and Other Arts; Translation Studies; World Literature; Historical Musicology & Ethnomusicology, Theatre Historiography, Performance Philosophy, Colonial Theatre, Performance and Ethnography, Aesthetics, Critical Theory, Ecocriticism Philosophy :- Metaphysics, Philosophy of Science, Philosophical Logic, Philosophy of Language, Professional Ethics, Philosophy of Wittgenstein, Sartre, Kripke, Quine, Moore, Hare, Bhartrahari, Philosophy of Mind, Philosophy of Education and Environmental Ethics, Indian	iv) Master's degree in Science or equivalent degree, with First class or 60% marks (55% marks for SC/ST). OR v) M. Phil. (awarded by IIT Bombay or equivalent 2 year degree) in any of the disciplines pertaining to the research areas in the Department, with First Class or 60% marks (55% marks for SC/ST).

						Philosophy and Comparative Philosophy, Buddhist Philosophy, Sankhya Philosophy and Vedanta Philosophy, Philosophy of Artificial Intelligence, Philosophy of Mind, Cognitive Science, Analytic Philosophy, Twentieth Century European Philosophy; Moral, Social and Political Philosophy, Social Epistemology, Moral theory, Alfred Korzybski- 'General Semantics' and related areas, Philosophy of Language, Wittgenstein, Culture and Value, Ethics/Moral Philosophy, Social and Political Philosophy, Classical American Pragmatism, Feminist Philosophy, Twentieth century Continental Philosophy 20th Century Continental Philosophy: Heidegger, Foucault, Husserl, Gadamer, Phenomenology and Hermeneutics, Epistemology: Implications of the Historicity of Knowledge for its Universal Validity Metaphysics: Implications of an Ontology of Events for Political Philosophy History of Western Philosophy Psychology :- Psychological Perspectives and Theory, Organizational Behaviour, Personality Studies, Qualified MBTI user, Organizational Culture and Values, Role of Psychology in Development - Health and Contraceptive Use,	

						Developmental Neuropsychology, Education and Child Development, Eyewitness Testimony, Cognitive Ergonomics, EEG / Event Related Potential, Working Memory and Prospective Memory and Developmental Dyslexia, Organization behavior, HRM,Culture and Values in organizations, Personality studies, Positive organization behavior and well-being. Sociology :- Urban Studies, Development Studies, Rural/Agrarian Sociology, Law and Governance Legal Pluralism, Vulnerability and Adaptation to Climate Change, Gender and Development, Disaster Studies, Ethnicity and Multiculturalism, Urban Studies, Sociological Theory, Sociology of Development, Anthropology of corruption, constitutional law, sociology of higher education, sociology of religion and kinship, conversion, Christianity in India. Caste today, religious institutions, hierarchy/stratification, sociology in/of India, contemporary Karnataka, Sociology of Development and Environment, Natural Resource Conflicts, Issues of livelihoods and problems of marginalized	

						class, resource rights, subaltern resistance and movements and Political Ecology, Sociology and political economy Of finance, Political economy of development, Indian political economy, Theories of money, Classical political economy, New and old Institutionalism and History of economic thought, Issues of gender and sexuality, medical anthropology, anthropology of the body and embodiment, post- colonial studies, post-modern feminist studies and Southern theories, Caste, Civility and Democracy, Civil Society Ethnography Studies, Inclusion and Exclusion. Cell for Indian Science and Technology in Sanskrit : - Indian Science and Technology, Indian Philosophy, Logic and Epistemology, Sanskrit language, Paninian Grammar, Philosophy of Language. History : Archeology, Ancient history, Medieval history & Modern history	

434	QIP0036	Indian Institute of Technology (IIT), Bombay	Ph.D Engineering	Centre for Urban Science and Engineering	DN000739	BMUS01 : Architecture, Urban Design & Planning : Housing, Land Use Policies, Public Space, Sustainable Urbanism, Contemporary Architecture Urbanization, Policy & Governance : Housing Economics, Water & sanitation, Climate change, Circular economy Infrastructure : Transportation and Land use, Public health, Water & wastewater, Waste Management, Smart Energy Informatics : Cyber-Physical Systems, Geo-Spatial Technologies, Network Analysis	First Class or 60% marks (55% marks for SC/ST), as specified in the General Eligibility Criterion of IIT Bombay's PhD admission Information Brochure, in the qualifying degree. The qualifying degree can be any one of the following: M.Tech./M.E. or equivalent degree in any branch of Engineering OR Master's degree in Architecture, Urban Design/Planning, Environmental Sciences, Energy Sciences, Geography, Social Sciences, Economics, Applied Mathematics, Statistics, or related disciplines.

435	QIP0036	Indian Institute of Technology (IIT), Bombay	Ph.D Engineering	Metallurgy Engineering and Materials Science	DN000766	Physical and Mechanical Metallurgy: microstructure, microstructure evolution, phase equilibrium, phase transformation, structure propertyrelationship, thermomechanical processing and texture analysis, metal forming, superplasticity, mechanical behavior-creep, fatigue, micromechanics, fracture mechanics Process Metallurgy and Manufacturing: process modelling, process analysis, iron and steel making (including clean steel production), non-ferrous extractive metallurgy, welding, powder metallurgy, additive manufacturing, E-waste processing refractories, Non-ferrous production, Sustainable metal production, powder metallurgy and additive manufacturing Structural Ceramics: high temperature ceramics, inorganic glasses and glass--ceramics, ceramic foams, ceramic coatings, industrial ceramics, ceramic synthesis/processing, sintering, near net shape forming, gel casting, rheology of suspensions, mechanical and tribological	The general eligibility criteria prescribed by IIT Bombay are bare minimum and mere possessions of same will not entitle the applicants to be called for written test/interview, The Department may restrict the number of applicants to be called for written test/interview to a reasonable limit, on the basis of qualifications and experience higher than that of the minimum prescribed in the advertisement. The candidate must satisfy the eligibility criteria in either one of the following qualifying degree: i. M.Tech./ M.E. or equivalent degree in Engineering/Technology. ii. B.Tech./B.E. or equivalent degree in Engineering/ Technology. iii. M.Sc. Or equivalent degree in Chemistry, Materials Science, Physics and related science streams. Mathematics as a subject at the B.Sc. Level is mandatory. Please visit the Department website(https://www.iitb.ac.in/mems/en)for additional details, where a dedicated webpage will be created prior to the initiation of the PhD admission process.

						behavior. Electronic, Magnetic and 2D Materials: electrical and optical properties, magnetic properties, dielectric and piezoelectric properties, electrochemical behavior, 2D materials, quantum and correlated materials, thin films synthesis/processing/devices Energy Materials: materials and devices for photovoltaic, advanced battery, supercapacitor, fuel cell, thermoelectric and sensing applications, nanoscale materials synthesis/processing/devices Polymers and Soft Matter: crystallization and self-assembly in soft matter (polymers, proteins) systems, polymer blends and polymer nanocomposites, polymer thin films and membranes, polyelectrolytes, surface and interfacial phenomena in soft materials, dynamics in polymer confinement, thermodynamic, mechano-rheological, mechanical properties of polymers, responsive, functional and conjugated polymers Corrosion and Coatings: Aqueous corrosion, the	

						metallurgy of corrosion, corrosion in oil and gas, atmospheric corrosion, corrosion inhibitors, and protective coatings (functional organic coating, galvanization, electroplating, and high-temperature coatings), electrochemistry, interface degradation Modelling and simulation: First principles-DFT, Monte Carlo, molecular dynamics, CALPHAD, phase field, phase field crystal, cellular automata, dislocation dynamics, crystal plasticity, plastic deformation and material flow, finite element Departmental common facilities available (in addition to those available in individual research groups' laboratories): • X-Ray Diffractometers • Scanning probe microscope-AFM, KPFM included • Confocal Raman/PL system • Dual-beam SEM/FIB microscope • Transmission Electron Microscopy Facility (300 kV) • Sample preparation facility for transmission electron microscopy • Nanoindenter • Metallography sample preparation setup • Optical Image analyser	

						system • Vickers Microhardness Tester • Scanning Electron Microscope • Environmental scanning electron microscope • simultaneous TG-DTA Thermal Analysis • Scanning electrochemical Microscope • Multi-channel potentiostat/Galvanostats • Gleeble 3800 • UTM Machines • Differential Scanning Calorimetry • Differential Scanning Calorimetry • Thermogravimetric Analyzer • Hot-dip Galvanization (HDG) Simulator • Corrotherm 610 Salt Spry • BET • DLS-Nano C particle analyzer • Dilatometer • High temperature furnaces • High Performance Computing facility, along with CALPHAD and standard open Source scientific software • UV Visible Spectrophotometer • Dynamic loop system • High temperature high pressure autoclaves • Vibrating sample magnetometer	

436	QIP0036	Indian Institute of Technology (IIT), Bombay	Ph.D Engineering	Biosciences & Bioengineering	DN000784	BMBS01 : BIOTECHNOLOGY (BT) (A) Biophysics and Computational Biology: Protein crystallography, NMR based structural biology, and single particle cryo-EM; Bioinformatics and computational biology; Physics of biological systems and computational Modeling of biomolecules; Dynamics of cytoskeletal filaments and chromatin remodelling; Physical properties of the extracellular matrix; Protein folding/misfolding, aggregation and neurodegeneration; Time-resolved techniques; Cellular Biophysics (B) Biochemistry: Molecular enzymology; Microbial metabolism and regulation;Aromatic hydrocarbon metabolism and genetic engineering; Molecular mechanisms of DNA replication, repair and packaging in double stranded DNA viruses (C) Microbial Biology: Fungi, viral assemblies, bacterial Pathogenesis, host-pathogen Interactions, molecular parasitology. (D) Cell Biology: Microtubule dynamics; Bacterial cell division; Chromosomal and extra chromosomal segregation in	BMBS01 : First Class or 60% marks (55% marks for SC/ST),as specified in the General Eligibility Criterion, in the qualifying degree: i. M.Tech. or equivalent degree in Biotechnology, or Bio-related engineering subjects ii. MD/MS in Health Sciences including AYUSH iii. M.Sc. or equivalent degree in subjects related to Life Sciences/Physics/ Chemistry/Mathematics iv. B.Tech. in Biotechnology, Chemical Engineering, Computer science and Engineering, Electrical Engineering/ Electronics and Telecommunications, Mechanical engineering, Engineering Physics. Candidates with qualifying degrees in [iii and iv] must fulfill one of the following: a) a valid GATE score (for TA/TAP/RA/RAP) b) a valid CSIR/UGC/DBT JRF or a valid ICMR JRF not linked to ICMR project (for FA)/BINC any fellowship that will provide scholarship for 5 years. c) Experience as specified earlier in A.5 and A.6(for CT, EX, IS, PS, SF,SW category) BMBS02: First Class or 60% marks (55% marks for SC/ST), as specified in theGeneral Eligibility Criterion, in the qualifying degree: i. M.Tech./M.E. or equivalent degree in Biomedical Engineering, Chemical Engineering, Computer Science & Engineering, Electrical Engineering, Electronics/Telecommunications Engineering, Instrumentation Engineering, Mechanical Engineering and

						fungi; Neurobiology; Motor proteins (E) Immunology: Tumor Immunology; Cancer biomarker. (F) Genetics and Molecular Biology: Functional Genomics; Epigenetic Regulation; Fungal Molecular Genetics. (G) Proteomics, System Biology and Biomarkers of infectious diseases BMBS02: BIOMEDICAL ENGINEERING (BME) (A) Sensors and Devices: Bioinstrumentation for diagnostics and therapeutics; Early detection of carcinoma and tropical diseases; bioMEMS devices; Fluorescent Biosensors; Nanoengineered Sensors; Layer by Layer Self Assembly; Microfluidics for biomedical applications; Robotics for Healthcare applications and devices; IoT for healthcare applications and devices. (B) Application of AI/ML in healthcare applications and devices. (C) Biomaterials, Drug delivery and tissue engineering, Nanobiotechnology, Design of scaffolds for tissue engineering,	Engineering Physics. ii. MBBS with MD/MS, MVSc, MDS, MPTh, MOTh, MS/MD Health sciences AYUSH. iii.B.Tech./B.E. or equivalent degree in Biomedical Engineering, Chemical Engineering, Computer Science & Engineering, Electrical Engineering, Electronics /Telecommunications Engineering,Instrumentation Engineering, Mechanical Engineering and Engineering Physics. iv. M.Sc. or equivalent degree in Biochemistry, Biophysics, Biotechnology, Ceramics, Chemistry, Electronics, Ergonomics, Material Science, Mathematics, Molecular Biology, Physics and Physiology. v. Health Sciences such as MBBS (Medicine) / BDS (Dental). Must qualify All India level post graduate entrance examination for corresponding disciplines such as AIIMS/ MCI/ /JIPMER/ PGI Chandigarh/AFMCPune/ for MBBS/BDS. vi. B.V.Sc., B.P.Th. ,B.O.Th.) (Duration 4 years or more). Must qualify All India level post graduate entrance examination for M.V.Sc., M.P.Th., and M.O.Th. GATE examination for all such health science background. vii. Candidates with qualifying degrees in [iii and iv] must fulfill one of the following: avalid GATE score (for TA/TAP/RA/RAP) a valid CSIR/UGC/DBT JRF or a valid ICMR JRF not linked to ICMR project (for FA)/BINC any fellowship that will provide scholarship for 5 years. Experience as specified earlier in A.5 and A.6 (for CT, EX, IS, PS, SF, SW category)

						Controlled Release technologies, Neuroprosthetic devices including aids for the handicapped, Signal processing, Telemedicine and knowledge based systems. Microfibrication forimmunotherapy (D) Computational physiology, Cardiac electrophysiology and muscle mechanics, Computational Neurophysiology (E) Movement Neuroscience, Rehabilitation technology; Neural signal processing, Neuroimaging, Neuromodulation, Neurofeedback. Human motor control, motor learning, biomechanics of human movement, non-invasive brain stimulation, neuromodulation, assistive devices, geriatric (aging) and neurological rehabilitation, rehabilitation technology, (F) Biomedical Optics: Optical tomography; Blood flow measurements; Computational Imaging; Cerebral blood flow imaging in humans, Laser and diffuse speckle imaging, Microscopy, small animal imaging, functional near infrared spectroscopy in humans and animals, Biomedical instrumentation (system development), imaging and other computational aspects,towards	

						commercialization of imaging systems.	
437	QIP0036	Indian Institute of Technology (IIT), Bombay	Ph.D Engineering	Civil Engineering	DN000810	BMCE01 : Transportation Systems Engineering BMCE02 - Geotechnical Engineering BMCE03 - Water Resources Engineering BMCE04 - Structural Engineering BMCE05 - Ocean Engineering BMCE06 - Remote Sensing Engineering BMCE07 - Construction Technology And Management	BMCE01 :- For all, minimum eligibility is a First class or equivalent (Min. 60%) in Master's degree in Civil Engineering (55% for SC/ST), OR, a First class or equivalent (Min. 60%) in Bachelor's degree in Civil Engineering (55% for SC/ST) with a valid GATE score of Minimum 600 out of 1000 BMCE02 :- For all, minimum eligibility is a First class or equivalent (Min. 60%) in Master's degree in Civil Engineering (55% for SC/ST), OR, a First class or equivalent (Min. 60%) in Bachelor's degree in Civil Engineering (55% for SC/ST) with a valid GATE score of Minimum 600 out of 1000 BMCE03 :- For all, minimum eligibility is a First class or equivalent (Min. 60%) in Master's degree in Civil Engineering (55% for SC/ST), OR, a First class or equivalent (Min. 60%) in Bachelor's degree in Civil Engineering (55% for SC/ST) with a valid GATE score of Minimum 600 out of 1000 BMCE04 :- For all, minimum eligibility is a First class or equivalent (Min. 60%) in Master's degree in Civil Engineering (55% for SC/ST), OR, a First class or equivalent (Min. 60%) in Bachelor's degree in Civil Engineering (55% for SC/ST) with a valid GATE score of Minimum 600 out of 1000 BMCE05 :- For all, minimum eligibility is a First class or equivalent (Min. 60%) in Master's degree in Civil Engineering (55% for SC/ST), OR, a First class or equivalent (Min. 60%) in Bachelor's degree in Civil Engineering (55% for SC/ST) with a valid GATE score of Minimum 600 out of 1000 BMCE06 :- For all, minimum eligibility is a First class or equivalent (Min. 60%) in Master's degree in Civil Engineering OR IN OTHER ALLIED AREAS OF CIVIL ENGINEERING (55% for SC/ST), OR, a First class or equivalent (Min. 60%) in Bachelor's degree in Civil Engineering OR IN OTHER ALLIED AREAS OF

							CIVIL ENGINEERING (55% for SC/ST) with a valid GATE score of Minimum 600 out of 1000 BMCE07 :- For all, minimum eligibility is a First class or equivalent (Min. 60%) in Master's degree in Civil Engineering (55% for SC/ST), OR, a First class or equivalent (Min. 60%) in Bachelor's degree in Civil Engineering (55% for SC/ST) with a valid GATE score of Minimum 600 out of 1000
438	QIP0037	National Institute of Technology (NIT), Hamirpur	Ph.D Engineering	Computer Science & Engineering	DN000073	Computer Science & Engineering	1.Full time regular/ permanent faculty members of AICTE approved Degree Level institutes having three year teaching experience at graduate level institutes. 2.The applicant must have passed Master Degree in Engineering/Technology in the appropriate discipline. Open/EWS/OBC-NCL candidates must have secured minimum CGPI of 6.5 on a 10-point scale (or equivalent) or 60% marks in Master Degree. Whereas, in case of SC/ST/PwD candidates, a minimum CGPI of 6.0 on a 10-point scale (or equivalent) or 55% marks in Master Degree shall be applicable. Candidates must have qualified GATE/UGC-NET/CSIR NET examination in the relevant area. (Note: Kindly visit the institutional website for details on eligibility for admission to Doctoral Programmes)
439	QIP0037	National Institute of Technology (NIT), Hamirpur	Ph.D Engineering	Civil Engineering	DN000226	Civil Engineering	1.Full time regular/ permanent faculty members of AICTE approved Degree Level institutes having three year teaching experience at graduate level institutes. 2.The applicant must have passed Master Degree in Engineering/Technology in the appropriate discipline. Open/EWS/OBC-NCL candidates must have secured minimum CGPI of 6.5 on a 10-point scale (or equivalent) or 60% marks in Master Degree. Whereas, in case of SC/ST/PwD candidates, a minimum CGPI of 6.0 on a 10-point scale (or equivalent) or 55% marks in Master Degree shall be applicable. Candidates must have qualified GATE/UGC-NET/CSIR NET examination in the relavant area. (Note: Kindly visit the institutional website for details on eligibility for admission to Doctoral Programmes)

440	QIP0037	National Institute of Technology (NIT), Hamirpur	Ph.D Engineering	Electrical Engineering	DN000227	Electrical Engineering	1.Full time regular/ permanent faculty members of AICTE approved Degree Level institutes having three year teaching experience at graduate level institutes. 2.The applicant must have passed Master Degree in Engineering/Technology in the appropriate discipline. Open/EWS/OBC-NCL candidates must have secured minimum CGPI of 6.5 on a 10-point scale (or equivalent) or 60% marks in Master Degree. Whereas, in case of SC/ST/PwD candidates, a minimum CGPI of 6.0 on a 10-point scale (or equivalent) or 55% marks in Master Degree shall be applicable. Candidates must have qualified GATE/UGC-NET/CSIR NET examination in the relevant area. (Note: Kindly visit the institutional website for details on eligibility for admission to Doctoral Programmes)
441	QIP0037	National Institute of Technology (NIT), Hamirpur	Ph.D Engineering	Mechanical Engineering	DN000230	Mechanical Engineering	1.Full time regular/ permanent faculty members of AICTE approved Degree Level institutes having three year teaching experience at graduate level institutes. 2.The applicant must have passed Master Degree in Engineering/Technology in the appropriate discipline. Open/EWS/OBC-NCL candidates must have secured minimum CGPI of 6.5 on a 10-point scale (or equivalent) or 60% marks in Master Degree. Whereas, in case of SC/ST/PwD candidates, a minimum CGPI of 6.0 on a 10-point scale (or equivalent) or 55% marks in Master Degree shall be applicable. Candidates must have qualified GATE/UGC-NET/CSIR NET examination in the relevant area. (Note: Kindly visit the institutional website for details on eligibility for admission to Doctoral Programmes)

442	QIP0037	National Institute of Technology (NIT), Hamirpur	Ph.D Engineering	Centre For Energy Studies.	DN000337	Centre for Energy Studies	1.Full time regular/ permanent faculty members of AICTE approved Degree Level institutes having three year teaching experience at graduate level institutes. 2.The applicant must have passed Master Degree in Engineering/Technology in the appropriate discipline. Open/EWS/OBC-NCL candidates must have secured minimum CGPI of 6.5 on a 10-point scale (or equivalent) or 60% marks in Master Degree. Whereas, in case of SC/ST/PwD candidates, a minimum CGPI of 6.0 on a 10-point scale (or equivalent) or 55% marks in Master Degree shall be applicable. Candidates must have qualified GATE/UGC-NET/CSIR NET examination in the relevant area. (Note: Kindly visit the institutional website for details on eligibility for admission to Doctoral Programmes)

443	QIP0038	National Institute of Technology (NIT), Silchar	Ph.D Engineering	Civil Engineering	DN000448	Hydrology, Water Resources Engineering, Optimization methods, Sediment transport / River Mechanics Water & Wastewater Engineering, Surface Water Hydrology, Sediment Transport, Climate change, River Modeling, hydrological modeling, groundwater Engineering , Climate change impact in DRF, Transportation planning, Transportation Engineering, Traffic Engineering, Pavement Engineering, Geotechnical Engineering, Shallow foundation, deep foundation, machine foundation, soil dynamics, soil stabilization, Application of probability and reliability theory in geotechnical engineering, Ground improvement and Geosynthetics. Construction Materials & Structural Engineering, Earthquake Engineering, Vibroacoustics, Structural Dynamics and vibration control, Active Structural Acoustic Control (ASAC), Environmental Engineering	Students for admission into Ph.D. Programs in Engineering Departments must satisfy one of the following criteria: M.E./M.Tech. or equivalent in an appropriate area with a minimum CPI of 6.5 (on a 10 point scale) or equivalent (60% of marks). For SC /ST /PwD candidates, a minimum CPI of 6.0 (on a 10 point scale) or equivalent (55% of marks).

444	QIP0038	National Institute of Technology (NIT), Silchar	Ph.D Engineering	Mechanical Engineering	DN000451	Computational fluid dynamics (CFD), Computational heat transfer, Multiphase flow Droplet dynamics, Solar collector and application of solar energy, Computational Bioheat transfer, Thermal clothing design, Application of PCM, Application of Porous medium, HVAC and Building information modeling (BIM) for thermal performance management, Wettability, Evaporation and condensation, Micro-scale fluid flow and heat transfer, Non-Newtonian fluid mechanics, Droplet dynamics, Energy storage and conversion (Batteries, fuel cells), Scram jet Engine, Natural and mixed convection heat transfer, Lattice Boltzmann Method, Combustion, Porous media flows, Multiphase flows, Solar polygeneration, Flow control and performance improvement of vertical axis wind turbines, Renewable energy (Wind renewable energy, Ocean renewable energy), Design of underwater objects at a high velocity of water flow, Design and	Students for admission into Ph.D. Programs in Engineering Departments must satisfy one of the following criteria: M.E./M.Tech. or equivalent in an appropriate area with a minimum CPI of 6.5 (on a 10 point scale) or equivalent (60% of marks). For SC /ST /PwD candidates, a minimum CPI of 6.0 (on a 10 point scale) or equivalent (55% of marks).

						development of well turbine and impulse turbine used in the oscillating water column (OWC), Development of floating and fixed type OWC, Ocean thermal energy conversion (OTEC), Method: Experimental, CFD, Numerical Matlab Coding, Composite fabrication and analysis, Application of MCDM techniques for Renewable Energy, Composites / FGM / Metamaterials / Smart / Deployable structures, Uncertainty Quantification, Artificial Intelligence and Machine Learning, Molecular Dynamics, Additive Manufacturing, Tribology of Bearing, Composite Materials, 3D printing, Bionic, Bioscience/ Biotechnology/ Bio-Mechanics, Modelling and Group A DEPARTMENT SPECIALISATION GROUP development of Expert System for communicable and non-communicable diseases, Augmented/ virtual reality Material Selection, Material Synthesis and Characterization, Metal Matrix Composites, Powder Metallurgy,	

						Advanced (Non-traditional) Machining, Surface Coating, Welding Technology, Soft Computing, Fatigue & Fracture, Nontraditional Optimization Tools, Multi-criteria Decision Making (MCDM) Techniques. Smart Adhesives and their joining, Hybrid multiscale laminated composites, Bio-composites, Phase change materials and encapsulation technology, Surface engineering and functionalization, Self-healing composite materials and FRP laminates, 3R Composites and vitrimers, Energy-efficient building materials, Vibration analysis, Machine Dynamics, Mechatronics systems and energy harvester Rotor dynamics and control Engineering Condition monitoring of dynamic system, Sustainable materials for coatings, Surface engineering and additively manufactured coatings, Robotic and control, Compliant mechanism, Soft actuation and mechanism, Sensor and actuators, Mobile robotics, Mobile manipulators, Underwater robotics,	

						Machining, Electro-deposition, Machining Learning, Product Development, Dissimilar welding of materials, Welding for Biodevices, Corrosion science, Thin film deposition, Sheet metal joining and riveting, Metal forming/Joining, Tribology, Nano materials, Unconventional machining, Renewable energy	

445	QIP0038	National Institute of Technology (NIT), Silchar	Ph.D Engineering	Electrical Engineering	DN000454	Micro-grid Operation and Management, Energy Forecasting & Pricing, Single and Multi-Objective Optimization and application in Power systems Meta-heuristic Algorithms, Electric Power Distribution systems, Optimal Power Flow in Power Systems, Power Electronics applications to Electric Power and Energy Systems, Microgrid Control, Power Conditioning of Power Distribution Systems using Active Filters, Smart Grid Power Management and Control, Application of Soft Computing Techniques, Primary secondary control for DC microgrid, Optimization techniques, Distribution network operation and planning, High Voltage Engineering and Testing, Design of Lithium-ion Batteries New Insulation Materials for AC and DC Cables, Electromagnetic Field, Applications of non-thermal plasma such as diesel exhaust pollution control, surface decontamination, carbon capture, food processing and waste water treatment, Plasma Pyrolysis Small-scale power generation, Hydro Power Plants, Applications of machine learning techniques in Electrical Engineering, Power System Flexibility Power System Security Load Forecasting Condition	Students for admission into Ph.D. Programs in Engineering Departments must satisfy one of the following criteria: M.E./M.Tech. or equivalent in an appropriate area with a minimum CPI of 6.5 (on a 10 point scale) or equivalent (60% of marks). For SC /ST /PwD candidates, a minimum CPI of 6.0 (on a 10 point scale) or equivalent (55% of marks).

						Health Monitoring and Fault Diagnosis of Electrical Machines Power Quality, Power system Reliability, Electric Vehicles, Renewable Energy Technologies, Renewable Energy and Energy Market, Distributed Generation, PV integration to grid and power quality issues, Renewable energy sources Fuel Cells, Optimization of renewable generation and storage in distribution grids, Renewable Generation Forecasting, Renewable Energy Sources and Restructured Power System, Grid interactive and isolated Renewable Energy Systems, Multifunctional and Flexible Power Converters and its applications; Power Electronics Electrical Machines and Drives, Low Power Switched Capacitor Converters Low Power Electronics converter based VLSI design. Nonlinear dynamics and chaos, their control with advanced nonlinear controllers and applications, Instability analysis of networked-isolated micro-grids in the presence of source, load disturbances and faults. Design, develop and control drones for different societal applications, Robust Control, Quantitative feedback theory based Control System: Design and application, Fractional Order Control Systems, Application of control	

						theories for -- Power & Energy System Problems, Robotics, Biomedical Systems, System Theory development for Behavioural and Psychological models, NN based embedded adaptive control system with wireless communication, Variable order dynamics, Optimal control, II Instrumentation, Machine Learning, Instrumentation and Signal Processing, Sensors and Actators, Embedded System Design and Programming, Numerical Linear Algebra, Digital Image Processing, Image processing VLSI	

446	QIP0038	National Institute of Technology (NIT), Silchar	Ph.D Engineering	Electronics & Communication Engineering	DN000457	Communication Systems: Wireless Communication, Cognitive Radio Networks, UAV based Communication and networking in C-RAN, Resource Allocation in 5G, Energy Harvesting protocols, Network Slicing, Caching and Splitting of network function in 5G, Satellite Communications, Wireless Sensor Networks, Communication Systems, Millimeter Wave Communications, Digital Communication, Soft Computing Techniques, Smart Grid Communications, Energy efficient, NOMA, MIMO-OFDM Communications, IoT, Signal Processing: Signal Processing, Speech and Audio Processing, Image and Video Processing, Biomedical Signal Processing, Multimedia Signal processing, Machine Learning, Deep Learning Techniques, Soft Computing Techniques, Computer Vision, Medical Imaging, Neuroimaging, Pattern Recognition, Optimization Techniques Microwave and RF System Design: RF Energy Harvesting Systems, WPT, SWIPT, Machine Learning for Electromagnetic Problems, Ultra-Wideband Technologies, Dielectric Resonators and Applications, EBG and FSS Structures, Antenna	Students for admission into Ph.D. Programs in Engineering Departments must satisfy one of the following criteria: M.E./M.Tech. or equivalent in an appropriate area with a minimum CPI of 6.5 (on a 10 point scale) or equivalent (60% of marks). For SC /ST /PwD candidates, a minimum CPI of 6.0 (on a 10 point scale) or equivalent (55% of marks).

						design for 5G Communications, MIMO antenna Design for 5G communication, Implantable sensor antenna. Antenna Design, Meta-material, WBAN, Flexible Antennas, Antenna Array Optimization, Micro/Nanoelectronics: SPICE/Compact modeling of multigate FETs/Nanowire FETs/ Nanosheet FETs; TCAD Simulation of nanoscale and emerging transistor architectures; Computational Nanoelectronics/Quantum modeling	

447	QIP0038	National Institute of Technology (NIT), Silchar	Ph.D Engineering	Computer Science & Engineering	DN000458	Hardware Security, Edge A,IC Layout, Hardware Acceleration, Theoretical Machine and Deep Learning, Cyber Physical System, Image Processing, Machine leaning, Medical imaging, Human Activity Recognition Machine Learning and Time Series Mining, Distributed Computing, Graph Algorithms, Approximations, Distributed Artificial Intelligence, Natural Language Processing/Quantum Computing Network Security, Internet of Things Wireless Sensor Network, Cryptography, Image and video processing, spiking neural networks, Networks optimization Human-Computer Interaction, Machine Translation, Applied machine learning and Deep learning, Social Media Analytics, Speech Processing, NLP, Human Activity Recognition, Time Series Mining, Distributed Computing, Graph Algorithms, Approximations Artificial Intelligence, Cryptography, video processing	Students for admission into Ph.D. Programs in Engineering Departments must satisfy one of the following criteria: M.E./M.Tech. or equivalent in an appropriate area with a minimum CPI of 6.5 (on a 10 point scale) or equivalent (60% of marks). For SC /ST /PwD candidates, a minimum CPI of 6.0 (on a 10 point scale) or equivalent (55% of marks)

448	QIP0038	National Institute of Technology (NIT), Silchar	Ph.D Engineering	Electronics and Instrumentation	DN000461	IoT, 5G Communications & Beyond, Cyber-Physical Systems Communication: IRS for 6G Communication, Block chain for 6G, UAV for 5G and beyond, IoT& IoT Communication, Vehicular: V2X communication, D2D, mm Wave 5G, Cognitive Radio, MIMO, etc., AI: Machine Learning, Deep Learning and its applications in Healthcare, Communication and Signal Processing. Bio-medical Instrumentation and Signal Processing Sensing Technology, Instrumentation, Biomedical Instrumentation & signal processing, Smart sensor, Industrial Instrumentation, Machine Learning, and Application of IoT. Transdermal Drug delivery, Medical Electronic devices, Biomedical signal processing, machine learning algorithms, artificial intelligence, intelligent instrumentation for health monitoring, Development of Sensors for biomedical applications such as continuous monitoring of Glucose, pH, Temperature, Pulse Rate etc, Design and Development of Sensing Devices for water quality and air quality monitoring, Gas-sensors Nano/Micro Electronics and VLSI Digital ICs, modern semiconductor devices, solar cells, New Generation Solar Cell, Design, Fabrication &	Students for admission into Ph.D. Programs in Engineering Departments must satisfy one of the following criteria: M.E./M.Tech. or equivalent in an appropriate area with a minimum CPI of 6.5 (on a 10 point scale) or equivalent (60% of marks). For SC /ST /PwD candidates, a minimum CPI of 6.0 (on a 10 point scale) or equivalent (55% of marks).

						Characterization of Sensors, Emerging memories with artificial intelligence (AI) applications, emerging memory technologies (PCM, RRAM): Materials, Device Fabrication & Characterization, Nano electronics and semiconductor devices Renewable Energy and Energy Storage Systems Renewable Energy system; Energy storage (battery, super capacitor, fuel cell, Flow batteries, Pumped hydro); Battery management; Electric vehicle, Design, development and optimization of super capacitors, NEMS & MEMS Devices, Mathematical modelling, scheduling & advanced control of Hybrid renewable energy system based smart grid under uncertainties, Hydrogen based energy generation- Fuel cells and its challenges, Control Theory, Robotics and Automation Control systems (conventional and data driven Modelling, estimation, control);; Fractional order systems, Control of Cyber Physical Systems, Network Control Systems, Modelling of Epidemics, Model Predictive Control and its applications, Robotics, Biomimetic Robots, Robust and Adaptive Control, Modelling of dynamic systems Motion planning of single and	

						multi-robots, Autonomous Aerial and Underwater Vehicles, Formation control of multiple robotic systems, Time Delay Systems, Lyapunov Stability, Fractional Order Systems, Linear and Nonlinear Multi-Dimensional Systems, Biological Control System, Control of renewable energy system, Optimization based process Scheduling, Machine Learning/AI based control & scheduling of process and energy systems Signal and Image Processing Condition Monitoring and Fault Diagnosis using Advanced Signal Processing Techniques, Application of Machine Learning and Artificial Intelligence, Intelligent Instrumentation, Image processing, Image and Signal Processing: Image Segmentation models for real-time and medical applications, Medical Imaging	
449	QIP0039	Indian Institute of Information Technology, Design and	M.Tech	Computer Science & Engineering	DN000272	Computer Science and Engineering with Specialization in Data Science and Artificial Intelligence	Full time regular/ permanent faculty members of AICTE approved Polytechnic (Diploma) institutes having (a) One year teaching experience at polytechnic level. (b) A Bachelor's degree in the appropriate branch.

		Manufacturing (IIITDM), Kancheepuram					
450	QIP0039	Indian Institute of Information Technology, Design and Manufacturing (IIITDM), Kancheepuram	M.Tech	Electronics & Communication Engineering	DN000273	1. Electronics and Communication Engineering with Specialization in Microelectronics and VLSI Systems 2. Electronics and Communication Engineering with Specialization in Communication Systems	Full time regular/ permanent faculty members of AICTE approved Polytechnic (Diploma) institutes having (a) One year teaching experience at polytechnic level. (b) A Bachelor's degree in the appropriate branch.
451	QIP0039	Indian Institute of Information Technology, Design and Manufacturing (IIITDM), Kancheepuram	Ph.D Engineering	Computer Science & Engineering	DN000297	1. Artificial intelligence and Machine Learning 2. Cyber security 3. Graph Theory 4. Image processing and Computer Vision 5. IOT and wireless sensor networks 6. Reconfigurable and Approximate Computing	Full time regular/ permanent faculty members of AICTE approved Degree Level institutes having (a) Three year teaching experience at graduate level institutes. (b) A Master degree in the appropriate branch.
452	QIP0039	Indian Institute of Information Technology, Design and Manufacturing (IIITDM), Kancheepuram	M.Tech	Mechanical Engineering	DN000302	1. Mechanical Engineering with Specialization in Mechanical Systems Design 2. Mechanical Engineering with Specialization in Smart Manufacturing	Full time regular/ permanent faculty members of AICTE approved Polytechnic (Diploma) institutes having (a) One year teaching experience at polytechnic level. (b) A Bachelor's degree in the appropriate branch.

453	QIP0039	Indian Institute of Information Technology, Design and Manufacturing (IIITDM), Kancheepuram	Ph.D Engineering	Electronics & Communication Engineering	DN000304	1. Microelectronics & VLSI design, Neuromorphic Computing, Nanoelectronic devices, 2D semiconductors 2. Power Electronics and Renewable Energy Systems 3. RF, Communication, Antenna Design and Fiber Optics 4. Signal Processing, Nonlinear systems, Image and Video Processing and Biomedical Image Processing	Full time regular/ permanent faculty members of AICTE approved Degree Level institutes having (a) Three year teaching experience at graduate level institutes. (b) A Master degree in the appropriate branch.
454	QIP0039	Indian Institute of Information Technology, Design and Manufacturing (IIITDM), Kancheepuram	Ph.D Engineering	Mechanical Engineering	DN000305	1. Manufacturing systems and Automation 2. Materials and Engineering Design 3. Thermal and Fluid Sciences	Full time regular/ permanent faculty members of AICTE approved Degree Level institutes having (a) Three year teaching experience at graduate level institutes. (b) A Master degree in the appropriate branch.
455	QIP0039	Indian Institute of Information Technology, Design and Manufacturing (IIITDM), Kancheepuram	Ph.D Science	Sciences and Humanities	DN000310	1. Fiber Optic sensors for biomedical applications 2. Metal oxides for methanol/ethanol sensors 3. Metal-based nanostructures towards photodetector devices 4. Nanomaterials for energy conservation and storage 5. Nanomaterials for sensing applications 6. Computational Fluid Dynamics	Full time regular/ permanent faculty members of AICTE approved Degree Level institutes having (a) Three year teaching experience at graduate level institutes. (b) A Master degree in the appropriate branch.

456	QIP0040	Puducherry Technological University, Puducherry	Ph.D Engineering	Civil Engineering	DN000141	Structural Engineering/ infrastructure Development/ Soil mechanics/ foundation Engg/Geo informatics/ Transportation Engineering/ Foundation & Tunneling /Environmental Engineering / Energy Technology/ Hydraulics and Water Resources Engineering/ Ocean Engineering/ Environmental Management /Construction materials/ Construction Technology and Management / Construction equipment and Techniques/ construction and Automation	B.E./B.Tech., Degree in Civil Engineering/ Structural Engineering and M.E., / M.Tech., Degree in Civil Engineering / Structural Engineering / Geotechnical Engineering/ Hydraulic & Water Resources Engineering / Ocean Engineering / Environmental Engineering / Environmental Technology / Advanced Construction Technology / Geo informatics with an overall minimum aggregate of 55% of marks or equivalent in the qualifying examination M.E., / M.Tech., Or B.E., / B.Tech., Degree in Chemical Engineering / Environmental Engineering and M.E., / M.Tech., Degree in Environmental Engineering / Environmental Management / Energy Technology / any related specializations with an overall minimum aggregate of 55% of marks or equivalent in the qualifying
457	QIP0040	Puducherry Technological University, Puducherry	Ph.D Engineering	Mechanical Engineering	DN000142	Alternate Fuels / IC Engines CFD / Biomass Gasification Refrigeration & Air-Conditioning Energy Engineering. Production/Manufacturing/ Composites / Nano materials Surface Engineering /Corrosion /CAD-CAM/FEM/Optimization Techniques /Mechatronics	B.E./B.Tech. Degree in Mechanical Engineering and M.E/ M.Tech. degree in Energy Technology / Product Design and Manufacturing / Production Engineering / Manufacturing Engineering/ CAD - CAM / Thermal Engineering / Industrial Engineering / any related specializations with an overall minimum aggregate of 55% of marks or equivalent in the qualifying examination M.E./ M.Tech.
458	QIP0040	Puducherry Technological University, Puducherry	Ph.D Engineering	Electronics & Communication Engineering	DN000144	Electronics/ Communication Systems/ Electronics and Communication Engineering/ Wireless Communication/ Network and Information security /VLSI Design/ Embedded Systems / Biomedical Engineering / Medical Electronics	B.E./B.Tech. Degree in Electronics and Communication Engineering and M.E/ M.Tech. degree in Electronics/ Communication Systems/ Electronics and Communication Engineering/ Wireless Communication /VLSI Design/ Embedded Systems/ Biomedical Engineering / Medical Electronics/ Network and Information security / any related specializations with an overall minimum aggregate of 55% of marks or equivalent in the qualifying examination M.E./ M.Tech.
459	QIP0040	Puducherry Technological University, Puducherry	Ph.D Engineering	Computer Science & Engineering	DN000146	Computer Science and Engineering /Information Technology	B.E./B.Tech. degree in CSE/IT/ECE and M.E. / M.Tech in Computer Science and Engineering / Information Technology with an overall minimum aggregate of 55% of marks or equivalent in the qualifying examination M.E./ M.Tech

460	QIP0040	Puducherry Technological University, Puducherry	Ph.D Engineering	Electrical & Electronics Engineering	DN000149	Electrical Drives and Control /Power System Engineering	B.E./B.Tech. Degree in Electrical and Electronics Engineering/Electronics and Instrumentation and M.E/ M.Tech. Degree in Electrical and Electronics Engineering/ other related specializations with an overall minimum aggregate of 55% of marks or equivalent in the qualifying examination M.E./ M.Tech.
461	QIP0040	Puducherry Technological University, Puducherry	Ph.D Engineering	Information Technology	DN000151	Data Science and Analytics, Networking, IoT, Information Security /Image Processing, AI and Machine Learning, Software Engineering	B.E./B.Tech. Degree in IT/CSE/ECE/EEE/E&I and M.E/M.Tech. Degree in IT/CSE or any related specializations with an overall minimum aggregate of 55% of marks or equivalent in the qualifying examination M.E./ M.Tech
462	QIP0040	Puducherry Technological University, Puducherry	Ph.D Engineering	Chemical Engineering	DN000154	Chemical/ Biochemical/Biotechnology/ Petroleum / Petrochemical / Process Control / Industrial Biotechnology Electrochemical/ Pharmaceutical / Food Technology / Ceramics & Cement Technology / Polymer / Nano Technology/Industrial Safety Engg. / Environmental Engg. / Energy and Environmental Engg	B.E/B.Tech in Engineering/Technology followed by M.E./M.Tech./M.S (by research) in Chemical/ Biochemical/Biotechnology/ Petroleum / Petrochemical / Electrochemical/ Pharmaceutical / Food Technology / Ceramics & Cement Technology / Polymer / Nano Technology / Industrial Safety Engg. / Environmental Engg. / Energy and Environmental Engg. / Process Control / Industrial Biotechnology or any other allied disciplines of Chemical Engg./Technology or equivalent from a recognized university with an overall minimum aggregate of 55% of marks or equivalent in the qualifying examination M.E./ M.Tech
463	QIP0040	Puducherry Technological University, Puducherry	Ph.D Engineering	Electronics and Instrumentation	DN000362	Electronics and Instrumentation /Instrumentation & control engineering/ control & instrumentation engineering /Biomedical Engineering /Electronics Engineering/ Applied Electronics /Electrical & electronics /Drives & control	B.E./B.Tech. Degree in Electronics and Instrumentation /Instrumentation & control engineering/ control & instrumentation engineering/Biomedical engineering /electrical & electronics engineering and M.E/ M.Tech. degree in Instrumentation/ Instrumentation & Control/ control and instrumentation / process control and instrumentation / Drives & control/ Applied Electronics / Biomedical Engineering / Electronics Engineering/ any related specializations with an overall minimum aggregate of 55% of marks or equivalent in the qualifying examination M.E./ M.Tech
464	QIP0040	Puducherry Technological University, Puducherry	M.Tech	Civil Engineering	DN000373	Structural Engineering	B.E/B.Tech in Civil Engineering/Civil and Structural Engineering through regular course of study from an AICTE approved institution (or) an examination of any University or Authority accepted by the Puducherry Technological University as equivalent thereto, with at least 50% marks

							(45% marks in case of candidates belonging to reserved category) or equivalent CGPA in the degree examination.
465	QIP0040	Puducherry Technological University, Puducherry	M.Tech	Mechanical Engineering	DN000375	Energy Technology	B.E/B.Tech in Mechanical/ Chemical/ Aerospace/ Aeronautical/ Automobile/ Energy Engineering/ Marine Engineering/ Petroleum Engineering/ Agricultural Engineering / Production / Manufacturing / Mechatronics / Metallurgy / Plastic / Industrial / Thermal / Precision Engineering and Manufacturing / Aerospace / Electrical Engineering / Automation and Robotics / Mechanical and Automation Engineering / Nano Technology and Material Science and Technology through regular course of study from an AICTE approved institution (or) an examination of any University or Authority accepted by the Puducherry Technological University as equivalent thereto, with at least 50% marks (45% marks in case of candidates belonging to reserved category) or equivalent CGPA in the degree examination.
466	QIP0040	Puducherry Technological University, Puducherry	M.Tech	Electronics & Communication Engineering	DN000376	Electronics and Communication Engineering	B.E/ B.Tech in Electronics and Communication Engineering/ Communication Engineering/Telecommunication Engineering/Electronics and Telecommunication Engineering through regular course of study from an AICTE approved institution (or) an examination of any University or Authority accepted by the Puducherry Technological University as equivalent thereto, with at least 50% marks (45% marks in case of candidates belonging to reserved category) or equivalent CGPA in the degree examination.
467	QIP0040	Puducherry Technological University, Puducherry	M.Tech	Computer Science & Engineering	DN000377	Data Science	B.E./B.Tech. in Computer Science and Engineering/Information Technology or MCA through regular course of study from an AICTE approved institution (or) an examination of any University or Authority accepted by the Puducherry Technological University as equivalent thereto, with at least 50% marks (45% marks in case of candidates belonging to reserved category) or equivalent CGPA in the degree examination.

468	QIP0040	Puducherry Technological University, Puducherry	M.Tech	Electrical & Electronics Engineering	DN000378	Electrical Drives and Control	B.E./B.Tech. in Electrical and Electronics Engineering/Electrical Engineering through regular course of study from an AICTE approved institution (or) an examination of any University or Authority accepted by the Puducherry Technological University as equivalent thereto, with at least 50% marks (45% marks in case of candidates belonging to reserved category) or equivalent CGPA in the degree examination
469	QIP0040	Puducherry Technological University, Puducherry	M.Tech	Information Technology	DN000380	Internet Of Things	BB.E/B.Tech in Computer Science and Engineering/Information Technology /Electronics & Communication Engineering / Electrical and Electronics Engineering / Electronics & Instrumentation Engineering / Bio Medical Engineering / Instrumentation and Control Engineering / Mechatronics / Computer Science and Engineering with specialization in IoT and Cyber Security including Block Chain Technology / Artificial intelligence and Data Science/Computer and Communication Engineeringthrough regular course of study from an AICTE approved institution (or) an examination of any University or authority accepted by the Puducherry Technological University as equivalent thereto, with at least 50% marks (45% marks in case of candidates belonging to reserved category) or equivalent CGPA in the degree examination
470	QIP0040	Puducherry Technological University, Puducherry	M.Tech	Electronics and Instrumentation	DN000381	Instrumentation Engineering	B.E/B.Tech in Electronics/ Instrumentation/ Electronics and Instrumentation Engineering/ Instrumentation and Control Engineering/ Electronics and Communication Engineering/ Electrical and Electronics Engineering/ Electronics and Control Engineering/Medical Electronics/Biomedical Engineering/Biomedical Instrumentation through regular course of study from an AICTE approved institution (or) an examination of any University or Authority accepted by the Puducherry Technological University as equivalent thereto, with at least 50% marks (45% marks in case of candidates belonging to reserved category) or equivalent CGPA in the degree examination

471	QIP0040	Puducherry Technological University, Puducherry	M.Tech	Chemical Engineering	DN000383	Chemical Engineering	B.E/B.Tech in Chemical or appropriate branch of Engineering/Technology in Chemical/Biochemical/ Biotechnology/Petroleum/Petrochemical/ Electrochemical/ Pharmaceutical /Food Technology/ /Polymer/Energy and Environmental Engg. or any other allied disciplines of Chemical Engg./Technology or equivalent from a recognized university with an overall minimum aggregate of 55% of marks or equivalent in the qualifying examination or as per the eligibility criteria of PTU for PG Programmes.
472	QIP0040	Puducherry Technological University, Puducherry	M.Tech	Environmental Engineering	DN000755	Environmental Engineering	B.E/B.Tech in Civil / Chemical/Environmental Engineering through regular course of study from an AICTE approved institution (or) an examination of any University or Authority accepted by the Puducherry Technological University as equivalent thereto, with at least 50% marks (45% marks in case of candidates belonging to reserved category) or equivalent CGPA in the degree examination.
473	QIP0040	Puducherry Technological University, Puducherry	M.Tech	Wireless Communication	DN000757	wireless communication	B.E/B.Tech in Electronics and Communication Engineering/Communication Engineering/Telecommunication Engineering/Electronics and Telecommunication Engineering/Information Technology/Computer and communication Engineering/ Computer Science Engineering through regular course of study from an AICTE approved institution (or) an examination of any University or Authority accepted by the Puducherry Technological University as equivalent thereto, with at least 50% marks (45% marks in case of candidates belonging to reserved category) or equivalent CGPA in the degree examination.

474	QIP0040	Puducherry Technological University, Puducherry	M.Tech	Product Design and Manufacturing	DN000882	Product Design and Manufacturing	B.E/B.Tech in Mechanical/ Production/ Manufacturing/ Automobile/ Mechatronics/ Aeronautical/ Metallurgy/ Plastic Engineering through regular course of study from an AICTE approved institution (or) an examination of any University or Authority accepted by the Puducherry Technological University as equivalent thereto, with at least 50% marks (45% marks in case of candidates belonging to reserved category)or equivalent CGPA in the degree examination.
475	QIP0040	Puducherry Technological University, Puducherry	M.Tech	Information Security	DN000883	Information Security (IS)	B.E./B.Tech. in Computer Science and Engineering/ Information Technology/ Electronics and Communication Engineering/ Electrical and Electronics Engineering / Electronics and Instrumentation Engineering / Bio-Informatics or MCA through regular course of study from an AICTE approved institution (or) an examination of any University or Authority accepted by the Puducherry Technological University as equivalent thereto, with at least 50% marks (45% marks in case of candidates belonging to reserved category) or equivalent CGPA in the degree examination.
476	QIP0041	Madhav Institute Of Technology & Science, Gwalior	Ph.D Engineering	Civil Engineering	DN000078	Water Resources Engineering; Construction Technology & Management; Structural Engineering; Environmental Hydraulics.	M.E./M.Tech. or Equivalent degree in Civil Engineering with at least 60% marks or equivalent grade (55% marks or equivalent grade for SC/ST candidates).

477	QIP0041	Madhav Institute Of Technology & Science, Gwalior	Ph.D Engineering	Mechanical Engineering	DN000079	Vibration & Noise Control; Design Engineering; Maintenance Engineering Tribology; Condition Monitoring; Industrial Engineering; Supply Chain Management; Operation Management, Production Engineering; Material Handling; Non-Conventional Energy System; Solar Energy, Heat Transfer; PV Technology; Green House Technologies; Thermal Engineering, FEA, Fracture Mechanics, Composite Material, FGM, Thermal and fire Protection, Hybrid Materials, Multi criteria optimization, Surface Engineering	M.E./M.Tech. in the relevant discipline with at least 60% marks or equivalent grade (55% marks or equivalent grade for SC/ST candidates).
478	QIP0041	Madhav Institute Of Technology & Science, Gwalior	Ph.D Engineering	Electrical Engineering	DN000080	Power systems; Biomedical Signal Processing; Medical Image Processing: Application of AI & Soft Computing Techniques for Electrical Engineering; Condition Based monitoring of Electrical Machines, Control Engg., Renewable Energy; Nature inspired optimization, Economic Load Dispatch, Optimal Power Flow, Reactive Power Dispatch, Distributed Generation FACTS Controllers.	M.E./M.Tech in Electrical Engineering, Electronics &Instrumentation, Electronics Engg, Electrical & Electronics and Biomedical Engg. with at least 60% marks or equivalent grade (55% marks or equivalent grade for SC/ST candidates)
479	QIP0041	Madhav Institute Of Technology & Science, Gwalior	Ph.D Engineering	Computer Science & Engineering	DN000081	Data Mining & Warehousing; Image Processing & Retrieval Techniques; Networking, Computer Science & Design, Artificial Intelligence & Data Science, AI & Machine Learning, AI & Robotics, Internet of Things	M.E./M.Tech in Computer Science & Engineering or Information Technology or any other Specialization of Computer Science & Engineering and Information Technology with at least 60% marks or equivalent grade (55% marks or equivalent grade for SC/ST candidates)

480	QIP0041	Madhav Institute Of Technology & Science, Gwalior	Ph.D Engineering	Architecture, Planning and Design	DN000082	Environmental Planning; Urban Design; Urban Planning; Urban Development, Energy Systems; Construction Management/ Project, Architecture, Interior Environment, Landscape Architecture and Conservation Energy & Sustainability, Facility Management.	M.Arch., M. Planning, M.E. or M.Tech. (Civil), with B.Arch/ Planning (Master in any Architecture, with at least 60% marks or equivalent grade (55% marks or equivalent grade for SC/ST candidates).
481	QIP0042	Veer Surendra Sai University Of Technology (VSUT), Burla	Ph.D Engineering	Mechanical Engineering	DN000064	Machine Design, Production Engineering, Thermal Engineering	B.Tech & M.Tech in Respective Branch of engineering
482	QIP0042	Veer Surendra Sai University Of Technology (VSUT), Burla	Ph.D Engineering	Production Engineering	DN000066	Production Enginreering, Robotics, CAD/CAM, NTM, Addtive Manufacturing, Micro Machining	B.Tech in Mechanical Engineering, Mechanical Engineering, Metallurgical Engineering and M.Tech in respective specilization.
483	QIP0042	Veer Surendra Sai University Of Technology (VSUT), Burla	Ph.D Engineering	Civil Engineering	DN000068	Structural Engineering, Water Resource Engineering, Giotech Engineering, Envermental Engineering, Transportation Engineering	B.Tech in Civil Engineering and MTech in respective branch of engineering.
484	QIP0042	Veer Surendra Sai University Of Technology (VSUT), Burla	Ph.D Engineering	Electrical Engineering	DN000070	Power System Engineering, Power Electronic control and drive, Control and Instrumention engineering.	B.Tech in Electrical Engieering/EEE and M.Tech in Respective specilization or related area
485	QIP0042	Veer Surendra Sai University Of Technology (VSUT), Burla	Ph.D Engineering	Electronics & Telecommunications Engineering	DN000071	RF and Microwave Engineering, Communication System Engineering, VLSI and Signal Processing Engineering	B.Tech in ETC/ECE/Electronic Instrumantation/EEE and M.Tech in Respective and related specalization
486	QIP0042	Veer Surendra Sai University Of	Ph.D Engineering	Metallurgical & Materials Engineering	DN000072	Industrial Metallurgy	B.Tech in Metallurgy/Production/Mechanical and M.Tech in respective and related Specialization.

		Technology (VSUT), Burla					
487	QIP0042	Veer Surendra Sai University Of Technology (VSUT), Burla	Ph.D Engineering	Computer Science & Engineering	DN000074	Computer Science and Engineering	B.Tech in CSE/IT/related Branch and M.Tech in Respective and related specialization.
488	QIP0042	Veer Surendra Sai University Of Technology (VSUT), Burla	Ph.D Engineering	Information Technology	DN000076	Information and Communication Technology	B.Tech in CSE/IT/related Branch and M.Tech in Respective and related specialization
489	QIP0042	Veer Surendra Sai University Of Technology (VSUT), Burla	Ph.D Engineering	Electrical & Electronics Engineering	DN000180	Sensors and cyber Physical System	B.Tech in EEE/EE/Instrumentation and M.Tech in related specialization
490	QIP0045	Bannari Amman Institute of Technology, Erode	Ph.D Engineering	Computer Science & Engineering	DN000934	Intelligent Systems : - Artificial Intelligence, Pattern Recognition, Machine Learning, Computer Algorithms & Optimization Techniques, Soft Computing, Data Mining & Information Retrieval, Big Data Analysis, Bioinformatics, Social Network Analysis, Cognitive Systems, Deep Learning, Image Processing, Computer Vision and Graphics Computer Systems and Software:- Computer Communication, Wireless Sensor Networks, Internet of Things, Mobile Computing, AdHoc Networks, Human-Computer Interactions, Cyber Physical Systems,	* M.E./M.Tech. or equivalent Degree in Computer Science and Engineering or Electrical Communication Engineering or Electrical Engineering or Information Technology or Information Sciences or allied disciplines in the relevant branch of Engineering and Technology • A minimum of 55% of marks/CGPA of 5.5 on a 10 point scale in Master's degree in Engineering/Technology. In case of SC/ST candidates, 50% marks or CGPA of 5.0 on a 10 point scale in the respective Master's degree.

						Embedded System, Computer Security, Cloud and Distributed Computing	
491	QIP0045	Bannari Amman Institute of Technology, Erode	Ph.D Engineering	Biotechnology	DN000935	Life Sciences:- Molecular Biology and Genetic Engineering, Plant Biotechnology, Animal Biotechnology, Molecular Diagnostics, Herbal Medicine, Pharmacology, Bio fertilizers, Microbial Fuel Cell, Pharmaceutical Microbiology Technology and Engineering:- Biopharmaceutical Technology, Pharmaceutical Biotechnology, Bioprocess Engineering, Microbial Biotechnology, Tissue Engineering, Regenerative Medicine, Biomaterials, Chemical Reactor Design, Environmental Biotechnology, Nanobiotechnology	* M.Sc./M.Phil/M.E./M.Tech. or equivalent Degree in Biotechnology or Environmental engineering or Biomedical Engineering or allied disciplines in the relevant branch of Engineering and Technology * A minimum of 55% of marks/CGPA of 5.5 on a 10 point scale in Master's degree in Engineering/Technology. In case of SC/ST candidates, 50% marks or CGPA of 5.0 on a 10 point scale in the respective Master's degree.

492	QIP0045	Bannari Amman Institute of Technology, Erode	Ph.D Engineering	Electronics & Communication Engineering	DN000936	Electronics System Design:- VLSI system Design, Embedded System Design, Medical Electronics, Robotics, Device modelling, Semiconductor Memories, Nano Electronics, Display Devices Communication Systems:- Wireless Communication Systems, Communication Signal Processing, Wireless Networks, Smart Antenna Design, RF System Design, Computer Communication, Wireless Sensor Networks, Internet of Things, Mobile Computing, AdHoc Networks, Human-Machine Interactions Intelligent Systems : - Artificial Intelligence, Pattern Recognition, Machine Learning, Computer Algorithms & Optimization Techniques, Soft Computing, Software Defined Radio, Cognitive Radio, Deep Learning, Image Processing, Computer Vision and Graphics	• M.E./M.Tech. or equivalent Degree in Electronics and Communication Engineering ,Computer Science and Engineering or Electrical and Electronics Engineering or Electrical Engineering or Information Technology or Information Sciences or allied disciplines in the relevant branch of Engineering and Technology • A minimum of 55% of marks/CGPA of 5.5 on a 10 point scale in Master's degree in Engineering/Technology. In case of SC/ST candidates, 50% marks or CGPA of 5.0 on a 10 point scale in the respective Master's degree.
493	QIP0046	Anna University (Centre For Research), Chennai	Ph.D Engineering	Computer Science & Engineering	DN000937	B.E - Computer Science and Engineering M.E - Computer Science and Engineering	M.E - Computer Science and Engineering

494	QIP0047	University of Hyderabad, Hyderabad	Ph.D Engineering	Computer & Information Science	DN000710	Pattern Recognition, Machine Learning, Data Mining, Image Processing, Computer Vision, Natural Language Engineering, Speech Processing, Neural Networks, Grid and Cloud Computing, Distributed Computing, IoT, Software Engineering, Computer Networks, Computer Forensics, Cryptography, Information Security, Systems Security, Combinatorial Optimization, Social Networks, Graph Algorithms, Bioinformatics, Rough Computing, Pervasive Computing, Simulation and Modeling	First Class Master's Degree in Engineering/Technology or equivalent in Computer Science
495	QIP0048	RAJIV GANDHI INSTITUTE OF PETROLEUM TECHNOLOGY	Ph.D Engineering	Petroleum Engineering	DN001116	Enhanced oil recovery, Drilling fluids, Gas hydrates, Source rock evaluation, Reservoir simulation, Flow assurance, Petroleum geomechanics, Unconventional hydrocarbon resources, Production operations, CO2 Sequestration, AI/ML applications	1. Applicants with Master'S degree in engineering in the discipline concerned or in an allied discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0 point scale) at the Master'S degree level. 2. Applicants with Bachelor's degree in engineering in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0 point scale) at the Bachelor's degree level. Applicant with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on 10 point scale) at Bachelor degree provided the degree is from an Institution funded by the Central Government.

496	QIP0048	RAJIV GANDHI INSTITUTE OF PETROLEUM TECHNOLOGY	Ph.D Engineering	Chemical Engineering	DN001117	Biofuels, Biomass to Hydrogen, Heterogeneous catalysis, Catalytic isomerization, Process modeling, Design, Simulation and control, Design controllability interaction in integrated chemical systems, Corrosion failure, Corrosion inhibition, Phase transformations in polymers and soft matter, Interfacial rheology of oil-water interface, Process intensification, Microfluidics, Multiphase flow, Rare earth metal extraction, Computational modeling of catalytic processes, CO2 capture, Adsorption, Electrochemical systems, Flow battery, Water splitting, Photo catalysis, Polymer-ceramic composites. Polymers, Oxides, Nanoparticles for energy, Photo voltaics, Photocatalysis, Modelling & Simulation of material structures and processes	Applicants with Master'S degree in engineering in the discipline concerned or in an allied discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0 point scale) at the Master'S degree level. Applicants with Bachelor'S degree in engineering in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0 point scale) at the Bachelor'S degree level. Applicant with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on 10 point scale) at Bachelor degree provided the degree is from an Institution funded by the Central Government.
497	QIP0048	RAJIV GANDHI INSTITUTE OF PETROLEUM TECHNOLOGY	Ph.D Engineering	Computer Science & Engineering	DN001118	Applied cryptography, Information security, Post-quantum data protection, IoT security, Cyber security, Network/Communication protection, block chain and decentralized data privacy, Image Processing, Computer Vision, LiDAR, Environmental Applications, Feature Extraction, Modeling, GIS, Data Science, Real-time	Applicants with Master's degree in engineering in the discipline concerned or in an allied discipline/area must have a minimum of 60% marks or 6.0 CPI (on a 10.0 point scale) at the Master's degree level. Applicants with Bachelor's degree in engineering in the discipline concerned or in an allied discipline/area must have a minimum of 75% marks or 7.5 CPI (on a 10.0 point scale) at the Bachelor's degree level. Applicant with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on 10 point scale) at Bachelor degree provided the degree is from an Institution funded by the Central Government.

						scheduling, Operating System, Artificial Intelligence and Machine Learning, Geo-informatics, Remote Sensing.	
498	QIP0049	Indian Institute of Technology (IIT), Chennai	Ph.D Engineering	Aerospace Engineering	DN000779	Code: MDAE01 Helicopter Aerodynamics, Geo-Physical Fluid Dynamics, Subsonic, Transonic, Supersonic, Hypersonic, Shock and Blast Wave Dynamics, Rarefied Gas flows, Boundary Layers and Stability of Flows, Turbulent Flows, Shock Tubes and Related Problems, Development of Algorithms and Code for Numerical Methods in Gas Dynamics and Computational Fluid Dynamics, Vortex Dynamics, Supersonic Mixing and Combustion, Optical Flow Diagnostics, Linear and Nonlinear Acoustics. Non-Linear Dynamics in Aerospace Applications, Computational Methods in Nonlinear Dynamics, Nonlinear Control Theory and Applications, Flight Simulations and Controller Development, Design Development of Autonomous Flying Vehicles.	Master's degree or its equivalent in Aerospace/ Civil/ Applied Mechanics/ Mechanical/ Chemical or Master's degree in Mathematics/ Physics and aptitude for research. Science Post-graduates should have exceptional merit and research or industrial experience in the appropriate field. Candidates with Master's degree in other allied engineering specializations can also be considered provided they have either basic degree in Aerospace Engineering or at least five years experience in Aerospace industry/ Research Organisation.

						Finite Element Methods, Numerical Methods, Composite Structures, Fatigue and Fracture Mechanics, Contact Mechanics, Vibration and Impact Mechanics, Constitutive Modelling. Rocket Propulsion and Solid Propellant Combustion, Airbreathing Propulsion and Combustion, Cascade Flows, Multiphase Flow Simulation, Combustion Instability, Optical Flow/Combustion Diagnostics. (In all cases, there is a good mix of experimental, computational and theoretical work).	

499	QIP0049	Indian Institute of Technology (IIT), Chennai	Ph.D Engineering	Applied Mechanics	DN000786	CODE:MDAM02 Biomechanics, Cardiovascular System studies, Image and Signal Processing, Speech Signal Processing, Biomedical Instrumentation, and Ultrasound and Laser instrumentation in Medicine, Rehabilitation Engineering, Evoked Response and Functional Electrical Stimulation, Physiological Modeling, Biomaterials, Biosensors, Medical Diagnostics, AI/ML and Biomedical Informatics Biomechanics, Cellular biomechanics, Neuromechanics, Neural control of movement, Neuro-rehabilitation, Perception and Virtual Reality. Computational Fluid Dynamics (CFD), Laser Diagnostics for fluids, Turbulent Convection, Bluff body and Industrial Aerodynamics, Cooling Technologies, Turbulence Modeling, Experimental Fluid Mechanics, Sprays and multiphase flows. Micro and Nanoscale Fluid Mechanics and Heat transfer, Rarefied gas Dynamics, Bio-Fluid Mechanics, Cardio-vascular and Pulmonary Fluid Mechanics, Nuclear Thermal Hydraulics, Fluid-Structure Interaction,	Master's degree in Applied Mechanics / Civil / ECE / Mechanical/ Electrical/ Biomedical Engineering/ Computer Science/ Instrumentation/Aerospace / Chemical/Nanotechnology or Nano engineering/ Engineering Mechanics/ Metallurgy and Materials science Engineering/ Production/ Nuclear Engineering and allied branches of Engineering. Master's degree in medicine in MD/MS, MDS with an aptitude for research in the relevant areas mentioned.

						Computational and Experimental studies in fatigue, fracture, smart materials, photoelasticity, plasticity, vibration of structures, linear and nonlinear dynamics, structural control, composites, constitutive modelling and stochastic mechanics, Impact Mechanics, Multiscale and multi-field modelling, Damage mechanics, Mechanics of soft matter	

500	QIP0049	Indian Institute of Technology (IIT), Chennai	Ph.D Engineering	Chemical Engineering	DN000787	CODE:MDCH01 Transport Phenomena, Reaction Engineering, Systems and Control, Environmental Engineering, Energy & Materials, Process Intensification, Molecular Simulations, Thermodynamics	Master's degree in Chemical Engineering

501	QIP0049	Indian Institute of Technology (IIT), Chennai	Ph.D Engineering	Biotechnology	DN000789	CODE: MDBT01 Research Areas The department focuses on a wide array of research topics, reflecting the diversity of modern biotechnology. The thrust areas of Research (M.S. and Ph. D.), are listed here: Research in the Biochemistry and Molecular Biophysics Group Protein Structure-Function Relationships; Structural Enzymology; Structural basis of Enzyme Properties; Protein Engineering; Structure and Mechanism of DNA Replication. GPCR-mediated Signal Transduction; Biophysical Chemistry of Calcium-binding proteins Biophysics; Green Chemistry; Structure-based Drug Design Phospholipid Scramblases; Membrane Biochemistry; Biochemical and Biophysical Characterization of Industrial Enzymes Structure-Function Relationships and Regulation of Ion Channels Protein Folding and Function; Protein-Protein-DNA Binding; Downhill Folding, Molten-Globules and Intrinsically Disordered Proteins; Thermodynamics, Dynamics and Kinetics; Liquid-Liquid Phase Separation; Engineering Protein Stability, Barriers and Rates;	a. Master's degree in any area of Engineering. Candidates with Master's in biotechnology, chemical engineering, computer science and electrical engineering are particularly encouraged to apply. b. Master's degree in any area of Science. Candidates with Master's in any branch of life sciences, chemistry, mathematics and physics are particularly encouraged to apply. Master's in Science must have qualified in GATE or any other national level examinations such as CSIR-JRF, UGC-JRF, DBT-JRF, ICMR-JRF. c. Master's degree in Agricultural Sciences d. Master's degree in Veterinary Sciences e. For Direct Ph.D., B.Tech/B.E/BS (4 year) with a CGPA of 8.0 and above on a 10 point scale or 75% aggregate with valid GATE score is required. GATE requirement is waived if the UG degree is from a Centrally Funded Technical Institute (CFTI) & CGPA >= 8.0.

						Statistical-Mechanical Models; Coarse-Grained and All-Atom Molecular Dynamics Simulations; Multi-Domain Proteins; Allostery; Epistasis; Macromolecular Crowding Enzyme-mediated Biomass Conversion for Biofuel and Functional Oligosaccharides; Bioremediation; Carbohydrate Chemistry Targeted Drug Delivery: Development of Conjugation Strategies for Antibody-Drug and Polymer-Drug Conjugates; Development of New Biosimilar: Identification of Novel Clones for Biosimilars and Improvement of Therapeutic Index of Proteins by Lipidation and Glycosylation; Biophysical Chemistry of modified Nucleic acids. Research in the Biological Science group Electrophysiology, Ion Channel and receptor biology, Calcium signaling Molecular epigenetics, Infection Biology, Malaria Quantitative genetics and systems biology of yeast, Specialized ribosomes in yeast, Gene-gene and gene-environment networks in yeast,. Bio-ethanol production, functional oligosaccharides, Molecular bioremediation Germline stem cells,	

						Caenorhabditie elegans, Gene silencing Vascular biology, Endothelial dysfunction, Atherosclerosis Pancreatic cancer evolution, Cellular plasticity, Metastasis, Chemoresistance, developing preclinical model of pancreatic cancer. Cardiovascular biology, Metabolic syndrome, Neuromodulation, Transgenic mouse models. Cardiovascular genetics, Biomarker discovery, Molecular basis of hypertension, type 2 diabetes, myocardial infarction, chronic kidney disease Molecular mechanisms of pattern formation in the cellular slime mold Dictyostelium, Estimating the types and rates of classes of spontaneous mutations and manipulation of meiotic recombination rates in Arabidopsis Molecular pathogenesis of HIV/AIDS, Cancer biology, Regulation of nucleo-cytoplasmic transport proteins Neuronal communication, Neuropeptides in facilitating neuronal function, Neuronal degeneration, Vision restoration Monoclonal and Polyclonal antibodies, Peptides targeting novel oncogenes, CRISPR/Cas9, Developing pre-clinical models of tumor progression	

						Tuberculosis, Microbiology, Immunology, Host-Pathogen interactions. Research in the Biological Engineering group Bioprocess engineering: Development of biomanufacturing platforms for conversion of lignocellulosic biomass to value added products like ethanol, xylitol, arabitol, biopolymers and 3-hydrosypropionic acid metabolic engineering strategies to improve the yields of industrially important metabolites production of industrially important biocatalysts such as L-asparaginase,esterases, oxidoreductases and caffeine degrading enzymes production of biopharmaceuticals and bioactive compounds from plants alternative food products (synthetic meat) and marine based bioproducts understanding biological systems and its manipulation Biomaterials engineering: Developing novel biomaterials for drug delivery and tissue regeneration Designing bioengineered microenvironments to study physiological and pathological niches	

						Micro/Nanofabrication and 3D bioprinting technologies for the development of functional tissue scaffolds Engineering organoids and microfuidic tissue-on-a-chip platforms for disease modeling Extracellular matrix regulation to control cellular behaviou Biochemical and biophysical stimulation for cells and tissues Research in the Computational Biology group Protein structure and function; Protein stability; Protein interactions; Binding affinity; Transcriptome analysis; Disease-causing mutations; Development of databases and tools Molecular dynamics simulations of proteins and nucleotides; QSAR; Structure-based drug design Computational neuroscience Systems biology; Metabolic engineering Molecular evolution; Comparative genomics; Structural bioinformatics Protein assembly and aggregation; Design of drug delivery mechanisms	

502	QIP0049	Indian Institute of Technology (IIT), Chennai	Ph.D Engineering	Civil Engineering	DN000791	CODE:MDCE01 Building Technology & Construction Management CODE:MDCE02 Environmental and Water Resources Engineering CODE:MDCE03 Geotechnical Engineering CODE:MDCE04 Structural Engineering CODE: MDCE05 Transportation Engineering	CODE:MDCE01 Candidates satisfying any of the following norms: Master's degree in Civil, Ocean or Industrial Engg., Industrial Management MBA after obtaining a basic degree in Civil Engineering, or in Architecture, Master's degree in Housing, Town & Country planning after obtaining a basic degree in Civil Engg., or Architecture with first Class. CODE:MDCE02 M.Tech or M.S. or equivalent degree in Engineering Mechanics/ Aerospace Engineering/ Agricultural Engineering/ Civil Engineering/ Environmental Engineering or M. Tech or M.S. or equivalent degree in Chemical Engineering/ Biotechnology. CODE:MDCE03 Master's degree in Civil or Ocean Engineering or Engineering Mechanics, Mining Engineering. With two years experience. CODE:MDCE04 Master's degree in Civil, Ocean, Aerospace, Naval Architecture, Mechanical, Computer Science or in Engineering Mechanics with basic degree in Civil Engineering or Infrastructural Civil Engineering. CODE: MDCE05 Master's degree in Civil/ Architecture/ Town and Country Planning/ Regional Planning/ City Planning/ Urban Engineering or 2 years full time Postgraduate Diploma in Town and Country Planning with specialization in Traffic and Transportation Planning of the School of Planning and Architecture, New Delhi/ MBA after obtaining a basic degree in Civil Engineering.

503	QIP0049	Indian Institute of Technology (IIT), Chennai	Ph.D Engineering	Computer Science & Engineering	DN000792	CODE:MDCS01 Intelligent Systems and Human Computer Interaction: Artificial Intelligence, Natural Language Processing, Machine Learning, Deep Learning, Reinforcement Learning, Big Data, Computational Brain Research, Computational Biology, Bioinformatics, Data Mining, Ontologies, Human Computer Interaction, Speech Technology, Visualization and Perception, Computer Vision. Systems Engineering: Compilers, Programming Languages, Software Verification, Computer Architecture, VLSI Design, High Performance Computing and Parallelization, Cyber-Physical Systems, Hardware and Network Security, Computer Networks, Distributed Systems, Cloud Computing, Blockchain Technology. Theoretical Computer Science: Design and Analysis of Algorithms, Graph Theory, Computational Complexity Theory, Cryptography and Information Security.	M.Tech/ M.E./ M.S. in Computer Science & Engineering or Information Technology.

504	QIP0049	Indian Institute of Technology (IIT), Chennai	Ph.D Engineering	Electrical Engineering	DN000795	CODE: MDEE01 Communication theory and systems, Wireless Communications (5G and 6G); Internet of Things (IoT) and Cyber Physical Systems (CPS); Networks: Design, Optimization & Control; Speech & Image Processing; Statistical Signal Processing: Estimation, Detection & Learning; Information and Coding Theory CODE: MDEE02 Power Systems, Power Electronics and moor drives, High voltage Engineering, Power quality, renewable energy and microgrid systems CODE: MDEE03 Nano Micro Electronics, MEMS, Organic Electronics, & VLSI Technology, Non-volatile memory, Phase change memory, Resistive random access memory, Neuromorphoic computing CODE: MDEE04 Electronic System Design and Instrumentation: Sensor systems, analog and	CODE: MDEE01 M.E/MTech/MS in Electrical Engineering / Electronics Communications Engineering, with specialization in Communications and Signal Processing. CODE: MDEE02 M.E/MTech/MS in Electrical Engineering, Power systems, Power Electronics, Machines and Electronic Circuits, High voltage Engineering. CODE: MDEE03 M.E/MTech/MS in Electrical Engineering / Electronics Communications Engineering, with specialization in Microelectronics and VLSI. CODE: MDEE04 MTech in Electrical and Electronics Engineering, Electronics and Communication Engineering, Sensor system, Robotics, Biomedical Instrumentation. (EEE, ECE, IN, C&I) CODE: MDEE05 MTech in Electrical and Electronics Engineering, Electronics and Communication Engineering, with specialization in Photonics, Optics and Electromagnetics CODE: MDEE06 MTech in Electronics & Communication Engineering, Electrical & Electronics Engineering, Instrumentation Engineering. (EEE, ECE & IN) CODE: MDEE07

						digital systems, Biomedical instrumentation, IoT applications, Data analytics, Wearable sensors and systems, industrial instrumentation CODE: MDEE05 Photonics Optical communications (optical fibre and free space), optical signal processing, RF and microwave engineering (inverse problems in electromagnetics, breast cancer detection, antenna arrays, remote sensing), quantum technologies (devices, sensing, communications and computing), pulsed and CW fiber lasers, silicon photonics, diffractive and meta optics, complex light, optical sensors and imaging technique. CODE: MDEE06 Integrated Circuits and Systems Analog, mixed-signal, and RF IC design Analysis and simulation of noise in circuits VLSI DSP architectures, Reconfigurable computing Efficient circuit implementations for ML CODE: MDEE07 Control and Optimization	M. Tech in Electronics and Communication Engineering, Electrical, Control (EC, EE, IN)

505	QIP0049	Indian Institute of Technology (IIT), Chennai	Ph.D Engineering	Engineering Design	DN000796	CODE: MDER01 Automotive Engineering: Vehicle Dynamics, Tyre Mechanics, Mathematical Modelling of Dynamic Systems, Control, Fault Diagnosis, Automotive Systems, Automotive Power Electronics and Drives, Intelligent Transportation Systems. Biomedical Design: Medical Imaging, Biomechanical Modeling, Soft Tissue Mechanics, Bio-fluid Mechanics, Prosthetic and Scaffold Design, Biomedical Devices and Control Microwave Applications, Tissue Ablation and Hyperthermia Physics, Radiometry, Ergonomics, Rehabilitation Engineering, Bio-MEMS/NEMS, Biomedical Micro/Nano devices. Materials and Design: Geometric and Solid Modeling, Computational Geometry, Shape Search, Shape Optimization, Machine / Deep Learning in geometry processing, Image Based Reconstruction, Solid Free Form Fabrication, Design Theory, Reliability, Fatigue and Fracture, Finite Element Analysis, Impact mechanics, Material Characterization, Design with Smart Materials, Sustainable Manufacturing, Additive manufacturing, Frugal Engineering, Frugal Manufacturing.	CODE: MDER01 Master's degree in Aerospace, Automobile, Biomedical, Chemical Engineering, Civil, Computer Science, Electrical, Electronics, Engineering Physics, Instrumentation, Mechanical, Metallurgical, Material Science, Naval Architecture, Production / Manufacturing Engineering, or Master's degree in Design (Engineering) (M.Des.) or M.Tech. (Industrial Mathematics)

						Robotics and Mechatronics: Parallel Manipulators, Underwater Robots, Medical Robotics, Exoskeletons, Rehabilitation robotics, Path Planning, System Dynamics and Control, Opto-mechatronics, Sensing.	

506	QIP0049	Indian Institute of Technology (IIT), Chennai	Ph.D Humanities	Humanities and Social Science	DN000797	CODE: MDHS01 Economics: Development Economics, Energy and Environmental Economics; Applied Econometrics; Industrial Economics; Microfinance; International Trade; Economics of Innovation and Technological Change; Health Care Economics and Public Policy; Financial Economics and Banking; Economics of Education/Labour Markets; Urban Water Management. Education and Technology Studies: Theories of Learning; Information and Communication Technologies (ICTs) in Higher Education; Engineering Education; Engineering Ethics; Assessment and Evaluation in Higher Education; Quality Assurance. History: Modern Indian History, History of Science, Technology and Medicine (since 1700s). Linguistics: Language in Education; Sociolinguistics; Applied Linguistics; syntax/Morphology; Linguistic Typology. Literature and Media Studies: American Literature; English Literature; Hindi Literature; Eco-criticism; (American/British); Disabilty Studies; Film and Media Studies; Popular Culture; Life writing.	CODE: MDHS01 Master's degree in relevant discipline.

						Philosophy: Phenomenology; Hermeneutics; Philosophies of Heidegger and Wittgenstein; Indian Philosophy; Philosophy of Mind; Consciousness; Analytical Philosophy; Philosophy of Language; Political Philosophy; Ethics; Professional Ethics; Engineering and Higher Education; Bioethics. Politics & International Relations / Political Science: International Relations Theory; International Political Economy; Taiwan Studies; Chinese Studies; Democracy Theory and Practice. Sociology/ Anthropology: Sociology of Religion; Islam; Sociology of Work and Gender; Anthropology of body; Anthropology of Technology; Gender Studies; Disability studies; Sociology of Science.	

507	QIP0049	Indian Institute of Technology (IIT), Chennai	Ph.D Engineering	Management Studies	DN000798	CODE: MDMS01 Finance: Corporate Finance: Financial Decision Making; Family Business Management; Financial Modelling & Forecasting; Banking and Risk Management. Financial Markets: Capital Market; Bond Market; Commodity Market; Derivative Market; Market Microstructure. Venture Capital and Private Equity; Small and Medium Enterprises; Real Options; Developmental Finance; Development Studies; Infrastructure Finance; Public Sector Finance; Behavioural Finance. Marketing: Salesperson Performance; Branding in emerging economies; Corporate identity; B2B Marketing; Customer Relationships and Communities; Marketing Measures; Entrepreneurial Marketing; Food Marketing. Big Data-Driven Consumer Analytics Social Media Marketing Marketing Engineering and Analytics, Gamification in marketing; Human engagement with AI powered devices; Consumer behaviour online & offline - Perception, Motivation,	CODE: MDMS01 Master's or Post graduate degree in Sciences/ Social Sciences/ Humanities/ Commerce/ Engineering/ Technology/ Management with a good academic record. A Research Proposal should also be submitted along with the Application

						Intention, etc. Consumption communities; Luxury and Environmentally Responsible Consumption; Developing Psychometric measures/scales. Information Systems: Preference Elicitation; Electronic Negotiation Tactics; Electronic Shopping Agents; Analytics in Cloud Computing; Smart Phones and Healthcare Web Personalization; Information Privacy; IT Usage; Adoption; Business Value; IT Services; Cloud and Emerging Business Models; eGovernment Systems; Social Network Mining; Recommender Systems; Mobile App Analytics; Econometric Modeling. HR and OB: Organizational Behaviour; Positive Organizational Behaviour; Leadership and Organization Development (L&OD); Cognition; Spontaneous Mental States and Goal Directed Behaviour Across Contexts; Behaviourism - Combining Elements of Philosophy, Methodology, and Psychological Theory; Employee Voice and Silence; Workforce Diversity and Inclusion; Judgement and Decision making; Human Comfort Studies; Social Neuroscience; Human Resource	

						Management; Training & Development; HR Audit; Workplace Teams; Work-Life Balance; Family-Friendly HR Policies and Practices; Employee Wellbeing; Women in Management and Entrepreneurship; Employer Branding; Corporate Sustainability and CSR; Technology and Human Interface; Knowledge Sharing / Hiding Behavior; Workplace Emotions; Ancient Indian Wisdom in Management; Creativity & Innovation; Cross-Cultural Research; Integral Education; Teaching-Learning Practices. Operations: Supply Chain and Logistics; Green Concerns; Healthcare and Food Sectors; Game Theoretic Models; Pricing and Revenue Management; Scheduling in Manufacturing and Service Operations; Integrated Production; Logistics and Inventory Optimization in Supply Chain Management; Behavioural Decision Theory. Integrative Management: Strategy and Policy Studies; Technology Management; Business Model Innovation; Entrepreneurship	

508	QIP0049	Indian Institute of Technology (IIT), Chennai	Ph.D Science	Mathematics	DN000799	CODE: MDMA01 Detailed information about the specialization of each faculty member is available in the Department web site.Mat.iitm.ac.in Algebra: Commutative Algebra, Algebraic Combinatorics, Geometry and Topology of Toric Varieties, Group Theory, , Fuzzy Algebra, Linear Algebra, Algebraic Geometry, Applications of Algebra Analysis: Functional Analysis, Numerical Analysis, Complex Analysis, Functional Spaces, Special Functions, Operator Equations, Inverse and III-posed Problems, Harmonic Analysis, Wavelets, Mathematical Programming, Game Theory, Conformal Geometry, Fixed Point Theory and Applications, Fuzzy Set Theory and Analysis, Functional Equations, Summability Theory, Spectral Approximation, Non-smooth Analysis, Optimization Theory, Sampling Theory, Approximation Theory, Control Theory,. Applied Mathematics: Numerical PDE, Convective Heat and Mass Transfer, Computational Fluid Dynamics, Ship Hydrodynamics, Mathematical Problems related	CODE: MDMA01 Master's Degree in Mathematics

						Naval Architecture and Ocean Engineering, Mathematical Modeling, Non - linear Differential Equations. Fluid Mechanics, Bio-Fluid Mechanics, Integral and Differential Equations, Water Waves. Applied Probability and Stochastic Process: Applied Probability and Stochastic Processes, Operations Research, Stochastic Models, Mathematical Ecology. Theoretical Computer Science and Discrete Mathematics: Theoretical Computer Science, Graph Theory, Combinatorics, DNA Computing, Theory of Codes, Combinatorial Optimization, Discrete Mathematics, Formal Language, Automata Theory, Modular Computing, Approximation Algorithms.	

509	QIP0049	Indian Institute of Technology (IIT), Chennai	Ph.D Engineering	Metallurgical & Materials Engineering	DN000801	CODE: MDMM01 Metal casting, Metal forming, Metal joining, Materials Technology, Physical and Structural Metallurgy, Mechanical Metallurgy, Chemical Metallurgy, Thermodynamics of Metallurgical Systems, Powder Metallurgy, Ceramics and Composites, Corrosion, Surface Engineering, Biomaterials, Simulation and Modeling of Materials Processing, Nanostructured Materials, Magnetic Materials, Amorphous Alloys, Nonequilibrium Processing, Hydrogen Storage Materials, Smart Materials, Fuel Cells, Metallic Foams, Chemical Sensors, Carbon Nanotubes, Special Steels, Superalloys, Intermetallics, Materials for Optoelectronic Applications, Shape Memory Alloys, Fatigue and Fracture Mechanics, High Temperature Behaviour of Materials and Creep.	CODE: MDMM01 Master's degree in appropriate branch of Engineering/ Technology. Engineering graduates (B.Tech/BE or equivalent) and Science postgraduates (M.Sc. or equivalent) to be considered should have exceptional merit and research or industrial experience in the appropriate field.

510	QIP0049	Indian Institute of Technology (IIT), Chennai	Ph.D Engineering	Mechanical Engineering	DN000802	CODE: MDME01 i) Design Engineering: Machine Elements ~ design development, analysis and performance improvements, New materials and design, composites, nano composites, bio materials, porous materials, radiation damage, surface engineering, design process, contact mechanics, tribology, tyre mechanics, biomechanics, fatigue and failure analysis, computational and experimental fracture mechanics, fatigue crack closure – environment interaction studies, alternate small specimen test methods, small crack propagation under biaxial multiaxial loading, multi crack interaction studies, fatigue damage in composites, failure mechanics of biomaterials. Non linear finite element analysis, Vibration and Control, Multi-body Dynamics and Applications, finite element analysis including coupled problems, Non destructive evaluation, structural health monitoring, Materials Characterization, Measurements of Material Properties and Behavior, machinery signal processing, Condition monitoring of structures machines, machinery diagnosis, and combustion flame noise, Acoustics and Noise Control,	CODE: MDME01 Master's degree in Mechanical Engineering, Aerospace Engineering, Automobile Engineering, Automotive Engine Tech., Biomedical Engineering, Chemical Engineering, Computer Science, Electrical Engineering, Electronics, Energy Engineering, Industrial Engineering, Instrumentation, Maintenance Management, Metallurgical Engineering, Production/ Manufacturing Engineering, Agricultural Engineering and in related areas depending on the research topics.

						Prosthetics and human body movement, Design optimization, constitutive modeling, MEMS, Rotor Dynamics. (ii) Manufacturing Engineering: Manufacturing Processes, Technologies, CAD/CAM, Manufacturing Planning and Control, Metrology and Computer Aided Inspection, Quality Control, Materials behaviour in Manufacturing, Surface Treatment, Machining Process, Condition Monitoring, Additive Manufacturing, Flexible Manufacturing Systems, Computer Integrated Manufacturing, Non Traditional Machining; Precision Gearing, Micro manufacturing, Friction Stir Welding Manufacturing Methods in Precision Engineering, Surface Technology, Microprocessor Based System Design, Electrohydraulic Servo and Proportional Controls, Pneumatic Systems, Robot-Kinematics, Dynamics, Design and Controls, System Simulation, Micro hydraulics, Mechatronics, Microactuators, MEMS (iii) Thermal Engineering: Micro-miniature and small cryogenic refrigerators, Simulation and optimization of air separation cycles, Heat Transfer in Nano-fluids, Heat Transfer in Multi-Phase Flows, Flow Structure Interaction in High Speed	

						Turbomachinery Seals, Heat Transfer Experiments in Phase Change Material Based Composite Heat Sinks, Two Phase Flow Convection Experiments and Numerical Methods in Porous Media, Solid State Hydrogen Storage, Sorption heating and cooling systems, Desiccant/evaporative cooling and air-conditioning, Conjugate heat transfer in low and high speed flows, Retrieval of geophysical parameters in the atmosphere in the microwave and infrared regions, Turbine rotor stator interaction, Performance improvement of centrifugal compressor by tip modification, subsonic cascade studies, Contra rotating turbines/compressors, Mixed flow compressors, Turbine blade cooling, Secondary loss reduction, Cavitation in hydraulic machines, Micro-scale Flows, Microfluidics, Free Surface flows, Acoustics of Supersonic Jets, Active and Passive Control of High speed flows, Combustion noise, Emissions, Combustion, Propulsion, CFD high speed reacting flows, I.C Engine Combustion and Emissions, alternative fuels, CFD applications in I.C Engines and Gas turbine combustion chambers, fluid flow, heat transfer and combustion related	

						to I.C Engines, advanced I.C Engine technologies such as homogeneous charge, compression ignition, gasoline direct injection, engine management (Simulation of engine processes and modeling – Combustion diagnostics in engines Heat Transfer in Fuel Cells, Fluidized Bed Combustion, Solar Power Systems, Optimization of Solar Ics Systems, Nano fluidics, Battery thermal management systems and Fuel Cells	

511	QIP0049	Indian Institute of Technology (IIT), Chennai	Ph.D Engineering	Ocean Engineering	DN000803	CODE: MDOE01 Ocean engineering : Wave-structure interaction, Soil-structure interaction, Hydrodynamics of fixed, floating and compliant offshore structures, Port and harbor structures, Coastal structures, coastal processes and shore protection, Subsea pipelines, risers and cables, Remote sensing and ocean optics, Ocean renewable energy - wind, wave, current and OTEC, Offshore structural engineering,- Ocean and underwater acoustics, and Ocean environment. Marine vehicles : Motion and stabilization, Maneuvering and controllability, Resistance, powering and propulsion systems - Design and surface development, Shipbuilding materials, structure and vibrations, under water vehicles, hydrodynamics and control, under water acoustics – under water towed systems and marine CFD. CODE: MDOE02 Petroleum engineering: Reservoir engineering; Reservoir Simulation; Analysis of seismic data and interpretation, Artificial lift methods, Drilling engineering and drilling fluids, Enhanced oil	CODE: MDOE01 Master's degree with good academic record and exceptional merit in Aerospace Engineering, Civil Engineering, Marine Engineering, Mechanical Engineering, Marine Structures, Naval Architecture, Ocean Engineering Or any other appropriate engineering discipline Or M.Sc. in Physics, Mathematics, Statistics or Oceanography. CODE: MDOE02 Master's degree with good academic record and exceptional merit in Chemical Engineering, Civil Engineering, Marine Engineering, Mechanical Engineering, Marine Structures, Naval Architecture, Ocean Engineering, Petroleum Engineering Or any other appropriate engineering discipline OR M.Sc. in Physics, Mathematics, Statistics, Oceanography, Geology and Geophysics.

						recovery, Flow assurance technologies, Formation evaluation from well logging methods, Gas hydrate studies, Hazards identification and risk management, Petroleum geology and geophysical studies, Flow through shale gas reservoirs, CBM reservoirs, fractured carbonate reservoirs and CO2 sequestration.	

512	QIP0049	Indian Institute of Technology (IIT), Chennai	Ph.D Science	Physics	DN000804	CODE: MDPH01 Applied Optics, Quantum Optics, Photonics and nonlinear optics, Atomic and Molecular Physics, Complex fluids, Soft Condensed Matter and Biological Physics, Low temperature physics and superconductivity, Magnetism and Magnetic materials, Semiconductor Physics, Photovoltaics, Dielectric materials & Microwave Physics, Spintronix Multifunctional materials. Thin film phenomena, Metal-oxide Thin films, Nanostructured thin film and heterostructures, Low Dimensional Materials, Carbon Nanotubes and Graphene, Hydrogen Storage Materials, Statistical Physics and Quantum Field Theory, String theory, electronic structure and Computational Material Science, Nonlinear Dynamics and Complex systems, Quantum Chaos, Quantum information and computation,, Experimental High Energy Physics, Gravity and Cosmology. Nuclear many-body theory, condensed matter theory.	CODE: MDPH01 M.Sc/ M.Sc (Tech) in Physics, Applied Physics, Materials Science/ M.Tech (Solid State Technology) / M.Tech. (Materials Science) M.Tech (Functional Materials and Nano Technology)or equivalent.
513	QIP0049	Indian Institute of Technology (IIT), Chennai	M.Tech	Aerospace Engineering	DN000902	CODE: MDAE01 Aerodynamics, Propulsion, Structures	Aerospace Engineering, Automobile Engg., Chemical Engg., Civil Engg., Computer Science & Engineering, Electronics & Communication Engg., Electrical & Electronics Engineering, Energy Engineering, Instrumentation, Mechanical

							Engineering, Manufacturing Engineering, Metallurgical Engineering, Naval Architecture, Production Engineering.
514	QIP0049	Indian Institute of Technology (IIT), Chennai	M.Tech	Applied Mechanics	DN000904	CODE: MDAM01 Computational and Experimental Mechanics CODE: MDAM02 Biomedical Engineering	CODE: MDAM01 The candidate should possess the following degree in B.E./B.Tech or equivalent, Aerospace Engineering, Chemical Engineering, Civil Engineering, Energy Engineering, Mechanical Engineering, Metallurgical Engineering, Naval Architecture. CODE: MDAM02 The candidate should possess the following degree in B.E./B.Tech or equivalent Biomedical Engineering, Electrical and Electronics Engineering, ECE, Civil, Mechanical, E&I Engineering, Computer Science Engineering / Computer Science.
515	QIP0049	Indian Institute of Technology (IIT), Chennai	M.Tech	Chemical Engineering	DN000905	CODE: MDCH01 Transport and Reaction Engineering, Systems and Control, Biochemical Engineering, Environmental Engineering, Materials and processes.	B.E./B.Tech or equivalent degree in Chemical Engineering, Biochemical Engineering, or Environmental Engineering.
516	QIP0049	Indian Institute of Technology (IIT), Chennai	M.Tech	Civil Engineering	DN000908	CODE : MDCE01 Building Technology & Construction Management CODE : MDCE02 Environmental Engineering CODE : MDCE03 Geotechnical Engineering CODE : MDCE04 Hydraulic & Water Resources Engineering. CODE : MDCE05 Structural Engineering	CODE : MDCE01 Architecture(B.Arch.),Civil Engineering CODE : MDCE02 Agricultural Engineering, Biotechnology, Chemical, Engineering, Environmental & Civil Engineering, M.Sc .in Life science. CODE : MDCE03 Civil Engineering. CODE : MDCE04 Agricultural Engineering, Environmental and Civil Engineering. CODE : MDCE05 Civil Engineering.

						CODE : MDCE06 Transportation Engineering	CODE : MDCE06 Architecture (B.Arch.), Civil Engineering
517	QIP0049	Indian Institute of Technology (IIT), Chennai	M.Tech	Computer Science & Engineering	DN000909	CODE : MDCS01 Computer Science & Engineering	B.E./ B.Tech (CSE, CS, or IT) or MCA with a prev. B.Sc. degree or M.Sc (CS)
518	QIP0049	Indian Institute of Technology (IIT), Chennai	M.Tech	Electrical Engineering	DN000910	CODE : MDEE01 Communications, Networks, Signal processing, Speech & Image Processing Information Theory CODE : MDEE02 Power Systems & Power Electronics CODE : MDEE03 Micro Electronics & VLSI Design CODE : MDEE04 Control and Instrumentation CODE : MDEE05 Microelectronics CODE : MDEE06 Integrated Circuits and Systems	CODE : MDEE01 Electronics & Communication Engineering CODE : MDEE02 Electronics & Communication Engineering, Electrical & Electronics Engineering, Instrumentation Engineering. CODE : MDEE03 Electronics & Communication Engg. CODE : MDEE04 Electrical and Electronics Engineering, Electronics and Communication Engg., Control and Instrumentation Engineering. CODE : MDEE05 B.E/ B.Tech. /M.Sc., in Electrical & Communication Engg./ Instrumentation Engg. / Electrical & Electronics Engineering / Physics who qualify with GATE subject EE/EC/IN/PH. CODE : MDEE06 Electronics & Communication Engineering, Electrical & Electronics Engineering, Instrumentation Engineering.

519	QIP0049	Indian Institute of Technology (IIT), Chennai	M.Tech	Mechanical Engineering	DN000911	CODE : MDME01 Thermal Engineering Stream: (Combustion & Propulsion, Heat Transfer & Thermal Power, I.C. Engines &Gas Turbines, Hydro Turbomachines, Refrigeration & Air Conditioning, Thermal Turbomachines) CODE : MDME02 Design Stream: (Mechanical Design, Composites Technology) CODE : MDME03 Manufacturing Engineering Stream: (Manufacturing and Precision Engineering)	CODE : MDME01 The candidate should posses the following degree in B.E./B.Tech or equivalent in Aeronautical/ Aerospace Engineering, Automobile Engg., Chemical Engineering, Energy Engineering, Mechanical Engineering, Marine Engineering, Petroleum Engineering CODE : MDME02 The candidate should posses the following degree in B.E./B.Tech or equivalent in Aeronautical/ Aerospace Engineering, Automobile Engg., Mechanical Engineering CODE : MDME03 The candidate should posses the following degree in B.E./B.Tech or equivalent in Aerospace Engineering, Automobile Engineering, Computer Science &Engineering, Electronics & Communication Engineering, Electrical &Electronics Engineering, Industrial Engineering, Instrumentation, Mechanical Engg, Manufacturing Engg., Machine Tool Engineering, Naval Architecture, Production & Industrial Engineering, Production Engineering
520	QIP0049	Indian Institute of Technology (IIT), Chennai	M.Tech	Metallurgical & Materials Engineering	DN000912	CODE : MDMM01 Metallurgical & Materials Engineering	BE/ B.Tech or equivalent in Biotechnology, Chemical Engineering, Manufacturing Engineering, Materials Technology, Mechanical Engineering, Metallurgical Engineering, Nanotechnology, Production Engineering or other appropriate branch of Engineering/Technology. Science postgraduates (M.Sc. or equivalent) in Physics, Chemistry, Materials Science, Nanoscience, Nanotechnology or other appropriate branch of Science with exceptional merit and research or industrial experience may be considered.
521	QIP0049	Indian Institute of Technology (IIT), Chennai	M.Tech	Ocean Engineering	DN000913	CODE : MDOE01 Ocean Engineering CODE : MDOE02 Petroleum Engineering	CODE : MDOE01 Civil Engineering, Naval Architecture, Mechanical Engineering, Marine Engineering, Aerospace Engineering OR M. Sc. in Oceanography CODE : MDOE02 Chemical Engineering, Civil Engineering, Marine Engineering, Mechanical Engineering ,Naval Architecture, Petroleum Engineering Or any other appropriate engineering discipline OR M.Sc in Physics, Mathematics, Statistics Oceanography, Geology and Geophysics

522	QIP0049	Indian Institute of Technology (IIT), Chennai	M.Tech	Mathematics	DN000917	CODE : MDMA01 Industrial Mathematics and Scientific Computing	M.Sc. in Mathematics or Physics or BE/ B.Tech or equivalent in Aerospace Engineering, Chemical Engineering, Civil Engineering, Computer Science & Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering, Mechanical Engineering, Metallurgical Engineering, Naval Architecture.
523	QIP0049	Indian Institute of Technology (IIT), Chennai	M.Tech	Physics	DN000918	CODE : MDPH01 Functional Materials & Nanotechnology	M.Sc. Physics/ Applied Physics, M.Sc. Material Science, Electronics and Communications Engineering, Electrical and Electronics Engineering, Metallurgical and Materials Engineering.
524	QIP0050	Rajiv Gandhi Institute of Technology (RGIT), Govt. Engineering College	Ph.D Engineering	Civil Engineering	DN000480	Traffic Engineering, Traffic Modelling, Pavement Engineering, Groundwater Quality Modelling, Climate Modelling, Computational Hydraulics, Drug Delivery, Air Quality Modelling, Computational Fluid Dynamics, Wastewater treatment, Solid waste management, Seismic Analysis and Design, Fatigue Analysis, Fire-resistant design, Concrete durability, Corrosion of reinforcement in RC systems, White topping, Structural Engineering, Structural stability, Building systems	Master's Degree in Engineering/Technology, Architecture, or a Master's Degree by research in Engineering/Technology with a minimum CGPA of 6.5 . Scheduled Caste / Scheduled Tribe / Other Backward Community (Non-Creamy Layers) /Differently-abled category candidates (with more than 40% disability) are eligible for admission with a minimum CGPA of 5.5.
525	QIP0050	Rajiv Gandhi Institute of Technology (RGIT), Govt. Engineering College	Ph.D Engineering	Electrical & Electronics Engineering	DN000481	Power and Renewable Energy System, Industrial Drives, Control Engineering., Digital Signal Processing, Real-time Systems	Master's Degree in Engineering/Technology, Architecture or a Master's Degree by research in Engineering/Technology with a minimum CGPA of 6.5 are eligible for admission to the Ph. D. program. Scheduled Caste / Scheduled Tribe / Other Backward Community (Non-Creamy Layers) / Differently-abled category candidates (with more than 40% disability) are eligible for admission with a minimum CGPA of 5.5

526	QIP0050	Rajiv Gandhi Institute of Technology (RGIT), Govt. Engineering College	Ph.D Engineering	Mechanical Engineering	DN000482	Ergonomics,Safety, Industrial Engineering, Career Development, Heat Transfer, Fluid Mechanics, Computational Fluid Dynamics Experimental techniques, Numerical simulations using commercial software (CFX, FLUENT, HYPERMESH), Design, vibration, Structural Dynamics,Finite Element Methods, Optimization Methods, Energy Harvesting, Advanced Manufacturing, Inverse Problems,Management,Production planning control	Master's Degree in Engineering/Technology, Architecture or a Master's Degree by research in Engineering/Technology with a minimum CGPA of 6.5 are eligible for admission to the Ph. D.program. Scheduled Caste / Scheduled Tribe / Other Backward Community (Non-Creamy Layers) / Differently-abled category candidates (with more than 40% disability) are eligible for admission with a minimum CGPA of 5.5
527	QIP0050	Rajiv Gandhi Institute of Technology (RGIT), Govt. Engineering College	Ph.D Engineering	Electronics & Communication Engineering	DN000483	Speech Processing Image Processing Machine Learning Machine learning application in tele-communication Channel Equalization Compressive sensing/machine learning application in image/signal processing Filter Banks and Multirate systems Optimization Techniques Wireless Communication	Master's Degree in Engineering/Technology, Architecture or a Master's Degree by research in Engineering/Technology with a minimum CGPA of 6.5 are eligible for admission to the Ph. D. program. Scheduled Caste / Scheduled Tribe / Other Backward Community (Non-Creamy Layers) / Differently-abled category candidates (with more than 40% disability) are eligible for admission with a minimum CGPA of 5.5
528	QIP0050	Rajiv Gandhi Institute of Technology (RGIT), Govt. Engineering College	Ph.D Engineering	Computer Science & Engineering	DN000484	Data Mining, Text Mining, Information Retrieval, Machine Learning, Big Data Processing	Master's Degree in Engineering/Technology, Architecture or a Master's Degree by research in Engineering/Technology with a minimum CGPA of 6.5. Scheduled Caste / Scheduled Tribe / Other Backward Community (Non-Creamy Layers) /Differently-abled category candidates (with more than 40% disability) are eligible for admission with a minimum CGPA of 5.5

529	QIP0050	Rajiv Gandhi Institute of Technology (RGIT), Govt. Engineering College	M.Tech	Civil Engineering	DN000485	1. Transportation Engineering 2. Structural Engg. & Construction Management	The candidate shall be an Indian National. The candidate should have B.Tech. Degree in the appropriate branch of APJ Abdul Kalam Technological University, Kerala or bachelor's degree in Engineering from another University approved by AICTE/UGC approved Deemed Universities in India and recognized to be eligible for higher studies by APJAKTU. In case of candidates who have an Under Graduate Degree in Engineering from foreign universities, an eligibility certificate from APJ Abdul Kalam Technological University is to be produced. The candidate should have a minimum CGPA of 6.0 in a 10 point scale in the Engineering Degree Examination. For SEBC (OBC) students, the minimum CGPA requirement is 5.5 in a 10 point scale. If the credit system is/was not followed, he/she should have a minimum of 60% aggregate marks (For SEBC /OBC students, a minimum of 55% aggregate marks in the Engineering Degree examination is mandatory). For SC/ST candidates a pass in the Engineering Degree Programme is sufficient.
530	QIP0050	Rajiv Gandhi Institute of Technology (RGIT), Govt. Engineering College	M.Tech	Electrical & Electronics Engineering	DN000486	1. Power Systems & Renewable Energy, 2. Industrial Drives & Control	The candidate shall be an Indian National. The candidate should have B.Tech. Degree in the appropriate branch of APJ Abdul Kalam Technological University, Kerala or bachelor's degree in Engineering from another University approved by AICTE/UGC approved Deemed Universities in India and recognized to be eligible for higher studies by APJAKTU. In case of candidates who have an Under Graduate Degree in Engineering from foreign universities, an eligibility certificate from APJ Abdul Kalam Technological University is to be produced. The candidate should have a minimum CGPA of 6.0 in a 10 point scale in the Engineering Degree Examination. For SEBC (OBC) students, the minimum CGPA requirement is 5.5 in a 10 point scale. If the credit system is/was not followed, he/she should have a minimum of 60% aggregate marks (For SEBC /OBC students, a minimum of 55% aggregate marks in the Engineering Degree examination is mandatory). For SC/ST candidates a pass in the Engineering Degree Programme is sufficient.

531	QIP0050	Rajiv Gandhi Institute of Technology (RGIT), Govt. Engineering College	M.Tech	Mechanical Engineering	DN000487	1. Industrial Engg. & Management. 2. Engineering Design	The candidate shall be an Indian National. The candidate should have B.Tech. Degree in the appropriate branch of APJ Abdul Kalam Technological University, Kerala or bachelor's degree in Engineering from another University approved by AICTE/UGC approved Deemed Universities in India and recognized to be eligible for higher studies by APJAKTU. In case of candidates who have an Under Graduate Degree in Engineering from foreign universities, an eligibility certificate from APJ Abdul Kalam Technological University is to be produced. The candidate should have a minimum CGPA of 6.0 in a 10 point scale in the Engineering Degree Examination. For SEBC (OBC) students, the minimum CGPA requirement is 5.5 in a 10 point scale. If the credit system is/was not followed, he/she should have a minimum of 60% aggregate marks (For SEBC /OBC students, a minimum of 55% aggregate marks in the Engineering Degree examination is mandatory). For SC/ST candidates a pass in the Engineering Degree Programme is sufficient.
532	QIP0050	Rajiv Gandhi Institute of Technology (RGIT), Govt. Engineering College	M.Tech	Electronics & Communication Engineering	DN000488	1. Advanced Communication and Information System. 2. Advanced Electronics and Communication	The candidate shall be an Indian National. The candidate should have B.Tech. Degree in the appropriate branch of APJ Abdul Kalam Technological University, Kerala or bachelor's degree in Engineering from another University approved by AICTE/UGC approved Deemed Universities in India and recognized to be eligible for higher studies by APJAKTU. In case of candidates who have an Under Graduate Degree in Engineering from foreign universities, an eligibility certificate from APJ Abdul Kalam Technological University is to be produced. The candidate should have a minimum CGPA of 6.0 in a 10 point scale in the Engineering Degree Examination. For SEBC (OBC) students, the minimum CGPA requirement is 5.5 in a 10 point scale. If the credit system is/was not followed, he/she should have a minimum of 60% aggregate marks (For SEBC /OBC students, a minimum of 55% aggregate marks in the Engineering Degree examination is mandatory). For SC/ST candidates a pass in the Engineering Degree Programme is sufficient.

533	QIP0050	Rajiv Gandhi Institute of Technology (RGIT), Govt. Engineering College	M.Tech	Computer Science & Engineering	DN000489	1. Computer Science and Engineering	The candidate shall be an Indian National. The candidate should have B.Tech. Degree in the appropriate branch of APJ Abdul Kalam Technological University, Kerala or bachelor's degree in Engineering from another University approved by AICTE/UGC approved Deemed Universities in India and recognized to be eligible for higher studies by APJAKTU. In case of candidates who have an Under Graduate Degree in Engineering from foreign universities, an eligibility certificate from APJ Abdul Kalam Technological University is to be produced. The candidate should have a minimum CGPA of 6.0 in a 10 point scale in the Engineering Degree Examination. For SEBC (OBC) students, the minimum CGPA requirement is 5.5 in a 10 point scale. If the credit system is/was not followed, he/she should have a minimum of 60% aggregate marks (For SEBC /OBC students, a minimum of 55% aggregate marks in the Engineering Degree examination is mandatory). For SC/ST candidates a pass in the Engineering Degree Programme is sufficient.
534	QIP0050	Rajiv Gandhi Institute of Technology (RGIT), Govt. Engineering College	Ph.D Engineering	Architecture and Planning	DN000537	Architecture, Sustainable Architecture, Urban Planning	Master's Degree in Engineering/Technology, Architecture, or a Master's Degree by research in Engineering/Technology with a minimum CGPA of 6.5 . Scheduled Caste / Scheduled Tribe / Other Backward Community (Non-Creamy Layers) /Differently-abled category candidates (with more than 40% disability) are eligible for admission with a minimum CGPA of 5.5.
535	QIP0051	Government College of Engineering, Salem	Ph.D Engineering	Civil Engineering	DN000306	Structural Engineering	M.E./M.Tech. in Civil Engg / Structural Engg
536	QIP0051	Government College of Engineering, Salem	Ph.D Engineering	Mechanical Engineering	DN000307	Mobile Robotics, Nano Coating/Nano Fluids, Composite Material Characterization, Alternate Refrigerants, Engine Research with Biofuels, Micro Machining, Design/Thermal Engineering	ME/M.Tech. or M.S.(by Research) in the relevant branch of Engineering

537	QIP0051	Government College of Engineering, Salem	Ph.D Engineering	Electrical Engineering	DN000308	Electrical and Electronics Engineering, power systems Engineering, Power Electronics and Drives, Embedded System Technologies. Renewable energy Systems.	ME/M.Tech. or M.S.(by Research) in the relevant branch of Engineering
538	QIP0051	Government College of Engineering, Salem	Ph.D Engineering	Electronics & Communication Engineering	DN000311	Communication Systems, Wireless networks, Digital image processing, Bio medical Electronics ,Embedded systems	ME/M.Tech. or M.S.(by Research) in the relevant branch of Engineering
539	QIP0051	Government College of Engineering, Salem	Ph.D Engineering	Computer Science & Engineering	DN000312	Computer Science Engineering, Machine Learning, Data Mining, Image Processing, Data Science, Artificial Engineering	ME/M.Tech. or M.S.(by Research) in the relevant branch of Engineering
540	QIP0051	Government College of Engineering, Salem	Ph.D Science	Physics	DN000314	Molecular Spectroscopy and Binary Liquid mixture, Nanoscience and Nanotechnology, Crystallography, Semiconductor Devices, Thin Film, Dielectrics, Magnetism	M.Sc. or M.S. (By Research) or equivalent degree in Physics.
541	QIP0051	Government College of Engineering, Salem	Ph.D Science	Chemistry	DN000315	Schiff base complexes corrosion, Environment, Corrosion, Organic chemistry, medicinal chemistry, Adsorption Physical Chemistry, Bio Sciences, Nanoscience and Nano technology, Bioinformatics.	M.Sc. or M.S. (By Research) or equivalent degree in Chemistry
542	QIP0051	Government College of Engineering, Salem	Ph.D Engineering	Metallurgical Engineering	DN000345	Welding Technology	ME/M.Tech. in the relevant branch of Engineering

543	QIP0057	Jadavpur University	Ph.D Engineering	Production Engineering	DN000814	Production Technology: Machine tools and Metal cutting, Non-tradition machining, Advanced material machining, CAD/CAM, Robotics, Tribology, Computer integrated manufacturing, Flexible automation, Precision engineering, Micro machining, Ergonomics, Designing for production, Manufacturing systems simulation. Production Management: Operations Management, Quantitative Management, Terotechnology, Reliability, Behavioral science, Enterprise resource planning (ERP), Supply chain management (SCM), Quality Engineering, Waste management.	Production Technology: Master's Degree in Production/ Industrial/ Mechanical/ Manufacturing Engineering with at least 60% marks. Production Management: Master's degree in any branch of Engineering/ Technology.

544	QIP0057	Jadavpur University	Ph.D Engineering	Electrical Engineering	DN000815	Control Systems: Control and guidance, Knowledge-base systems, Artificial Intelligence, Software Engineering, Stochastic Processes, Distributed Computer Control Theory, Motion Control and Power Conditioning. Electrical Machines: System Optimization, Optimal Design of Electrical Machines, Synchronous Machines Stability, Electrical Drives, Wind Energy. Electrical Measurements: Digital and Microprocessor-based Instrumentation, Biomedical Instrumentation, Digital Signal Processing, Process Instrumentation, Fiber Optic Instrumentation. High Voltage Engineering: High Voltage Laboratory Techniques, Field Analysis and Computation, Discharge Phenomena in Gas, Liquid and Solid and Solid Media, Dielectric Engineering, Surge Analysis. Power Systems: Computer-Aided Power System Analysis Microprocessor Applications, Power Electronics, Power Systems Protection, Power System Control.	Master's degree in Electrical Engineering.

545	QIP0057	Jadavpur University	Ph.D Engineering	Electronics & Telecommunications Engineering	DN000816	Communication Engineering: Digital Communication, Data Compression, Image Processing, Fiber Optic Communication, Analog and Digital Mixed Signal Circuits and Systems. Computer Engineering: Programme Semantics, Compiler, Operating System, Computer Architecture, Artificial Intelligence, Pattern Recognition, Neural Networks. Control Engineering: Digital Control, Robotics, Adaptive and Optimal Control, Fuzzy Control. Electronic Devices: Photovoltaic Energy Conversion, Power Semiconductor Devices, Semiconductor Device Modeling, Electrical Conduction and Related Phenomena in Semiconductors and Superconductors, Microelectronics Technology, Nano Crystalline Materials and Devices, EDA, Sensors, MENS, VLSI Circuit Design and Implementation. Microwave Engineering: Microwave and Millimeter Wave Antenna Theory and Technique, Microstrip Components, Antennas and Arrays, Electromagnetic Interference	Master's degree in Electrical Engineering & Telecommunication Engineering.

						and Compatibility, Electrostatic Charging and Discharging.	
546	QIP0057	Jadavpur University	Ph.D Engineering	Mechanical Engineering	DN000817	Applied Mechanics. Heat Power Engineering. Fluid and Hydraulic Engineering (incl. Water Resources). Production Engineering. Machine Design (including Bioengineering).	Master's degree In Mechanical Engineering with at least 60% marks (and also in the preceding degree).
547	QIP0057	Jadavpur University	M.E	Electrical Engineering	DN000818	Electrical Machines Control Systems Power Systems High Voltage Electrical Measurements	Degree or equivalent in Engineering in the appropriate branch with at least 60% marks.

548	QIP0057	Jadavpur University	M.E	Electronics & Telecommunications Engineering	DN000819	Communication Engineering Computer Engineering Control Engineering Electronic Devices Microwave Engineering	Degree or equivalent in Engineering in the appropriate branch with at least 60% marks.
549	QIP0057	Jadavpur University	M.E	Mechanical Engineering	DN000820	Applied Mechanics Heat Power Engineering Fluid and Hydraulic Engineering Production Engineering Machine Design.	Degree or equivalent in Engineering in the appropriate branch with at least 60% marks.
550	QIP0057	Jadavpur University	M.E	Production Engineering	DN000821	Production Technology: CAD/CAM, Robotics, Tribology, Flexible Manufacturing, Computer Integrated Manufacturing, Ergonomics, Designing for Production. Production Management Quantitative Management, Terotechnology, Reliability, Behavioral Science, Simulation Theory and Applications.	Degree in Production/ Industrial/ Mechanical/ Manufacturing Engineering with at least 60% marks.
551	QIP0057	Jadavpur University	Ph.D Engineering	Architecture, Planning and Design	DN000989	Architecture	Master Degree in Architecture or equivalent.
552	QIP0057	Jadavpur University	Ph.D Engineering	Chemical Engineering	DN000990	Chemical Engineering/ Bioprocess Engineering.	Master in Chemical Engineering / Bio-Technology / Food Technology & Biochemical Engineering.
553	QIP0057	Jadavpur University	Ph.D Engineering	Civil Engineering	DN000991	Structural Engineering /Soil Mechanics & Foundation Engineering /Environmental Engineering.	For Structural Engineering :Mater in Soil Mechanics & Foundation Engineering Civil Engineering /Construction Engineering. For Environmental Engg. :Mater in Chemical Engineering / Civil Engineering /Construction Engineering /Environmental Engineering / FoodTechnology & Biochemical Engg.
554	QIP0057	Jadavpur University	Ph.D Engineering	Computer Science & Engineering	DN000992	Computer Science & Engineering /Computer Technology	Master in Computer Science & Engineering.

555	QIP0057	Jadavpur University	Ph.D Engineering	Food Technology	DN000993	Food Technology & Bio-Chemical Engineering.	Masters in Food Technology & Bio-Chemical Engineering / Bioprocess Engineering /Chemical Engineering / Food Engineering / Food Technology / Food Technology & Biochemical Engineering / Food Processing Technology.
556	QIP0057	Jadavpur University	Ph.D Engineering	Instrumentation & Control Engineering	DN000994	Instrumentation & Electronics Engineering	Master in Electrical Engineering/ Electrical & Electronics Engineering /Electronics & Communication Engineering / Instrumentation & Electronics Engineering / or Equivalent.
557	QIP0057	Jadavpur University	Ph.D Engineering	Metallurgical & Materials Engineering	DN000995	Material Engineering/Metallurgical Engineering.	Master in Ceramic Technology or Engineering / Chemical Engineering / Material Engineering / Mechanical Engineering / Metallurgical Engineering / Production Engineering.
558	QIP0057	Jadavpur University	Ph.D Engineering	Information Technology	DN000997	Software Engineering .	Master in Computer Science & IT / Computer Application / Electronics.
559	QIP0059	Malaviya National Institute of Technology (MNIT), Jaipur	Ph.D Engineering	Chemical Engineering	DN000182	Chemical Engineering	B.Tech./M.Tech. or equivalent degree in Chemical Engineering, B. Tech./ M.Tech. or equivalent degree in any branch of Engineering/Chemical Technology and interdisciplinary areas.
560	QIP0059	Malaviya National Institute of Technology (MNIT), Jaipur	Ph.D Engineering	Civil Engineering	DN000185	1. Environmental Engineering 2. Geotechnical Engineering 3. Structural Engineering 4. Transportation Engineering 5. Water Resource Engineering 6. Disaster Assessment and Mitigation	M.E./M.Tech. degree in the relevant engineering discipline
561	QIP0059	Malaviya National Institute of Technology (MNIT), Jaipur	Ph.D Engineering	Computer Science & Engineering	DN000187	Computer Science & Engineering	B.E./B.Tech .in CSE/IT/ECE/EE or equivalent disciplines, M.E./M.Tech./M.S. in CSE/IT/ECE/EE or equivalent disciplines
562	QIP0059	Malaviya National Institute of Technology (MNIT), Jaipur	Ph.D Engineering	Electrical Engineering	DN000188	Electrical Engineering	M.E./M.Tech. or equivalent degree in respective & relevant Engineering disciplines

563	QIP0059	Malaviya National Institute of Technology (MNIT), Jaipur	Ph.D Engineering	Mechanical Engineering	DN000189	1. Design Engineering 2. Industrial Engineering 3. Production Engineering 4. Thermal Engineering	B.Tech./M.Tech. degree or equivalent degree in Mechanical/Industrial/ Production Engg., B.Tech./M.Tech. degree/ disciplines consistent with the research areas of the department.
564	QIP0059	Malaviya National Institute of Technology (MNIT), Jaipur	Ph.D Engineering	Electronics & Communication Engineering	DN000190	1. Electronics & Comm. Engineering-ECE 2. Embedded Systems 3. VLSI Design 4. Wireless and Optical Communication	B. Tech. and M.Tech. Electrical/ Electronics/ Computer/ Communication/ Telecommunication/ Instrumentation/ Control/ Microelectronics or equivalent discipline consistent with research areas of department.
565	QIP0059	Malaviya National Institute of Technology (MNIT), Jaipur	Ph.D Engineering	Metallurgical & Materials Engineering	DN000191	Metallurgical & Materials Engineering	B.E./B.Tech. degree in Metallurgical Engineering/ Materials Engineering/ Mechanical Engineering/ Materials Science and Engineering/ Metallurgical and Materials Engineering/Chemical Engineering/Ceramic Engineering/Manufacturing Engineering/ Production Engineering/ Materials Science/Forge and Foundry with M.E./M.Tech degree in Metallurgical Engineering/Materials Science/Ceramic Engineering/ Thermal Engineering/Polymer Engineering/Plastic Engineering/ Polymer Science and Engineering/Metallurgy and Materials Science/Materials Engineering/ Design/ Machine Design/Production/Foundry/ Industrial Metallurgy/ Welding Technology/ Manufacturing/ Process Metallurgy/Process Engineering/ Corrosion Engineering/ Nano Technology/Steel Technology/Mineral Processing/ Alloy Technology/ Extractive Metallurgy/ Composites/ Powder Metallurgy.

566	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	M.Tech	Energy & Environmental Engineering	DN000330	Energy Engineering	B.E./B.Tech. in Chemical Engineering, Chemical Technology, Electro-Chemical Engineering, Chemical and Electrochemical Engineering, Petroleum Engineering, Petrochem and Petroleum Refinery, Petrochemical Technology, Petroleum Technology, Petrochem Engineering, Petrochem Technology, Petroleum Engineering and Technology, Mechanical Engineering, Electrical & Electronics Engineering, Electronics & Electrical Engineering, Electrical Engineering, Electrical and Electronics, Biotechnology, Biotechnology & Biochemical Engineering, Biochemical & Biotechnology Engineering, Biochemical Engineering, Biotech Engineering, Mining Technology, Mining Engineering, Materials Science & Engineering, Material Science & Metallurgical Engineering, Materials Science & Technology, Materials & Metallurgical Engineering, Metallurgical &Materials Engineering, Metallurgical &Materials Technology, Metallurgical Engineering, Metallurgical Engineering &Materials Science, Metallurgy and Material Technology, Metallurgy and Materials, Energy Engineering, Energy Science & Engineering, Energy and Environmental Management, Renewable Energy.

567	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	M.Tech	Chemical Engineering	DN000331	1. M.Tech - Chemical Engineering 2. M.Tech - Process Control and Instrumentation	1. B.Tech in Dairy Engineering, Energy and Environmental Management, Cement and Ceramic Technology, Chemical Engineering, Electro-Chemical Engineering, Nuclear Engineering, Petrochemical Engineering, Polymer Science and Rubber Technology, Renewable Energy, Dyestuff Technology ,Oil and Paint Technology, Oils - Oleochemicals and Surfactants, Petroleum Engineering, Pulp and Paper Engineering, Solar and Alternate Energy, Sugar Technology, Chemical and Alcohol Technology, Jute and Fibre Technology, Man Made Fibre Technology, Chemical Engineering (Desalination and Water Treatment), Society Examinations eSI/IIChemE/IIE/IIM/ICE/IETE/IE), Chemical and Biochemical Engineering, Pharmaceutical Engineering, Biochemical Engineering, Biotech Engineering, Biosciences and Bioengineering, Biotechnology and Biochemical Engineering, Food Engineering, Food Processing and Preservation, Industrial Biotechnology, Biochemical and Biotechnology Engineering, Pharma Technology, Pharmaceutical Chemistry, Pharmaceuticals and Fine Chemical Technology, Pharmaceuticals Chemistry and Technology, Pharmaceutics, Food Technology and Biochemical Engineering, Food Engineering and Technology, Food Technology and Management. 2. B.Tech in Petroleum Engineering and Technology, Chemical Engineering, Electro-Chemical Engineering, Petrochemical Engineering, Chemical Technology, Petrochem and Petroleum Refinery Engineering, Petrochemical Technology, Petrochem Technology, Petrochem Engineering, Petrochem Technology, Chemical and Electrochemical Engineering, Petroleum Engineering, The Indian Institute of Chemical Engineers, including, Polymer and Environmental Group (IIChemE), Professional Society Examinations (AeSI/IIChemE/IIE/IIM/ICE/IETE/IE), Instrumentation and Control Engineering, Applied Electronics and Instrumentation Engineering, Electronics and Instrumentation, Instrumentation Engineering, Instrumentation Technology,

							Electrical and Instrumentation Engineering, Electronics and Instrumentation Engineering, Instrumentation and Electronics Engineering, Control and Instrumentation, Electronic Instrumentation and Control Engineering, Electronics Instrument and Control, Instrumentation and Control System, Applied Electronics and Instrumentation, Instrumentation, Instrumentation and Control Engineering, Applied Electronics and Instrumentation Engineering, Electronics and Instrumentation, Instrumentation Engineering, Instrumentation Technology, Electrical and Instrumentation Engineering, Electronics and Instrumentation Engineering, Instrumentation and Electronics Engineering, Control and Instrumentation, Electronic Instrumentation and Control Engineering, Electronics Instrument and Control, Instrumentation and Control System, Applied Electronics and Instrumentation, Instrumentation, Electrical and Electronics Engineering, Electronics & Electrical Engineering, Electrical Engineering, Electrical and Instrumentation Engineering, Electrical and Electronics.

568	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	M.Tech	Civil Engineering	DN000333	1. M. tech - Transportation Engineering and Management 2. M.Tech - Structural Engineering 3. M.tech - Environmental Engineering 4. M.Tech - Geotechnical Engineering	1. B.E./B.Tech. in Civil Engineering, Highway Engineering, Transportation Engineering, Transportation Urban planning, Civil & Transportation Engineering, Civil & Transportation Technology, Civil Technology. 2. B.E./B.Tech. in Civil Engineering, Structural Engineering, Civil Engineering & Planning, Civil Technology. 3. B.E./B.Tech. in Civil Engineering, Civil Environmental Engineering, Environmental Engineering, Environment & Pollution Control, Environmental Science & Engineering, Environmental Science & Technology, Civil Engineering (Public Health Engineering), Civil Technology, Biotech Engineering, Biotechnology, Chemical Engineering, Chemical Technology, Biotechnology and Biochemical Engineering, Mechanical Engineering. 4. Civil Engineering, Civil & Structural Engineering, Civil Engineering & Planning, Civil Technology, Civil Environmental Engineering, Civil & Transportation Engineering, Civil & Transportation Technology, Civil & Water Management, Civil Engineering (Public Health Engineering).
569	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	M.Tech	Computer Science & Engineering	DN000335	Computer Science and Engineering	B.E./B.Tech. in Computer & Communication Engineering, Computer Engineering, Computer Engineering & Application, Computer Networking, Computer Science, Computer Science & Engineering, Computer Science & Information Technology, Computer Science & Systems Engineering, Computer Science & Technology, Computer Technology, Computing in Computing, Computing in Multimedia, Computing in Software, Electrical and Computer Engineering, Information & Communication Technology, Information Engineering, Information Science, Information Science & Engineering, Information Science & Technology, Information Technology, Information Technology and Engineering, Electronics & Communication Engineering, Electronics & Computer Engineering, Electronics & Electrical Communication

							Engineering, Electronics & Information Systems, Electronics & Telecommunication Engineering, Electronics & Telematics Engineering, Electronics Engineering, Electronics Technology.
570	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	M.Tech	Electrical & Electronics Engineering	DN000338	1. M.Tech - Power Systems 2. M.Tech - Power Electronics	1. B.E./B.Tech. in Electrical & Instrumentation Engineering, Electrical & Electronics Engineering, Electrical & Power Engineering, Electrical and Computer Engineering, Electrical and Electronics (Power System), Electrical and Mechanical Engineering, Electrical Engineering, Electrical Engineering & Industrial Control , Electrical Engineering (Power), Electrical Instrumentation & Control Engineering, Electrical Power Engineering, Control & Electrical Engineering, Electronics & Electrical Communication Engineering, Electronics & Electrical Engineering, Electronics & Power Engineering, Power Control & Drives, Power Electronics, Power Electronics & Instrumentation Engineering, Power Engineering, Electrical and Electronics, Electrical, Electronics and Power Engineering. 2. B.E./B.Tech. in Electrical & Instrumentation Engineering, Electrical & Electronics Engineering, Electrical & Power Engineering, Electrical and Computer Engineering, Electrical and Electronics (Power System), Electrical and Mechanical Engineering, Electrical Engineering, Electrical Engineering & Industrial Control, Electrical Engineering (Power), Electrical Instrumentation & Control Engineering, Electrical Power Engineering, Control & Electrical Engineering, Electronics & Electrical Communication Engineering, Electronics & Electrical

							Engineering, Electronics & Power Engineering, Power Control & Drives, Power Electronics, Power Electronics & Instrumentation Engineering, Power Engineering, Electrical and Electronics, Electrical, Electronics and Power Engineering.
571	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	M.Tech	Electronics & Communication Engineering	DN000341	1. M.Tech - Communication Systems 2. M.Tech - VLSI Systems	1. B.E./B.Tech. in Electronics and Communication Engineering, Electronics and Telecommunication, Electronics Engineering, Electronics Technology, Electronics & Electrical Communication Engg, Telecommunication Engineering, Communication Engineering, Electronics and Telecommunication Engineering, Electronics and Communication Engineering (Avionics). 2. B.E./B.Tech. in Electronics and Communication Engineering, Electronics and Telecommunication, Electronics Engineering, Electronics Technology, Electronics & Electrical Communication Engg, Electronics and Telecommunication Engineering, Electronics and Communication Engineering (Avionics), Electrical and Electronics Engineering, Electrical Engineering, Computer Science and Engineering, Computer Engineering, Computer Technology, Electronics and Instrumentation Engineering, Applied Electronics and Instrumentation Engineering, Instrumentation and Control Engineering, Control and Electrical Engineering, Electronic Instrumentation & Control Engineering, Electronics & Computer Engineering, Electronics

							Communication & Instrumentation Engineering, Electronics Instrument & Control, Electronics & Electrical Engineering, Electronics & Control Engineering, Electronics & Control Systems, Electronics Design Technology, Electronics Engineering (Design & Manufacturing), Applied Electronics and Instrumentation, Computer Science and Technology.
572	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	M.Tech	Instrumentation & Control Engineering	DN000342	M.Tech - Industrial Automation	B.E./B.Tech. in Instrumentation Engineering, Instrumentation Technology, Instrumentation and Control Engineering, Electronics and Instrumentation Engineering, Applied Electronics and Instrumentation Engineering, Applied Electronics and Instrumentation, Electronics and Instrumentation, Mechatronics, Mechanical Engineering, Production Engineering.
573	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	M.Tech	Mechanical Engineering	DN000344	1. M.tech - Thermal Power Engineering 2. M.tech - Industrial Safety Engineering	1. B.E./B.Tech. in Mechanical Engineering 2. B.E./B.Tech. in Mechanical Engineering, Production Engineering, Electrical Engineering, Electrical and Electronics Engineering, Electronics & Electrical Engineering, Electrical and Electronics, Chemical Engineering, Chemical Technology, Civil Engineering, Civil Technology.

574	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	M.Tech	Metallurgical & Materials Engineering	DN000347	1. M.Tech - Welding Engineering 2. M.Tech - Materials Science and Engineering 3. M.Tech - Industrial Metallurgy	1. B.E./B.Tech. in Industrial Metallurgy, Materials Science & Engineering, Material Science & Metallurgical Engineering, Materials Science & Technology, Materials & Metallurgical Engineering, Metallurgical &Materials Engineering, Metallurgical &Materials Technology, Metallurgical Engineering, Metallurgical Engineering & Materials Science, Metallurgy, Metallurgy and Material Technology, Metallurgy and Materials, Mechanical Engineering, Aeronautical Engineering, Aerospace Engineering, Automotive Engineering, Electrical and Mechanical Engineering, Industrial and Production Engineering, Industrial Manufacturing Engineering, Manufacturing Engineering, Manufacturing Process, Manufacturing Science & Engineering, Manufacturing Technology, Mechanical & Automation Engineering, Mechanical Engineering (Design & Manufacturing), Mechanical Engineering (Repair and Maintenance), Nuclear Engineering, Production & Industrial Engineering, Production Engineering, Production Engineering &Management, Shipbuilding Engineering. 2. B.E./B.Tech. in Materials Science & Engineering, Materials Science & Technology, Industrial Metallurgy, Metallurgical &Materials Engineering, Metallurgical Engineering, Metallurgical Engineering & Materials Science, Metallurgy and Material Technology, Mechanical Engineering, Production Engineering, Chemical Engineering, Chemical Technology, Energy Engineering, Chemical Engineering (Plastic & Polymer), Ceramic Technology, Ceramic Engineering, Ceramic and Glass Technology, Cement and Ceramic Technology, Mechatronics, Nano Technology, Nuclear Science & Technology, Polymer Science & Chemical Technology, Polymer Engineering & Technology, Plastics Technology, Plastic & Polymer Engineering, Production & Industrial Engineering, Rubber Technology, Solar & Alternate Energy, Surface Coating Technology, Industrial and Production Engineering. M.Sc. degree in

							Physics, Chemistry, Materials Science, Applied Science, Applied Physics, Applied Chemistry, Engineering Physics. 3.B.E./B.Tech. in Surface Coating Technology, Metallurgical &Materials Engineering, Metallurgy Materials Science & Engineering, Material Science & Metallurgical Engineering, Materials & Metallurgical Engineering, Industrial Metallurgy, Metallurgy and Material Technology, Material Science & Technology, Production Engineering, Production & Industrial Engineering, Nuclear Science & Technology, Nuclear Engineering, Mining Technology, Mining Engineering, Mineral Processing, Mineral Engineering, Mineral Dressing, Mechanical Engineering, Mechanical & Automation Engineering Mechanical Engineering (Design & Manufacturing), Manufacturing Technology, Manufacturing Science & Engineering Manufacturing Process, Manufacturing Engineering, Industrial Manufacturing Engineering Industrial and Production Engineering Automotive Technology, Automotive Engineering, , Chemical Engineering, Chemical Technology, Industrial Engineering, Mine Engineering.

575	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	M.Tech	Physics	DN000348	Non Destructive Testing	B.E./B.Tech. in Materials Science & Engineering, Materials & Metallurgical Engineering, Metallurgical & Materials Engineering, Metallurgical & Materials Technology, Metallurgical Engineering, Metallurgy, Metallurgy & Material Technology, Mechanical Engineering, Production & Industrial Engineering, Production Engineering, Metallurgy and materials, Material Science & Technology, Material Science & Metallurgical Engineering, Metallurgical Engineering & Material Science. M.Sc. degree in Physics, Applied Physics, Applied Science, Engineering Physics, Engineering Physics & Instrumentation Materials Science, Materials Science Solid State Physics.
576	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	M.Tech	Production Engineering	DN000349	1. M.Tech - Manufacturing Technology 2. M.Tech - Industrial Engineering and Management	1. B.E./B.Tech. in Automobile Engineering, Industrial & Production Engineering, Industrial Manufacturing Engineering, Manufacturing Engineering, Manufacturing Engineering & Automation, Manufacturing Process, Manufacturing Process & Automation Engineering, Manufacturing Science & Engineering Manufacturing Technology, Mechanical & Automation Engineering, Mechanical Engineering, Mechanical Engineering (Design & Manufacturing), Mechatronics, Production & Industrial Engineering, Production Engineering, Production Engineering & Management, Production and Management, Industrial production, Mechanical Engineering (Manufacturing Engineering), Tool Engineering, Mechanical Engineering (Smart Manufacturing). 2. B.E./B.Tech. in Automobile Engineering, Automotive Engineering, Automotive Technology, Industrial & Management Engineering Industrial & Production Engineering, Industrial Engineering, Industrial Engineering & Management, Industrial Management, Industrial Manufacturing Engineering Manufacturing Engineering, Manufacturing Engineering & Automation, Manufacturing Process, Manufacturing Process & Automation Engineering, Manufacturing Science & Engineering Manufacturing Technology, Mechanical &

							Automation Engineering, Mechanical Engineering, Mechatronics, Production & Industrial Engineering Production Engineering, Production Engineering & Management, Industrial production, Production and Management, Tool Engineering, Mechanical Engineering (Design & Manufacturing), Mechanical Engineering (Smart Manufacturing).
577	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	Ph.D Engineering	Chemical Engineering	DN000350	Ph.D - Chemical Engineering	Bachelor's and Master's/M.S. (by Research) degree in Engineering/Technology in the appropriate branch of study.
578	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	Ph.D Engineering	Civil Engineering	DN000351	Ph.D - Civil Engineering	Bachelor's and Master's/M.S. (by Research) degree in Engineering/Technology in the appropriate branch of study.
579	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	Ph.D Engineering	Computer Science & Engineering	DN000352	Ph.D - Computer Science and Engineering	Bachelor's and Master's/M.S. (by Research) degree in Engineering/Technology in the appropriate branch of study.

580	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	Ph.D Engineering	Electrical & Electronics Engineering	DN000353	Ph.D - Electrical and Electronics Engineering	Bachelor's and Master's/M.S. (by Research) degree in Engineering/Technology in the appropriate branch of study.
581	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	Ph.D Engineering	Electronics & Communication Engineering	DN000354	Ph.D - Electronics and Communication Engineering	Bachelor's and Master's/M.S. (by Research) degree in Engineering/Technology in the appropriate branch of study.
582	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	Ph.D Engineering	Instrumentation & Control Engineering	DN000355	Ph.D- Instrumentation and Control Engineering	Bachelor's and Master's/M.S. (by Research) degree in Engineering/Technology in the appropriate branch of study.
583	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	Ph.D Engineering	Mechanical Engineering	DN000356	Ph.D - Mechanical Engineering	Bachelor's and Master's/M.S. (by Research) degree in Engineering/Technology in the appropriate branch of study.
584	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	Ph.D Engineering	Metallurgical & Materials Engineering	DN000357	Ph.D - Metallurgical and Materials Engineering	Bachelor's and Master's/M.S. (by Research) degree in Engineering/Technology in the appropriate branch of study.
585	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	Ph.D Engineering	Production Engineering	DN000358	Ph.D - Production Engineering	Bachelor's and Master's/M.S. (by Research) degree in Engineering/Technology in the appropriate branch of study.

586	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	Ph.D Engineering	Architecture and Planning	DN000359	Ph.D - Architecture	Bachelor's and Master's/M.S. (by Research) degree in Engineering/Technology in the appropriate branch of study.
587	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	Ph.D Science	Chemistry	DN000360	Ph.D - Chemistry	Bachelor's and Master's/M.S. (by Research) degree in the appropriate branch of study.
588	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	Ph.D Humanities	Humanities and Social Science	DN000361	Ph.D - Humanities	Bachelor's and Master's/M.S. (by Research) degree in the appropriate branch of study.
589	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	Ph.D Engineering	Energy & Environmental Engineering	DN000363	Ph.D - Energy and Environmental Engineering	Bachelor's and Master's/M.S. (by Research) degree in Engineering/Technology in the appropriate branch of study.
590	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	Ph.D Management	Management Studies	DN000364	Ph.D - Management Studies	Bachelor's and Master's/M.S. (by Research) degree in the appropriate branch of study.
591	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	Ph.D Science	Mathematics	DN000365	Ph.D - Mathematics	Bachelor's and Master's/M.S. (by Research) degree in the appropriate branch of study.

592	QIP0060	National Institute of Technology (NIT), Tiruchirappall (ENG)	Ph.D Science	Physics	DN000366	Ph.D - Physics	Bachelor's and Master's/M.S. (by Research) degree in the appropriate branch of study.
593	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	Ph.D Engineering	Civil Engineering	DN000007	Structural Engineering, Geotechnical Engineering, Transportation Engineering, Construction Technology and Management, Environmental Engineering and Earth Sciences.	Master's degree in relevant field.
594	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	Ph.D Engineering	Chemical Engineering	DN000021	Process Development, Particulate Systems, Environmental Engineering, Transfer Operations, Industrial Biotechnology, Energy, Modelling and Simulation, Computational Fluid Dynamics, Nanosciences / Nanotechnology, Polymer nanocomposites, Process dynamics and control	Master's degree in relevant field.

595	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	Ph.D Engineering	Computer Science & Engineering	DN000022	Sensor Networks, Spacial Data Science, 5G and beyond, Quantum Computing and Cryptography Computer Networks, Software Engineering, Distributed Computing, Data Mining, Information Security, High Performance Computing, Computer Vision, Cloud Computing, Image Processing, Speech Processing, Mobile computing, Cloud system, Internet of Things (IoT), Blockchain Applications, Computer Architecture, Machine Learning and Artificial Intelligence, Networks-on-Chip, Formal Verification, Cyber-Physical Systems, Data Science, Precision agriculture and farming, Social Computing, Graph Theory, Big Data analytics, Network Function Virtualization, Information Centric Networking, 5G Core, Underwater Communication, Cryptography, Deterministic Networking Industrial IoT, Underwater Communications	Master's degree in relevant field.
596	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	Ph.D Engineering	Electrical & Electronics Engineering	DN000023	Adaptive and Distributed Signal Processing for Sensing and Image Applications; Control System; Electrical Machines and Machine Diagnosis; High Voltage Engineering and Field Computations; Power Electronics and Drives; Power Systems;	Master's degree in relevant field.

						Renewable Energy Technologies; Smart Grid Technologies, Machine learning	
597	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	Ph.D Engineering	Electronics & Communication Engineering	DN000024	Electronic Communication / VLSI / Signal Processing	Master's degree in relevant field.
598	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	Ph.D Engineering	Information Technology	DN000025	Affective Computing, Big Data Analytics, Blockchain Technologies, Cloud/Edge/Fog Computing, Cloud Security, Computer Networks, Cyber Security, Databases, Data Mining, Deep Learning Applications, Distributed Computing, Future Internet Architecture, Healthcare Informatics, High Performance Computing, Information Retrieval, Information Security, Internet of Things, Mobile Software Engineering, Natural Language Processing, Network Security, Semantic Web Technology, Social Multimedia/Social Network Analysis, , Software Engineering , Web Services, Wireless	Master's degree in relevant field.

599	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	Ph.D Engineering	Metallurgical & Materials Engineering	DN000028	Physical Metallurgy, Mechanical Metallurgy, Extractive Metallurgy, Beneficiation of Minerals, Welding, Surface Engineering, Corrosion, Polymer Nanocomposites, Ceramic and Polymeric Nanofabrics, Energy conversion and storage, Thin films & coatings, Advanced Materials, Heat transfer studies	Master's degree in relevant field.
600	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	Ph.D Engineering	Mining Engineering	DN000029	Rock Mechanics & Ground Control Engineering, Drilling & Blasting, Mine Planning, Environmental Management, Slope Stability, Design and stability of civil Excavations, Waste Management, Mineral benificiation. Computer Applications in Mining, Mine health & Safety Engineering	Master's degree in relevant field.
601	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	M.Tech	Chemical Engineering	DN000031	Chemical Engineering Environmental Science & Technology Industrial Biotechnology	B.E. / B.Tech. in Chemical Engg / Polymer Technology / Ceramic and Cement Technology / Bio-Chemical Engineering / Biotechnology / Petrochemical Engg AMIE (Chemical Engineering) / A.M.I.I.Ch.E. B.E. / B.Tech. in Chemical Engg/Mechanical / Mining Engineering / Polymer Technology / Ceramic and Cement Technology / Environmental Engineering / Bio-Chemical Engineering / Biotechnology / Petrochemical Engineering AMIE (Chemical Engineering) / A.M.I.I.Ch.E. B.E. / B.Tech. in Chemical Engg/Mechanical / Mining Engineering / Polymer Technology / Ceramic and Cement Technology / Environmental Engineering / Bio-Chemical Engineering / Biotechnology / Petrochemical Engineering AMIE (Chemical Engineering) / A.M.I.I.Ch.E.

602	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	M.Tech	Civil Engineering	DN000032	Structural Engineering Geotechnical Engineering Transportation Engineering Construction Technology and Management	B.E. / B.Tech / B.Sc.(Engineering) in Civil Engineering /Structural Engineering of any Recognised Indian Universities. AMIE in Civil Engineering B.E. / B.Tech / B.Sc.(Engineering) in Civil Engineering / Chemical/Mechanical / Metallurgical / Mining Engg / Environmental Engg / Bio-Chemical Engineering / Bio- Technology / Agricultural Engg / Biological Science and Bio-Engg / Bio- Sciences & Bio- Engg / Bio-Tech Engineering / Bio Technology & Bio-Chemical Engineering / Chemical & Bio Engineering / Chemical Technology / Civil & Water Management / Civil Engg (Public Health Engg) / Civil Environmental Engg / Environment & Pollution Control / Environmental Science & Engineering / Environment Science and Technology Health Science & Water Engg / Mining Technology / Paper & pulp Engineering / Pulp Technology / Sugar Technology / Water Management / Bio-Engg / Chemical & Bio Engg / Bio-Chemical & Biotechnology Engineering AMIE in Civil Engineering/Chemical Engineering MSc in Applied Chemistry / Earth Sciences / Environmental Sciences / Industrial Chemistry / Life Science / Bio-Chemistry / Bio -Technology B.E. / B.Tech / B.Sc.(Engineering) in Civil Engineering / Highway Engg / Transportations Engg / Civil & Transportation Engineering / Civil & Transportation Technology of any recognised Indian University AMIE in Civil Engineering B.E. / B.Tech. / B.Sc (Engineering) in Civil Engineering / Civil Engg & Planning / Construction & Project Management / Construction Engineering / Construction Engineering Management / Construction Technology /

							Construction Technology and Management / Mining Engineering / Transportation Engineering / Environmental Engg / Structural Engineering of any recognized Indian University. AMIE in Civil / Mining Engineering. Bachelors' degree in Architecture (B.Arch. / B.E. or B.Tech. in Architecture of any recognized Indian University
603	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	M.Tech	Computer Science & Engineering	DN000034	Computer Science & Engineering Computer Science & Engineering - Information Security	B.E./B.Tech. in Computer Engineering,
604	QIP0061	National Institute of Technology	M.Tech	Electrical & Electronics Engineering	DN000036	Power and Energy Systems	B.E. / B.Tech. / B. Sc (Engg) in Electrical Engineering or Electrical & Electronics

		(NIT), Surathkal, Karnataka					Engineering AMIE in Electrical Engineering
605	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	M.Tech	Electronics & Communication Engineering	DN000037	VLSI Design Communication Engineering and Networks Signal Processing and Machine Learning	B.E. / B.Tech. / B.Sc. (Engineering) in E&C, Electronics & Telecommunications / Instrumentation Technology / E&E / Computer Science & Engineering / Electronics / Telecommunication / Electronics & Control / Biomedical Engineering/Medical Electronics. AMIETE (Electronics & Telecommunication) B.E. / B.Tech. / B.Sc. (Engineering) in E&C, Electronics & Telecommunications. AMIETE (Electronics & Telecommunication)B.E. / B.Tech. / B.Sc. (Engineering) in E&C, Electronics & Telecommunications / Instrumentation Technology / E&E / Computer Science & Engineering / Electronics / Telecommunication / Electronics & Control / Biomedical Engineering/Medical Electronics/Information Science/ Information Science and Engineering/Information Technology. AMIETE (Electronics & Telecommunication)
606	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	M.Tech	Information Technology	DN000039	Information Technology	B.Tech/ B.E (Any branch), M.Sc(Math) / M.Sc(Stat) / MCA with valid GATE score in CS/IT AMIE in Computer Science & Engineering (by Examination) AMIETE in Computer Science & Engineering and Information Technology (by Examination)

607	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	M.Tech	Mechanical Engineering	DN000041	Thermal Engineering Manufacturing Engineering Mechatronics Engg Mechanical Design	B.E. / B.Tech. / AMIE) in Mechanical Engineering / Automobile Engineering / Aeronautical Engineering / Aerospace Engg / Energy System Engg / Marine Technology / Power Plant Engg / Renewable Energy Engineering / Chemical Engg. B.E. / B.Tech. / AMIE in Mechanical Engineering / Industrial Engineering / Industrial and Production Engineering / Industrial Engineering and Management / Manufacturing Engineering / Production Engg / tool Engineering B.E / B. Tech / AMIE in Mechanical Engineering ii) B.E / B. Tech / AMIE in Electronics & Comm. Electrical & Electronics, Instrumentation. Control Engg / Electronics & Instrumentation Engineering B.E / B. Tech / AMIE in Mechatronics / Industrial Production / Production Engg / Manufacturing Engg / Industrial Engg / Aeronautical Engg, Automobile Engg,. B.E / B. Tech / AMIE in Mechanical Engineering, Automobile Engg, Manufacturing Engineering, Aeronautical Engineering/Aerospace Engineering, Production Engineering

608	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	M.Tech	Metallurgical & Materials Engineering	DN000042	Process Metallurgy Materials Engineering Nanotechnology	B.E. / B.Tech. / B.Sc.(Engineering) in Metallurgical Engineering / Industrial & Production Engg / Metallurgy / Metallurgical & Materials Engineering / Metallurgical Engg & Materials Science / Metallurgical & Materials Technology / Mechanical Engg / Chemical Engg / Production Engineering / Ceramics Engineering. AMIE in Metallurgical Engineering / Mechanical Engineering (by Examination) Associate Member of the Indian Institute of Metals (by examination) -A.M.I.I.M. M.Sc. Chemistry (Physical / Analytical / Industrial / Applied Inorganic) M.Sc. (Materials Science) Master Degree in Mineral Beneficiation / Mineral Processing / Ore Dressing. B.E./B.Tech./B.Sc Engineering in Metallurgy / Mechanical Engineering / Chemical Engineering / Industrial Production / Polymer Technology / Ceramic & Cement Technology / Manufacturing Engineering / Industrial & Production Engg / Metallurgical & Materials Engineering / Metallurgical Engineering / Metallurgical Engg & Materials Science / Polymer Science & Technology / Polymer Science & Rubber Technology / Metallurgy & Materials Technology / Production Engineering. AMIE in Mechanical / Metallurgical Engineering by exam. AMIIM (by examination) of Indian Institute of Metals. M.Sc (Materials Science / Physics / Chemistry (Physical / Analytica / Industrial / Applied / Inorganic) B.Tech. in Nanotechnology M. Sc. In Physics, Chemistry, Materials Science, Bio-Technology. Nanoscience / Nanotechnology

							B. Tech / AMIE in Civil, Mechanical, E & E, E & C, Instrumentation, Chemical, Metallurgy, Mining Engineering, Metallurgical & Materials Engineering. Associate member of the Indian Institute of Metals (by examination) – AMIIM
609	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	M.Tech	Mining Engineering	DN000043	Rock Excavation Technology & Management	B.E/B.Tech/AMIE in Mining Engineering
610	QIP0061	National Institute of Technology (NIT),	Ph.D Management	Mathematical and Computational Science	DN000058	Mathematics Stream: Computational Fluid Dynamics, Reliability Engineering, Graph Theory, Algebra, Number Theory, Real Analysis, Dynamical	M.Sc.in Mathematics / M. Tech in relevant field / MCA

		Surathkal, Karnataka				Systems, Differential Equations, Numerical Analysis, Functional Analysis	
611	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	Ph.D Engineering	Water resources and ocean engineering	DN000059	Water Resources Engg & Management; Surface Water Hydrology, Ground Water Hydrology, Hydrological modelling,, Artificial Intelligence in water resources, Urban Hydrology, Urban water management, Sediment Transport, Ocean and Coastal Engineering, Offshore Renewable Energy, Computational Hydrodynamics, Structural Dynamics, Offshore Engineering, Marine Structures, Isotropic Elasticity in Marine Structure Analysis, Finite Element Analysis of marine and hydraulic structures, Soft computing Applications in Civil Engineering , Geo-informatics Applications in Civil Engineering: Hyperspectral Remote Sensing, Microwave Remote Sensing , Disaster management using advance surveying , GIS and UAV.	Master's degree in relevant field.
612	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	Ph.D Science	Chemistry	DN000285	Inorganic, Materials, Physical and Organic Chemistry	M.Sc. / M. Tech in relevant field.

613	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	Ph.D Science	Physics	DN000286	High energy theory, Quantum gravity, Quantum field theory and gravity, Optoelectronics, Condensed Matter- Theory and Experiment, Cosmology and High Energy Physics, Nonlinear Dynamics, and Material Science	Master's degree in relevant field
614	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	Ph.D Management	School of humanities, social science and management	DN000288	Strategic Management, International Business, Technology Management, Organizational Behaviour, Human Resource Management, Marketing, Corporate Finance, Capital Markets, Behavioural Finance, Development Economics, International Economics, Agricultural Economics, Rural Development, Applied Econometrics, Operations Management, Information Systems, E-Governance, English and Comparative Literature, and Other related areas. M.Phil degree will not be considered.	Master degree in relevant field, CA along with undergraduate degree

615	QIP0061	National Institute of Technology (NIT), Surathkal, Karnataka	Ph.D Science	Mathematical and Computational Science	DN000292	Computer Stream: Computer Network Security, Graph Algorithms, Image Processing, Machine Learning, Cloud Computing, Cryptography, Wireless Sensor Networks, Block Chain Technology, Internet of Things. Mathematics Stream: Computational Fluid Dynamics, Reliability Engineering, Graph Theory, Algebra, Number Theory, Real Analysis, Dynamical Systems, Differential Equations, Numerical Analysis, Functional Analysis.	M.Sc.in Mathematics / M. Tech in relevant field / MCA
616	QIP0063	National Institute of Technical Teachers Training and Research (NITTTR) Engg., Chandigarh	Ph.D Engineering	Civil Engineering	DN000445	Structural Engineering, Geo-technical Engineering, Transportation Engineering, Concrete Technology, Construction Engineering and Management, Environmental Engineering, Computer Aided Design and Applications, Rehabilitation/Maintenance of Civil Engineering Structures	Master's degree in relevant branch or a professional degree declared equivalent to the Master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational Institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions. A relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, may be allowed for those belonging to SC/ST/OBC (noncreamy layer)/ Differently-Abled and other categories of candidates as per the decision of the Commission from time to time, or for those who had obtained their Master's degree prior to 19th September, 1991. The eligibility marks of 55% (or an equivalent grade in a point scale wherever grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the

							grace mark procedure. (Subjected to be updated as per guidelines of Panjab University Chandigarh)
617	QIP0063	National Institute of Technical Teachers Training and Research (NITTTR) Engg., Chandigarh	Ph.D Engineering	Computer Science & Engineering	DN000518	Network & Information Security, Image Processing, Artificial Intelligence, Wireless Networks, Distributed Computing, Cloud Computing, Mobile Adhoc Networks, Wireless Sensor Networks, Vehicular Adhoc Networks, Internet of Things, Fog/Edge Computing, Data Science	Master's degree in relevant branch or a professional degree declared equivalent to the Master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational Institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions. A relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, may be allowed for those belonging to SC/ST/OBC (noncreamy layer)/ Differently-Abled and other categories of candidates as per the decision of the Commission from time to time, or for those who had obtained their Master's degree prior to 19th September, 1991. The eligibility marks of 55% (or an equivalent grade in a point

							scale wherever grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedure. (Subjected to be updated as per guidelines of Panjab University Chandigarh)
618	QIP0063	National Institute of Technical Teachers Training and Research (NITTTR) Engg., Chandigarh	Ph.D Engineering	Electrical Engineering	DN000520	Power System Operation & Control; Power Electronics, Microgrids, Smartgrids, Distributed Generation, Electric Vehicles, Hardware in Loop System, Real Time Simulation Studies using Opal-RT and Typhoon HIL, Wide Area Monitoring Studies, Electrical Machines & Drives; Process Control & Instrumentation, Applications of Artificial Intelligence Techniques in Electrical Engineering, Biomedical Instrumentation and Biometrics	Master's degree in relevant branch or a professional degree declared equivalent to the Master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational Institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions. A relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, may be allowed for those belonging to SC/ST/OBC (noncreamy layer)/ Differently-Abled and other categories of candidates as per the decision of the Commission from time to time, or for those who had obtained their Master's degree prior to 19th September, 1991. The eligibility marks of 55% (or an equivalent grade in a point

							scale wherever grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedure. (Subjected to be updated as per guidelines of Panjab University Chandigarh)
619	QIP0063	National Institute of Technical Teachers Training and Research (NITTTR) Engg., Chandigarh	Ph.D Engineering	Electronics & Communication Engineering	DN000522	Soft Computing, Image Processing, Digital Signal Processing, Coding, Antenna, Microwave, VLSI Design and VLSI CAD, Optimization Techniques, Neural Networks, Video, Mobile Communication, Optical/Satellite Communication, MEMS, Bio-medical Signal Processing and other area of Electronics & Communication Engg.	Master's degree in relevant branch or a professional degree declared equivalent to the Master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational Institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions. A relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, may be allowed for those belonging to SC/ST/OBC (noncreamy layer)/ Differently-Abled and other categories of candidates as per the decision of the Commission from time to time, or for those who had obtained their Master's degree prior to 19th September, 1991. The eligibility marks of 55% (or an equivalent grade in a point

							scale wherever grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedure. (Subjected to be updated as per guidelines of Panjab University Chandigarh)
620	QIP0063	National Institute of Technical Teachers Training and Research (NITTTR) Engg., Chandigarh	Ph.D Engineering	Mechanical Engineering	DN000525	3D/4D and 5D printing; Heat Transfer; Energy Conservation and Management; Bearing &Lubrication; Computer-Aided Design & Manufacturing; Industrial Engineering; Robotics Mechatronics and Manufacturing Technology; Operations Research; Production & Materials Management; Quality, Reliability and Maintenance; Productivity Management; Ergonomics; Total Quality Management; Business Process Reengineering; Enterprise Resource Planning.	Master's degree in relevant branch or a professional degree declared equivalent to the Master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational Institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions. A relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, may be allowed for those belonging to SC/ST/OBC (noncreamy layer)/ Differently-Abled and other categories of candidates as per the decision of the Commission from time to time, or for those who had obtained their Master's degree prior to 19th September, 1991. The eligibility marks of 55% (or an equivalent grade in a point

							scale wherever grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedure. (Subjected to be updated as per guidelines of Panjab University Chandigarh)
621	QIP0063	National Institute of Technical Teachers Training and Research (NITTTR) Engg., Chandigarh	M.E	Mechanical Engineering	DN000531	1. Mechanical Engineering (Manufacturing Technology) 2. Mechanical Engineering (Specialization in Robotics)	A Bachelor's Degree in Mechanical Engineering / Manufacturing Engineering (or Technology)/ Production Engg./ Industrial Engg./ Automobile Engg. from recognized University or its equivalent with at least 60% marks in aggregate.
622	QIP0063	National Institute of Technical Teachers Training and Research (NITTTR) Engg., Chandigarh	M.E	Civil Engineering	DN000535	Civil Engineering (Construction Technology & Management)	A Bachelor's Degree in Civil Engineering from a recognized University or its equivalent with at least 60% marks in aggregate.

623	QIP0063	National Institute of Technical Teachers Training and Research (NITTTR) Engg., Chandigarh	M.E	Computer Science & Engineering	DN000536	1. Computer Science and Engineering 2. Computer Science and Engineering (Specialization in Internet of Things)	A Bachelor's Degree in Computer Science & Engineering / Electronics Engineering / Electrical Engineering/ Instrumentation & Control Engineering/ Information Technology from a recognized University or its equivalent with at least 60% marks in aggregate.
624	QIP0063	National Institute of Technical Teachers Training and Research (NITTTR) Engg., Chandigarh	M.E	Electrical Engineering	DN000539	Electrical Engineering (Instrumentation and Control)	A Bachelor's Degree in Electrical Engineering / Electronics Engineering/ Instrumentation and Control Engineering from a recognized University or its equivalent with at least 60% marks in aggregate.
625	QIP0063	National Institute of Technical Teachers Training and Research (NITTTR) Engg., Chandigarh	M.E	Electronics & Communication Engineering	DN000540	1. Electronics and Communication Engineering 2. Electronics and Communication Engineering (Specialization in Artificial Intelligence)	A Bachelor's Degree in Electronics and Communication Engineering from a recognized University or its equivalent with at least 60% marks in aggregate.
626	QIP0065	National Institute of Technology (NIT) Engg., Calicut	Ph.D Engineering	Architecture and Planning	DN000321	1. Urban and Regional Planning: Transportation, Infrastructure, Housing, Environmental Planning, Planning Informatics, Disaster Management &Climate Change. 2. Architecture: Urban Design, Landscape -Conservation, Architectural Theory, Architectural Visualization & Product Design. 3. Sustainable Building Design:	Master's Degree in Architecture / Design /Planning / Engineering /Technology or in any other relevant disciplines (such as in Geography, Sociology, Economics, Disaster management etc.) related to major areas of research available in the department with minimum 60% marks (CGPA 6.0/10) [For SC/ST/PWD candidates, the minimum mark is 55% (CGPA 5.5/10)]. Candidates are also required to have passed the relevant undergraduate degree with minimum 60% marks (CGPA 6.0/10) in the qualifying examination [For SC/ST/PWD candidates the minimum mark is 55% (CGPA 5.5/10)]. Candidates who secured B. Arch/ B. Plan./ B. Tech. degree under lateral entry should have passed the three-year

						Building Services, Energy Modelling, Building Information & Management 4. Building Technology & Management: Alternate Building Materials, Construction Management	diploma in engineering with minimum 60% marks (CGPA 6.0/10) [For SC/ST/PWD candidates 55% marks (CGPA 5.5/10)].
627	QIP0065	National Institute of Technology (NIT) Engg., Calicut	Ph.D Engineering	Biotechnology	DN000323	Enzyme Technology, Microbiology, Bioprospecting, Cancer Research, Bioinformatics and Computational Biology, Gene Regulation, Molecular genetics, Machine Learning and Network biology, NGS data analysis for Precision Medicine, Protein Folding ,Protein Engineering, Genetic Engineering, Bio modeling and Drug Design, Neurobiology, Immunology, Cytoskeleton and Motor proteins, Biophysics, Bio nanotechnology, Bio-Nano Engineering, tissue engineering, bioinspired materials, supramolecular chemistry and extremozymes.	A Master's degree in Engineering /Technology / with minimum 60% marks (CGPA 6.0/10) [For SC/ST/PWD candidates, the minimum mark is 55% (CGPA 5.5/10)]. OR A Master's degree in any discipline in Science with minimum 60 % marks (CGPA 6.0/10) or equivalent, [For SC/ST/PWD candidates, the minimum mark is 55% (CGPA 5.5/10)]. Apart from this, the candidates should possess minimum 60% marks (CGPA 6.0/10) or equivalent in their Bachelor's degrees as well [For SC/ST/PWD candidates, the minimum requirement is 55% marks (CGPA 5.5/10)].

628	QIP0065	National Institute of Technology (NIT) Engg., Calicut	Ph.D Engineering	Chemical Engineering	DN000324	Advanced Separations, Bio-materials, Biofuels, Catalysis, Carbon-based materials , Fuel Cells, Electrochemical systems, Computational Fluid Dynamics, Multiphase Flow Modelling, Environmental Engineering, Waste-water Treatment, Biochemical Engineering, Microfluidics, Mineral Processing, Nano –composites, Polymers, Blends and Alloys, Process Control and Dynamics ,Process Modelling, Simulation and Optimization Process, Design and Intensification, Phase Change Heat transfer, Soft Matter, Non-Newtonian Fluid Dynamics, Thermodynamic Modelling, Gas Hydrates, Molecular Simulations, Machine Learning, Flow Assurance in Oil and Gas Pipelines, Rheology.	ME /M. Tech./ M.Tech. (by research)/MS/MS (by research) / Integrated / dual degree M. Tech. in Chemical Engineering/ or any other relevant branch of Engineering and Technology including Petroleum / Petrochemical/Energy/Environmental Technology/ElectrochemicalTechnology/Biotechnology/Industrial Biotechnology / Biochemical / Polymer science &Technology / Ceramic / Nanotechnology / Material science / Metallurgical and Materials / Mechanical / Applied Electronics / Instrumentation Technology / Instrumentation and Control , with minimum 60% marks (CGPA 6.0/10) [For SC/ST/PWD candidates, the minimum mark is 55% (CGPA 5.5/10)] Apart from this, the candidates should possess minimum 60% marks (CGPA 6.0/10) or equivalent in their Bachelor's degrees as well [For SC/ST/PWD candidates, the minimum requirement is 55% marks (CGPA 5.5/10)].
629	QIP0065	National Institute of Technology (NIT) Engg., Calicut	Ph.D Engineering	Computer Science & Engineering	DN000325	Algorithms and complexity, Bioinformatics, Cloud Computing, Compilers and Programming Languages, Computer Architecture, Database Management Systems, Distributed Computing, Image Processing, Information Security, Networks, Operating Systems, Software Engineering.	M.E./M. Tech. Degree in Computer Science & Engineering/Computer Engineering/Information Security/or other allied streams with minimum 60% marks (CGPA 6.0/10) [For SC/ST/PWD candidates, the minimum mark is 55% (CGPA 5.5/10)]. Apart from this, the candidates should possess minimum 60% marks (CGPA 6.0/10) or equivalent in their Bachelor's degrees as well [For SC/ST/PWD candidates, the minimum requirement is 55% marks (CGPA 5.5/10)].

630	QIP0065	National Institute of Technology (NIT) Engg., Calicut	Ph.D Engineering	Civil Engineering	DN000326	Structural Engineering, Offshore Structures, Traffic & Transportation Planning, Geotechnical Engineering, Water Resources Engineering, Environmental Engineering, Building Technology and Construction Management, Town Planning	M.E./M. Tech. Degree in Structural Engineering with minimum 60% marks (CGPA 6.0/10) [For SC/ST/PWD candidates, the minimum mark is 55% (CGPA 5.5/10)] or M.E./M. Tech. Degree in Offshore Structures/ Structural Engineering/ Ocean Engineering/ Coastal Engineering with minimum 60% marks (CGPA 6.0/10) [For SC/ST/PWD candidates, the minimum mark is 55% (CGPA 5.5/10)] or M.E./M. Tech. Degree in Transportation Engineering / Highway Engineering/ Traffic & Transportation Planning/ Urban Engineering with minimum 60% marks (CGPA 6.0/10) [For SC/ST/PWD candidates, the minimum mark is 55% (CGPA 5.5/10)] or M.E./M.Tech. Degree in Geotechnical Engineering/ Environmental Geotechnology with minimum 60% marks (CGPA 6.0/10) [For SC/ST/PWD candidates, the minimum mark is 55% (CGPA 5.5/10)] or M.E./M. Tech. Degree in Water Resources Engineering/ Hydraulic Engineering/ Hydraulics and Water Resources Engineering/ Irrigation Engineering/ Coastal Engineering/ Environmental Geotechnology/ Environmental Engineering / Remote Sensing and GIS/ Geoinformatics with minimum 60% marks (CGPA 6.0/10) [For SC/ST/PWD candidates, the minimum mark is 55% (CGPA 5.5/10)] or M.E./M. Tech. Degree in Environmental Engineering/ Environmental Geotechnology with minimum 60% marks (CGPA 6.0/10) [For SC/ST/PWD candidates, the minimum mark is 55% (CGPA 5.5/10)] or M.E./M. Tech. Degree in Building (Construction) Technology/ Construction Management/ Structural Engineering/ Architecture with minimum 60% marks (CGPA 6.0/10) [For SC/ST/PWD candidates, the minimum mark is 55% (CGPA 5.5/10)] or M.E./M. Tech. Degree in Town Planning / Urban Design/ Architecture with minimum 60% marks (CGPA 6.0/10) [For SC/ST/PWD candidates, the minimum mark is 55% (CGPA 5.5/10)]. Apart from this, the candidates should possess minimum 60% marks (CGPA 6.0/10) or equivalent in their Bachelor's degrees

							as well [For SC/ST/PWD candidates, the minimum requirement is 55% marks (CGPA 5.5/10)].
631	QIP0065	National Institute of Technology (NIT) Engg., Calicut	Ph.D Engineering	Electrical Engineering	DN000327	Instrumentation and Control Systems, Power and Energy Systems, Power Electronics & Machines, Industrial Power & Automation, Biomedical Instrumentation and Signal Processing, High Voltage Engineering	M.E./M. Tech. Degree in Electrical Engineering/ Power Systems/ Energy Systems/ Energetics/ Industrial Power/ Industrial Power & Automation/ Power Electronics/ Power Electronics & Drives/ Control Systems/ Instrumentation and Control Systems/ Instrumentation Engineering/ Applied Electronics and Instrumentation/ Biomedical Engineering/ Computer Controlled Industrial Power/ Avionics Engineering/ Guidance and Navigation Control/ High Voltage Engineering/ Control and Automation, with minimum 60% marks (CGPA 6.0/10) [For SC/ST/PWD candidates, the minimum mark is 55% (CGPA 5.5/10)]. Apart from this, the candidates should possess minimum 60% marks (CGPA 6.0/10) or equivalent in their Bachelor's degrees

							as well [For SC/ST/PWD candidates, the minimum requirement is 55% marks (CGPA 5.5/10)].
632	QIP0065	National Institute of Technology (NIT) Engg., Calicut	Ph.D Engineering	Electronics & Communication Engineering	DN000328	1. Electronics Design and Technology: Embedded System Design, EMI/ EMC, Control System Design, Biomedical System Design, System Design for Signal Processing and Communication 2. Microelectronics and VLSI Design: Power Management in IC Design, Analog & Mixed-signal IC design, Semiconductor Device modeling, Micro fabrication Technology, Micro/Nano Electro Mechanical System MEMS/NEMS, VLSI architectures for Signal Processing and Communication 3. Telecommunication: Wireless Communications and Networks, OFDM/MIMO and Massive MIMO, 5G Wireless Communications, Cryptography and Secure Communication, RF/Microwave, Coding Theory and Applications, Distributed Computing and Content Delivery 4. Signal Processing: Speech/ Audio / Image / Video	M.E./M. Tech. Degree in relevant streams of Electrical & Electronics Engineering/ Electronics Engineering/ Electronics & Communication Engineering/ Computer Science Engineering with minimum 60% marks (CGPA 6.0/10) [For SC/ST/PWD candidates, the minimum mark is 55% (CGPA 5.5/10)]. Apart from this, the candidates should possess minimum 60% marks (CGPA 6.0/10) or equivalent in their Bachelor's degrees as well [For SC/ST/PWD candidates, the minimum requirement is 55% marks (CGPA 5.5/10)].

						Processing, Signal Theory, Compressed Sensing/ Sparse Signal Processing, Multi-rate Signal Processing, Biomedical Signal Processing, Radar/Array Signal Processing, Machine Learning, Computer Vision, Deep Learning, VLSI Architectures for Signal Processing & Deep Learning.	

633	QIP0065	National Institute of Technology (NIT) Engg., Calicut	Ph.D Engineering	Mechanical Engineering	DN000329	1. Industrial Engineering and Management: Ergonomics and Product Design, Supply Chain Management, Marketing Management, Human Resource Management, Data Science Applications in Operations Management 2. Machine Design: Computational Mechanics, Robotics, Tribology, Machine Dynamics and Vibrations, Nano- and Micro-mechanics, Product Design 3. Materials and Manufacturing: Macro and Micro Machining, Modern Machining, Metrology, CAD/CAM, Composite Materials, Ferrous and Non-Ferrous Metallurgy, Materials for Electronics Application, Additive Manufacturing/3D printing, Digital Manufacturing and Design, Automation of Manufacturing Functions 4. Thermal and Energy Engineering: Renewal Energy Technologies, Energy Conservation, Fuel Cells and Hydrogen Technology, Computational Fluid Dynamics, Heat Pipes, Cryogenics, Jets and Flow Acoustics, Combustion and Fire Safety, Fluid-Structure Interactions, Multi-phase Flows, High Performance Computing, Lattice Boltzmann Modeling, High Speed Flows, Turbo-machinery, Internal Combustion	M.E./M. Tech. Degree in Mechanical Engineering in the relevant fields of specialization with minimum 60% marks (CGPA 6.0/10) [For SC/ST/PWD candidates, the minimum mark is 55% (CGPA 5.5/10)]. Apart from this, the candidates should possess minimum 60% marks (CGPA 6.0/10) or equivalent in their Bachelor's degrees as well [For SC/ST/PWD candidates, the minimum requirement is 55% marks (CGPA 5.5/10)].

						Engines, Convection and Radiation Heat Transfer.	
634	QIP0065	National Institute of Technology (NIT) Engg., Calicut	M.Tech	Chemical Engineering	DN000334	Chemical Engineering	B.E./B.Tech. in Chemical Engineering/ Chemical Technology/ PetroChemical Engineering/ PetroleumEngineering/Petrochemical Technology/Biotechnology/Polymer Technology/ Plastic Technology/Chemical&Electrochemical Engineering/Pharmaceutical Technology/Food Technology/Ceramic Technology/ Rubber and Plastic Technology/ Rubber Technology from an approved Institute/University with minimum 60% marks (or CGPA 6.5/10) for GEN/GEN-EWS/OBC and 55% marks (or CGPA 6.0/10) for SC/ST/PwD categories.
635	QIP0065	National Institute of Technology	M.Tech	Civil Engineering	DN000336	Structural Engineering, Traffic and Transportation Planning, Offshore Structures,	B.E./B.Tech. in Civil Engineering from an approved Institute/University with minimum 60% marks (or CGPA 6.5/10) for GEN/GEN-EWS/OBC and 55% marks (or CGPA 6.0/10) for SC/ST/PwD categories

		(NIT) Engg., Calicut				Environmental Geotechnology, Water Resources Engineering	
636	QIP0065	National Institute of Technology (NIT) Engg., Calicut	M.Tech	Computer Science & Engineering	DN000339	Computer Science and Engineering, Computer Science & Engg. (Information Security)	B.E./B.Tech. in Computer Science & Engineering/ Information Technology/ I class MCA from an approved Institute/University with minimum 60% marks (or CGPA 6.5/10) for GEN/GEN-EWS/OBC and 55% marks (or CGPA 6.0/10) for SC/ST/PwD categories. Candidates applying for M. Tech. admission with MCA should have minimum 60% marks (or CGPA 6.5/10) for GEN/GEN- EWS/OBC and 55% marks (or CGPA 6.0/10) for SC/ST/PwD categories, in both MCA and undergraduate degree.
637	QIP0065	National Institute of Technology (NIT) Engg., Calicut	M.Tech	Electrical Engineering	DN000340	Instrumentation and Control Systems, Power Systems, Power Electronics, Industrial Power and Automation, High Voltage Engineering	B.E./B.Tech. in Electrical Engineering/Electrical & Electronics Engineering/Instrumentation & Control Systems/Applied Electronics & Instrumentation Engg./Electronics & Instrumentation/Instrumentation from an approved Institute/University with minimum 60% marks (or CGPA 6.5/10) for GEN/GEN-EWS/OBC and 55% marks (or CGPA 6.0/10) for SC/ST/PwD categories.
638	QIP0065	National Institute of Technology (NIT) Engg., Calicut	M.Tech	Electronics & Communication Engineering	DN000343	Electronics Design and Technology, Microelectronics & VLSI Design, Telecommunication, Signal Processing	B.E./B.Tech. in Electronics Engg./Electronics & Communication /Applied Electronics & Instrumentation or allied disciplines from an approved Institute/University with minimum 60% marks (or CGPA 6.5/10) for GEN/GEN-EWS/OBC and 55% marks (or CGPA 6.0/10) for SC/ST/PwD categories or B.E./B.Tech. in Electronics Engg./Electronics & Communication /Applied Electronics & Instrumentation or allied disciplines from an approved Institute/University with minimum 60% marks (or CGPA 6.5/10) for GEN/GEN-EWS/OBC and 55% marks (or CGPA 6.0/10) for SC/ST/PwD categories or B.E./B.Tech. in Electronics Engg./Electronics & Communication /Applied Electronics & Instrumentation or allied disciplines from an approved Institute/University with minimum 60% marks (or CGPA 6.5/10) for GEN/GEN-EWS/OBC and 55% marks (or CGPA 6.0/10) for SC/ST/PwD categories or B.E./B.Tech. in Electronics Engg./Electronics &

							Communication /Applied Electronics & Instrumentation or allied disciplines from an approved Institute/University with minimum 60% marks (or CGPA 6.5/10) for GEN/GEN-EWS/OBC and 55% marks (or CGPA 6.0/10) for SC/ST/PwD categories.

639	QIP0065	National Institute of Technology (NIT) Engg., Calicut	M.Tech	Mechanical Engineering	DN000367	Industrial Engineering and Management, Thermal Sciences, Manufacturing Technology, Energy Engineering and Management, Materials Science and Technology, Machine Design	B.E./B.Tech. in Mechanical Engineering/Aerospace Engineering/ Agricultural Engineering/ Automobile Engineering/ Material Science & Engineering/ Manufacturing Engineering/ Mechatronics/ Metallurgical Engineering/ Industrial Metallurgy/ Production Engineering/ Production & Industrial Engineering/ Production & Management/Textile Engineering & Fiber Science / Industrial Engineering from an approved Institute/University with minimum 60% marks (or CGPA 6.5/10) for GEN/GEN-EWS/OBC and 55% marks (or CGPA 6.0/10) for SC/ST/PwD categories or B.E./B.Tech. in Mechanical Engineering/Aerospace Engineering /Aeronautical/ Automobile/ Energy/ Manufacturing/ Nuclear/ Production Engineering from an approved Institute/University with minimum 60% marks (or CGPA 6.5/10) for GEN/GEN-EWS/OBC and 55% marks (or CGPA 6.0/10) for SC/ST/PwD categories or B.E./B.Tech. in Mechanical Engineering/ Automobile/ Manufacturing/ Material Science & Engineering/ Mechatronics/ Metallurgical/ Production Engineering/ Production & Industrial Engineering/ Production & Management from an approved Institute/University with minimum 60% marks (or CGPA 6.5/10) for GEN/GEN-EWS/OBC and 55% marks (or CGPA 6.0/10) for SC/ST/PwD categories or B.E./B.Tech. in Mechanical Engineering/ Chemical Engineering/ Aeronautical/ Aerospace/ Automobile/ Energy Engineering/ Nuclear Engineering/ Renewable Energy from an approved Institute/University with minimum 60% marks (or CGPA 6.5/10) for GEN/GEN-EWS/OBC and 55% marks (or CGPA 6.0/10) for SC/ST/PwD categories or B.E./B.Tech. in Mechanical Engineering/ Automobile/Material Science & Engineering/ Engineering Physics/ Manufacturing/ Mechatronics/ Metallurgical/ Industrial Metallurgy/ Nano Technology/ Production/ Production & Industrial Engineering/ Production & Management from an approved Institute/University with minimum 60% marks (or CGPA 6.5/10) for GEN/GEN-EWS/OBC and 55% marks (or CGPA 6.0/10) for SC/ST/PwD categories or B.E./B.Tech. in Mechanical Engineering/ Aerospace

							Engineering/ Aeronautical Engineering/ Automobile Engineering/Material Science & Engg../ Manufacturing Engineering/ Mechatronics/ Metallurgical Engineering/ Industrial Metallurgy/ Production Engg/Production & Industrial Engg./Production & Management from an approved Institute/University with minimum 60% marks (or CGPA 6.5/10) for GEN/GEN-EWS/OBC and 55% marks (or CGPA 6.0/10) for SC/ST/PwD categories.
640	QIP0065	National Institute of Technology (NIT) Engg., Calicut	M.Tech	Material Science and Engineering	DN000368	Nanotechnology	B.E./B. Tech. in Mechanical Engg/Chemical Engg/ Production Engg/ Material Science & Engg. with minimum 60% marks (or CGPA 6.5/10) for GEN/GEN-EWS/OBC and 55% marks (or CGPA 6.0/10) for SC/ST/PwD categories.

641	QIP0065	National Institute of Technology (NIT) Engg., Calicut	Ph.D Engineering	Material Science and Engineering	DN000369	Solar Thermal Systems, Solar Fuels, Thermal Management of Devices, Emerging Photovoltaic technologies, Perovskite solar cells, Pyrolyzed carbon materials and material characterization, Nano-materials and their applications, Nano-fluids, Photo Catalysis/ Water Splitting, Biomaterials, Corrosion and Wear Resistant Coating, Nano Composites for Energy, Nanocomposites and Nanosensors, Surface Modifications and Coating Techniques (Metals), Biodegradable Metals, Lightweight metallic systems, Electrospinning, Nanocomposites, Medical Materials (Metals And alloys), Affordable Healthcare , Magnesium based Hydrogen storage.	M.E./M. Tech. Degree in the appropriate branch of study /Nanoscience and Technology with minimum 60% marks (CGPA 6.0/10) [For SC/ST/PWD candidates, the minimum mark is 55% (CGPA 5.5/10)] OR Master's degree in Chemistry/Physics/Life science/Nanoscience and Technology/ any other relevant disciplines related to major areas of research available in the department with minimum 60 % marks (CGPA 6.0/10) or equivalent, [for SC/ST/PWD candidates, the minimum mark is 55% (CGPA 5.5/10)] Apart from this, the candidates should possess minimum 60% marks (CGPA 6.0/10) or equivalent in their Bachelor's degrees as well [For SC/ST/PWD candidates, the minimum requirement is 55% marks (CGPA 5.5/10)].
642	QIP0065	National Institute of Technology (NIT) Engg., Calicut	Ph.D Management	Management Studies	DN000390	Management & Social Sciences: Finance, Human Resources and Behavioural Sciences, Quantitative Techniques and Operations Management, Data Sciences & Analytics, Marketing, Economics Strategy, Entrepreneurship, Technology Management, Health Business & Policy, Public Policy and Public Administration Humanities (English): English Studies, ELT, Cultural Studies, Indian Writing in English and Translations, Postcolonial	Candidates should possess minimum 60% marks (CGPA 6.0/10) or equivalent both in Bachelor's and Master's degrees in a relevant area from an Institution recognized by UGC/AICTE [For SC/ST/PWD candidates, the minimum requirement is 55% mark (CGPA 5.5/10) or equivalent both in Bachelors and Masters degrees. Candidates shall be required to have passed both the bachelor's and Master's degrees in regular full-time mode.

						Studies, Dalit Studies, Canadian Literature, Comparative Literature, Literary Theories, Theatre and Drama, and Art Management	
643	QIP0067	PDPM - Indian Institute of Information Technology, Design and Manufacturing (IIITDM), Jabalpur	Ph.D Engineering	Computer Science & Engineering	DN000746	Computer Sciences, AI and ML	ME/MTech
644	QIP0067	PDPM - Indian Institute of Information Technology, Design and Manufacturing (IIITDM), Jabalpur	Ph.D Engineering	Electronics & Communication Engineering	DN000747	ECE, Signal Processing, VLSI	MTech/ME
645	QIP0067	PDPM - Indian Institute of Information Technology, Design and Manufacturin	Ph.D Engineering	Mechanical Engineering	DN000748	All Specialization of Mechanical Engineering	ME/Mtech

		g (IIITDM), Jabalpur					
646	QIP0067	PDPM - Indian Institute of Information Technology, Design and Manufacturing (IIITDM), Jabalpur	Ph.D Engineering	Design	DN000749	All specilaization of design	MDes
647	QIP0069	National Institute of Technology (NIT), Durgapur	M.Tech	Electrical Engineering	DN000006	1.Power Electronics and Machine Drives 2.Power Systems 3.Instrumentation and Control	7.5 CGPA (on a 10-point scale) or 70% for B. Tech. or equivalent in relevant discipline
648	QIP0069	National Institute of Technology (NIT), Durgapur	M.Tech	Biotechnology	DN000143	Biotechnology	7.5 CGPA (on a 10-point scale) or 70% for B. Tech. or equivalent in relevant discipline.
649	QIP0069	National Institute of Technology (NIT), Durgapur	M.Tech	Civil Engineering	DN000145	1.Structural Engineering 2. Geotechnical Engineering	7.5 CGPA (on a 10-point scale) or 70% for B. Tech. or equivalent in relevant discipline.
650	QIP0069	National Institute of Technology (NIT), Durgapur	M.Tech	Computer Science & Engineering	DN000148	Computer Science & Engineering	7.5 CGPA (on a 10-point scale) or 70% for B. Tech. or equivalent in relevant discipline.
651	QIP0069	National Institute of Technology (NIT), Durgapur	M.Tech	Chemical Engineering	DN000150	1. Energy Resources and Sustainable Environmental Engineering 2.Chemical Engineering	7.5 CGPA (on a 10-point scale) or 70% for B. Tech. or equivalent in relevant discipline.

652	QIP0069	National Institute of Technology (NIT), Durgapur	M.Tech	Electronics & Communication Engineering	DN000152	1.Micro - Electronics & VLSI 2.Telecommunication Engineering	7.5 CGPA (on a 10-point scale) or 70% for B. Tech. or equivalent in relevant discipline.
653	QIP0069	National Institute of Technology (NIT), Durgapur	M.Tech	Mechanical Engineering	DN000155	1.Fluid Mechanics and Heat Transfer 2.Machine Design 3.Thermal Engineering	7.5 CGPA (on a 10-point scale) or 70% for B. Tech. or equivalent in relevant discipline.
654	QIP0069	National Institute of Technology (NIT), Durgapur	M.Tech	Metallurgical & Materials Engineering	DN000156	Metallurgy and Materials Technology	7.5 CGPA (on a 10-point scale) or 70% for B. Tech. or equivalent in relevant discipline.
655	QIP0069	National Institute of Technology (NIT), Durgapur	Ph.D Engineering	Biotechnology	DN000157	Microbial biotechnology, food biotechnology, nano biotechnology Bioprocess engineering, Bio- fuels, Heavy metal removal, fermentation.	M.Tech/ME/M. Pharm/ Msc in relevant discipline with at least 6.5 CGPA or 60 percent marks in aggregate in the M.Tech/M.E. level
656	QIP0069	National Institute of Technology (NIT), Durgapur	Ph.D Engineering	Chemical Engineering	DN000158	Environment, Energy, Membrane Technology, Biochemical Reaction Engg. Multi Phase Flow, Transport Phenomena.	M.Tech/ M.E in relevant discipline with at least 6.5 CGPA or 60percent marks in aggregate in the M.E/M.Tech. level in relevant discipline
657	QIP0069	National Institute of Technology (NIT), Durgapur	Ph.D Engineering	Civil Engineering	DN000159	Structural Engineering, Geotechnical Engineering, water resources Engineering, Environmental Engineering, Remote Sensing & GIS, Transportation Engineering.	M.Tech/ M.E in relevant discipline with at least 6.5 CGPA or 60percent marks in aggregate in the M.E/M.Tech. level in relevant discipline
658	QIP0069	National Institute of Technology (NIT), Durgapur	Ph.D Engineering	Computer Science & Engineering	DN000160	Big data analysis, integrity and migration in chip Multiprocessors.	M.Tech/ M.E in relevant discipline with at least 6.5 CGPA or 60percent marks in aggregate in the M.E/M.Tech. level in relevant discipline .

659	QIP0069	National Institute of Technology (NIT), Durgapur	Ph.D Engineering	Electronics & Communication Engineering	DN000161	Antenna/ Digital signal processing/ MEMS/Nano scale Semiconductor Device/power line communication/ Resistivity memory devices/ RF and microwave Engineering semiconductor process Technology/ underwater acoustic communication/ VLSI/wireless Communication/ wireless relays and space time coding.	M.Tech/ M.E in relevant discipline with at least 6.5 CGPA or 60percent marks in aggregate in the M.E/M.Tech. level in relevant discipline .
660	QIP0069	National Institute of Technology (NIT), Durgapur	Ph.D Engineering	Electrical Engineering	DN000162	Power System, Power Electronics & Machine Drives, Control Systems, High Voltage Engineering, Instrumentation & Control.	M.Tech/ M.E in relevant discipline with at least 6.5 CGPA or 60percent marks in aggregate in the M.E/M.Tech. level in relevant discipline .
661	QIP0069	National Institute of Technology (NIT), Durgapur	Ph.D Engineering	Mechanical Engineering	DN000163	Iridology, Fluid Mechanics, CFD, Micro Fluidics, Simulation and modelling of pipe line network.	M.Tech/ M.E in relevant discipline with at least 6.5 CGPA or 60 percent marks in aggregate in the M.E/M.Tech. level in relevant discipline .
662	QIP0069	National Institute of Technology (NIT), Durgapur	Ph.D Engineering	Metallurgical & Materials Engineering	DN000164	Process Metallurgy/ Ferrous Processing/ Physical Metallurgy/ Heat Treatment and phase Transformation/ Mechanical Metallurgy/ Aqueous and High Temperature corrosion/ Power Metallurgy/ Composites and Ceramics/ Meterials Characterization/ Simulation and modelling in Materials.	M.Tech/ M.E in relevant discipline with at least 6.5 CGPA or 60percent marks in aggregate in the M.E/M.Tech. level in relevant discipline .

663	QIP0070	National Institute of Technology (NIT), Agartala	Ph.D Engineering	Civil Engineering	DN000192	Structural Engineering Transportation Engineering Geotechnical Engineering Environmental Engineering Water Resource Engineering	Master ‘s Degree in Engineering/ Technology or equivalent in an appropriate area with a minimum CGPA of 6.5 out of 10 or equivalent (60% of marks) Or Bachelor’s degree in Engineering / Technology with an excellent academic record and with CGPA of at least 9.0 out of 10 (85% of Marks). Candidates must have valid GATE score.
664	QIP0070	National Institute of Technology (NIT), Agartala	Ph.D Engineering	Electrical Engineering	DN000193	Power System Engineering Power Electronics & Drives Instrumentation Integrated Energy System Non Linear Optics	Master ‘s Degree in Engineering/ Technology or equivalent in an appropriate area with a minimum CGPA of 6.5 out of 10 or equivalent (60% of marks) Or Bachelor’s degree in Engineering / Technology with an excellent academic record and with CGPA of at least 9.0 out of 10 (85% of Marks). Candidates must have valid GATE score
665	QIP0070	National Institute of Technology (NIT), Agartala	Ph.D Engineering	Electronics & Communication Engineering	DN000194	VLSI Communication Engineering	Master ‘s Degree in Engineering/ Technology or equivalent in an appropriate area with a minimum CGPA of 6.5 out of 10 or equivalent (60% of marks) Or Bachelor’s degree in Engineering / Technology with an excellent academic record and with CGPA of at least 9.0 out of 10 (85% of Marks). Candidates must have valid GATE score.
666	QIP0070	National Institute of Technology (NIT), Agartala	Ph.D Engineering	Production Engineering	DN000195	Welding Foundry and Metal Casting, Application of Soft Computing Technique Metal Forming and Foundry Composite Material I C Engine Alternative Fuel Multi –criteria Decision Making	Master ‘s Degree in Engineering/ Technology or equivalent in an appropriate area with a minimum CGPA of 6.5 out of 10 or equivalent (60% of marks) Or Bachelor’s degree in Engineering / Technology with an excellent academic record and with CGPA of at least 9.0 out of 10 (85% of Marks). Candidates must have valid GATE score.

						Adv. Fluidics Case Based Reasoning	
667	QIP0070	National Institute of Technology (NIT), Agartala	Ph.D Engineering	Mechanical Engineering	DN000196	Thermal Science & Engineering Manufacturing Science & Engineering Machine Design Automotive Engineering IC Engine	Master 's Degree in Engineering/ Technology or equivalent in an appropriate area with a minimum CGPA of 6.5 out of 10 or equivalent (60% of marks) Or Bachelor's degree in Engineering / Technology with an excellent academic record and with CGPA of at least 9.0 out of 10 (85% of Marks). Candidates must have valid GATE score.
668	QIP0070	National Institute of Technology (NIT), Agartala	M.Tech	Civil Engineering	DN000725	Geotechnical Engineering, Structural Engineering, Environmental Engineering, Transportation, Water Resources Engineering, Seismic Science & Engineering, Hydro Informatics Engineering	Civil Engineering / Highway Engineering / Transportation Engineering / Transportation Urban Planning C Engineering & Planning/ C V Technology/ C & Transportation Engineering. with 60 % marks or CPI CGPA of 6.5 at a scale of 10 for General/OBC /EWS category candidates and 55%o marks or CPI of 6.0 at a scale of 10 for SC/ST/PH candidates

669	QIP0070	National Institute of Technology (NIT), Agartala	Ph.D Engineering	Chemical Engineering	DN000742	Environmental Engineering, Waste water treatment, Adsorption, Bioremediation, Optimization and Design, Computational Fluid Dynamics, Multiphase Flow phenomena, Petroleum & Refinery Engg., Transport Phenomena, Energy, Environment, Chemical & Bio-Chemical Engineering,Microalgae and Cyanobacteria based Biofuels and Bioproducts, Agriculture Waste Management, Metabolic Network Analysis for Biological Systems, Systems Biology, Fermentation Technology Environmental Engineering and Pollution Control, Biotechnology, Electrochemical Technologies, Nanotechnology, Materials Engineering, Polymer Engineering, Reaction Engineering & Catalysis, Renewable Energy & Biofuels, Energy and Fuel Technology, Sustainable Engineering, Waste Utilization, and Biomass valorization, Water and wastewater treatment; Groundwater and wastewater treatment by membrane and adsorption processes; Utilization of solid waste, Membrane distillation; Assessment of groundwater and surface water quality, Arsenic removal by membrane processes	I. Master's Degree in Engineering/ Technology or equivalent in an appropriate area with minimum CGPA of 6.5 out of 10 point grading system or equivalent 65% marks. II. Bachelor's Degree in Engineering/ Technology from a centrally funded Technical Institute with an excellent academic record and with a CGPA of at least 9.0 out of 10 point grading system or equivalent 90% of marks. III. Master's Degree in relevant science discipline with a good academic record and of exceptional merit are eligible for relevant engineering discipline with minimum CGPA of 6.5 out of 10 point grading system or more or at least 65% of marks

670	QIP0070	National Institute of Technology (NIT), Agartala	M.Tech	Chemical Engineering	DN000743	CHEMICAL ENGINEERING	BE/B.Tech in Biotech Engineering BioEngineering, Biotechnology, Chemical Engineering Electro -chemical Engineering Energy Engineering Environmental Engineering Material science and Engineering Petro-Chemical Engineering Polymer science and rubber technology Polymer science and technology Polymer technology Bioengineering Biotechnology and biochemical engineering Chemical and polymer Engineering Chemical technology Food engineering Petroleum engineering Plastic and polymer engineering, Biotech EngineeringBiotechnology, Chemical Engineering, Electro -chemical Engineering, Energy Engineering, Environmental Engineering Material science and Engineering Petro-Chemical Engineering Polymer science and rubber technology, Polymer science and technology, Polymer technology Bioengineering, Biotechnology and biochemical engineering, Chemical and polymer Engineering Chemical technology, Food engineering Petroleum engineering, Plastic and polymer engineering, Plastic engineering, Pulp and paper technologyRubber technology, Polymer engineering and technology Chemical and alcohol engineering Biochemical and biotechnology engineering Chemical and bio engineering Chemical engineering (plastic and polymer) Food processing technology, Food technology Material science and technology Petrochem and petroleum refinery engineering Petro-chemical technology, Petroleum technology Polymer engineering, Polymer science and chemical technology Agriculture Engineering, Biochemical engineering, Biological Science and Bio Engineering, Bio Science and Bio Engineering Industrial Bio Technology Energy Science and Engineering Fuel Technology, Renewable Energy

							Environment & Pollution Control Environmental Science and Technology Environmental Science and Technology Oil and Paint Technology, Oil Techno Oils-Oleochemicals and surfactant technology Petrochemical Technology, Paint Technology Desalination and Water Treatment Pulp Technology with 60%, marks or CPI / CGPA of 6.5 at a scale of 10 for General/OBC/EWS category candidates and 55% marks or CPI of 6.0 at a scale of 10 for SC/ST/PH candidates
671	QIP0070	National Institute of Technology (NIT), Agartala	Ph.D Management	School of humanities, social science and management	DN000744	Marketing, Finance, HR	A Master degree in the appropriate branch with 65% marks

672	QIP0070	National Institute of Technology (NIT), Agartala	Ph.D Science	Mathematics	DN000759	Topology, Operations Research Fuzzy Topology, Bi-Topology Mathematical Biology OR, Fuzzy Optimization, Mathematical Modelling Topology, Multi Criteria Decision Making, Optimization Technique Quantum information and computation, Graph theory	M.Sc
673	QIP0070	National Institute of Technology (NIT), Agartala	Ph.D Science	Chemistry	DN000761	Organic Chemistry, Inorganic Chemistry, Physical Chemistry, Analytical Chemistry, Nano Chemistry ,Chemistry /Bio-Chemistry / Materials Science	Master Degree or Equivalent Degree with Good Academic score
674	QIP0070	National Institute of Technology (NIT), Agartala	Ph.D Science	Biosciences & Bioengineering	DN000762	Microbial and Enzyme Engineering; Bioseparation and Downstream Processing; Metabolic engineering; Animal and plant cell culture; Environmental Biotechnology; Biochemistry and molecular biology; Bioinformatics and Genomics; Biophotonics; Agricultural Microbiology; Electromicrobiology;	Full time regular/ permanent faculty members of AICTE approvedDegree Level institutes having, (a) Three-year teaching experience at graduate-level institutes. (b) A Master's degree in the appropriate branch. (c) In addition to the above minimum eligibility, criteria of respective QIP centre to be fulfilled.
675	QIP0070	National Institute of Technology (NIT), Agartala	M.Tech	Biosciences & Bioengineering	DN000763	Biotechnology and Biochemical Engineering	A Bachelor's degree in the appropriate branch.

676	QIP0070	National Institute of Technology (NIT), Agartala	M.Tech	Electronics & Communication Engineering	DN000765	M.Tech in Communication Engineering M.Tech in VLSI Design	For Communication . Engg BE/B.Tech in Eectronics & Electrical Communication Engg/ Eectroncs & Electrical Engg/ Eectroncs & Information System/ Electronics Communication & Instrumentation Engg/ Electroncs Design Technology/ Electroncs Science &Engg/ Nano Technology & Robotics/ VLSI System Design/ Radio Physics and Electronics/ Electronics & Telecom Engg/ Electronics & Communication Engg.l Electronics Engg. Applied Electronics & Instrumentation Engg./ Industrial Electronics Electronics Instrumentation and Control Engineering Electronics & Telemetrics Engineering M.Sc in Applied Electronics/ M.Sc n Radio Physics/ M.Sc n Electronics with 60% marks or CPI / CGPA of 6.5 at a scale of 10 for General/OBC/EWS category candidates an'd 55o/o marks or CPI of 6.0 at a scale of 10 for SC/ST/PH candidates. For VLSI (BE/B.Tech in Applied Electronics & Instrumentation Engg/ E ectronics & Communication Engg/ E ectron cs & Instrumentation Engg/ E ectron cs & Te.lecommunication Engg/ E ectron cs Engineerrng l Nano Technology/ Power Electronics/ Applied Electronics & Telecommunication Enee/ E ectronics & Avionics/

							E ectronics & Computer Engg/ E ectronics & Electrical Communication Engg/ E ectron cs & Electrical Engg/ E ectron cs & Information System/ Electronics Communication & Instrumentation Enp.p./ Electron cs Design Technology/ Electron cs Science &Engg/ Nano Technology

677	QIP0070	National Institute of Technology (NIT), Agartala	Ph.D Science	Physics	DN000767	- BROAD AREA OF RESEARCH: Plasma Physics, Semiconductor devices, nano technology, Experimental Condensed Matter Physics, Advanced Smart Multifunctional Materials, Multiferroic Polymer nanocomposites, Quantum effects in low dimensional semiconductor, Application of low dimensional materials for green energy and sustainable environment, Liquid crystals, Statistical mechanics, quantum many body problems, quantum field theory, cosmology, Novel Biomedical Sensor for Human Breath Monitoring,	I. Master's Degree in Engineering/ Technology or equivalent in an appropriate area with minimum CGPA of 6.5 out of 10 point grading system or equivalent 65% marks. II. Bachelor's Degree in Engineering/ Technology from a centrally funded Technical Institute with an excellent academic record and with a CGPA of at least 9.0 out of 10 point grading system or equivalent 90% of marks. III. Master's Degree in relevant science discipline with a good academic record and of exceptional merit are eligible for relevant engineering discipline with minimum CGPA of 6.5 out of 10 point grading system or more or at least 65% of marks

678	QIP0070	National Institute of Technology (NIT), Agartala	M.Tech	Mechanical Engineering	DN000776	Thermal Science & Engineering,Manufacturing Technology,Machine Design,Automotive Engineering,Material Science & Engineering	BE/ B.Tech in Mechanical Engineering,Mechanical Engineering / Production Engineering / Manufacturing Process/ Manufacturing Science and Engineering/ Manufacturing Engineering and Automation/ Manufacturing Process and Automation Engineering/ Mechanical Engineering (Design and Manufacturing)/ Mechanical Engineering (Manufacturing Engineering)/ Mechanical Engineering (Welding Technology)/ Production and Management/ Industrial Manufacturing Engineering/ Industrial and Production Engineering/ Advanced Manufacturing and Mechanical Systems Design/Applied Mechanics/ Computer Aided Design of Structures/ Engineering Design/ Manufacturing Process and Automation Engineering/ Mechanical and Automation Engineering/ Robotics and Automation/ Manufacturing Engineering and Automation/ Mechanical Engineering (Design and Manufacturing)/ Automation Engineering/ Automation and Robotics/ Automobile Engineering/ Mechanical Engineering/ Production Engineering/ Automotive Engineering/ Automotive Technology. Material Science & Engineering Metallurgical Engineering with 60% marks or CPI / CGPA of 6.5 at a scale of 10 for General/OBC/EWS category candidates and 55% marks or CPI of 6.0 at a scale of 10 for SC/ST/PH candidates

679	QIP0070	National Institute of Technology (NIT), Agartala	M.Tech	Electrical Engineering	DN000777	Power Electronics & Drives,Power System Engineering,Instrumentation Engineering,Integrated Energy System	BE/B.Tech in Control Engg/ Control & Electrical Engg / Electrical & Electronics Engineering/ Electrical & Instrumentation Engg/ Electrical Engg/ Electrical Engg (Power)/ Electrical Power Engg/ Electronics & Instrumentation Engineering/ Electronics & Telecom Engg/ Electronics Engineering / Energy Engineering/ Power Electronics/ Renewable Energy/ Electrical Engg & Industrial Control/ Electrical & Instrumentation Engineering/ Electrical & Power Engg/ Electronics & Electrical Engg/ Electronics & Power Engg/ Energy Science & Engg/ Power Control & Drives/ Power Engg/ Electronics & Communication Engg. Instrumentation & Control Engg/ Instrumentation Engg/ Instrumentation Technology/ Renewable Energy/ Control & Instrumentation/ Control System Engg/ Electrical Engg & Industrial Control/ Electrical & Power Engg/ Electrical Instrumentation & Control Engg/ Electronic Instrumentation & Control Engg/ Electronics & Control System/ Electronics & Electrical Engg/ Electronics & Power Engg/ Electronics Instrument & Control/ Energy Science & Engg/ Instrumentation & Process control/ Power Engg/

							Electronics & Communication Engg/. Instrumentation Engineering/ Renewable Energy/ Electrical Engineering & Industrial Control/ Electrical & Instrumentation Engineering/ Electrical & Power Engineering/ Electronics & Electrical Engineering/ Energy Science & Engineering/ Power Engineering/ Solar & Alternate Energy/ Electrical & Computer Engineering/ Electrical & Electronics (Power System) Electrical & Mechanical Engineering/ with 60% marks or CPI / CGPA of 6.5 at a scale of 10 for General/OBC/EWS category candidates and 55% marks or CPI of 6.0 at a scale of 10 for SC/ST/PH candidates.
680	QIP0070	National Institute of Technology (NIT), Agartala	Ph.D Engineering	Computer Science & Engineering	DN000806	Visual inference and Image Processing NLP Cryptography	B. Tech with CGPA>9 Or M.Tech in any CSE Specialisation

						Networking Data Science	
681	QIP0070	National Institute of Technology (NIT), Agartala	M.Tech	Computer Science & Engineering	DN000807	1.Artificial Intelligence 2.Data Science 3.Cyber Security	B. Tech/ BE
682	QIP0070	National Institute of Technology (NIT), Agartala	M.Tech	Production Engineering	DN000809	Computer integrated manufacturing	BE/B.Tech in Industrial Manufacturing/ Industrial & Production Engineering/ Industrial Engg/ Industrial Engg & Management/ Manufacturing Engg ./ Mechanical Engineering/ Production Engineering / Production Engineering & Management/ Advance Manufacturing & Systems Design/ Automation & Robotics/ Automotive Engg/ Automotive Technology/ Industrial & Management Engg/ Industrial Management/ Machine Engg./ Machine Tool Engg./ Manufacturing Process/ Manufacturing Sc & Engg/ Mechanical & Automation Engg/ Mechanical Engg & Automobile/ Manufacturing Technology/ Mechanical Engineering (Design & Manufacturing). with 60% marks or CPI / CGPA of 6.5 at a scale of 10 for General/OBC/EWS category candidates and 55% marks or CPI of 6.0 at a scale of 10 for SC/ST/PH candidates.

683	QIP0071	National Institute of Technology (NIT), Srinagar	Ph.D Engineering	Civil Engineering	DN000115	Structural Engineering: Structural Dynamics and Earthquake Engineering structural behaviour of Reinforced Concrete, Earthquake Engineering. Microstructural Characterization of Concrete, Corrosion Mitigation in RC Structures. Finite Element Modelling, Double skin Tubular Columns, Machine learn applications, Structural system based Evaluation of composite Steel Girder Bridges, Curved and Straight Corrugated Steel Girders, Asset Management and Health Monitoring Concrete Technology, High-Performance Concrete, Reactive Powder Concrete, Eco-friendly Concrete Construction Productivity, Contract Management, Building Information Modelling, Construction Project Monitoring, Lean Construction, Alternate Dispute Resolution, Human Factors and Ergonomics, Prefabrication Technology Water Resources & Environmental Engineering: Hydrology, Sediment transport, Climate change Water Resources Engineering, Hydraulics structures, Hydrological Modelling Water	ME/ M. Tech in the relevant field of Engineering with a minimum CGPA of 6.5 or not less than 60% for General/OBC/EWS Category and for SC/ST minimum CGPA of 6.0 Or not less than 55% marks at the Master's level or any other equivalent qualification recognized by the Institute. In addition to the above, the following qualifications are also eligible for Engineering Geology and Geo-Science Specializations only: Master's degree in Applied Geology/ Geology/ Earth Sciences or an allied area satisfying each of the following criteria: A minimum of 65% marks or 6.5 CGPA in the Master's degree, and First division in the Bachelor's degree, AND Valid GATE score or UGC / CSIR NET in relevant specialization tenable for the year of registration.

						Quality Modelling, Solid Waste Management, Soft Computing in Water Resources Engineering, Water Resources, Sediment Transport, Air water & land pollution, Environmental Engineering, GIS And RS, Hydropower plants, Dams, Penstocks etc, irrigation & flood control, Water Resources systems, Hydrologic extremes, Stochastic hydrology, Fate and removal of pollutants in engineered and natural systems, Water and wastewater treatment, Wastewater reuse and public perception Geotechnical Engineering: Ground improvement, Environmental Geotechnics and Constitutive modelling of soils, Pavement Materials, Foundations, Rock Mechanics Geotechnical Earthquake Engineering, Liquefaction, Dynamic Properties of Soils, Characterizations of Geomaterials, Experimental Geotechnics. Transportation Engineering: Pavement Engineering, Material Characterization, Traffic Engineering Geology and Rock Mechanics / Geosciences:	

						Rock Mechanics, Engineering Geosciences, Remote Sensing & GIS	

684	QIP0071	National Institute of Technology (NIT), Srinagar	Ph.D Engineering	Electrical Engineering	DN000119	Power & Energy Systems: This covers the following areas of research:- Power System Dynamics & Control, Stand Alone Power System, Power system operation & Optimization, Renewable energy systems (solar, wind and Hybrid), Probabilistic Power System, Uncertainty quantifications, Deregulation, Distributed Generation, Applications of Energy Storage Devices to Power System. Flexible AC Transmission System, Energy System Planning & Auditing, Loss Allocation, Power Systems Stability & Control. Power Electronics & Electrical Drives: Power Electronics, Power Quality, Improved Power Quality Convertors, Custom Power Devices (DSTATCOM, DVR & UPQC), Active Power Filters, Multi-level converters, Matrix converters, Electric Drives, Flexible AC Transmission Systems, Isolated Bidirectional DC-DC converters, AC – DC Microgrids, Smart Grids, Special Machines & Control, Modulation Techniques, Electric Vehicles, Control of Renewable Energy Systems, Variable frequency transformer.	ME/ M. Tech in the relevant field of Engineering with a minimum CGPA of 6.5 or not less than 60% for General/OBC/EWS Category and for SC/ST minimum CGPA of 6.0 Or not less than 55% marks at Master's level or any other equivalent qualification recognized by the Institute.

						Control & Automation: Control Theory, Model Order Reduction of Linear, Non-Linear and Parametric systems, Finite Element modelling of Distributed Parameter systems, efficient Algorithms for fast simulation of power electronics circuits & power systems, vector control of electric drives, Disease Modelling, Artificial Intelligence and Deep Learning.	

685	QIP0071	National Institute of Technology (NIT), Srinagar	Ph.D Engineering	Electronics & Communication Engineering	DN000125	Digital Image Processing, Biometrics, IOT, Network Security, Wireless sensor networks, Optical Fibre Communication Systems, Semiconductor Optoelectronic devices, RF Communication Systems, Wireless Communications, Cognitive Radio, Machine Learning for Wireless Communication, Cyber-Physical Systems, Quantum computing, Biomedical signal processing, Wavelets & filter banks, Architectural Design of DSP systems, VLSI Signal Processing Architectures, FPGA based Design, Reconfigurable Computing, VLSI memory circuit design, Analog CMOS, and Bipolar Circuit Design, Semiconductor device physics & simulation, Novel Semiconductor Microelectronics Devices, Semiconductor Device modelling & Circuit simulation, Compact device modelling for the Industry, RF Characterization and Modelling, Emerging Nanoelectronic technologies, Organic / Molecular Electronics, Inorganic / Organic photovoltaic's, Application of Machine learning in Semiconductor devices.	ME/M. Tech in the relevant field of Engineering with a minimum CGPA of 6.5 or not less than 60% for General/OBC/EWS Category and for SC/ST minimum CGPA of 6.0 Or not less than 55% marks at Master's level or any other equivalent qualification recognized by the Institute.

686	QIP0071	National Institute of Technology (NIT), Srinagar	Ph.D Engineering	Mechanical Engineering	DN000130	Materials Tribology, Bearing Tribology and Synthesis and Analysis of Mechanism Wear modelling. Tribology of advanced ceramics & Nano Ceramics, Life Cycle Engineering. Biomaterial, Friction Material, Condition monitoring, Nano lubrication, Smart Structures, Mathematical modelling, Material Characterisation, Machining, Optimization and Modelling, Computational Mechanics, FEM, Thermo elasticity and Second Sound Fracture Mechanics and Material Fatigue, Aircraft wing vibration, Smart Structures, Finite elements, Material Characterisation, Experimental Fluid Mechanics, Heat Transfer Augmentation, Design of Thermal Systems, Engine Design To Meet Future Emission Norms, Turbo-charging And Downsizing Of Spark Ignition Engines. Alternative Fuels For I C Engines. Computational Fluid Dynamic Applications In Engine Design, Haptics and Control Systems, MEMS Modelling and Simulation, Robotics, Multibody Dynamics, Mechatronics, Fuel Cells (DMFCs) and Membrane synthesis, Industrial Engineering and Operations Management, Value Engineering, Project management, Quality control, Decision Sciences, Ergonomics,	ME/M. Tech in the relevant field of Engineering with a minimum CGPA of 6.5 or not less than 60% for General/OBC/EWS Category and for SC/ST minimum CGPA of 6.0 Or not less than 55% marks at Master's level or any other equivalent qualification recognized by the Institute.

						Innovations and Entrepreneurship, Data mining and Manufacturing Strategies, Utilization of Biofuel in I C Engine. Engine Performance, Emission and Combustion Thermal Energy Systems, Welding, Materials Processing, Machining, Optimization, Production., Composite Materials, Computational Methods, Experimental Fluid Mechanics, Machinability of Metal Matrix Composites; Conventional and non-traditional machining of composite materials, Water Generation from Atmospheric air, Desiccant Materials, Low and Medium Temperature Applications of Solar Energy, Bio-fuel in IC Engine.	

687	QIP0072	G. B. Pant Institute of Engineering & Technology, Pauri	Ph.D Engineering	Civil Engineering	DN000015	Geotechnical Engineering, Soil Dynamics, Laterally Loaded Pile near Sloping Ground, Climate Change, Soil-Structure Interaction, Seismic Analysis of Earth Retaining Structures, Flood Modeling, Disaster Management, Environmental Engineering, Water Quality Modelling (Surface and Subsurface), Air and Water Pollution Control, Solid Waste Management, Structural Health Monitoring, Rock Mechanics, Underground Excavation, Ground Improvement of Cohesionless Soils: Application of Confined Footings, Ground Improvement of Cohesive Soils: Applications of Stone Columns, Geomechanics of Municipal Solid Disposal.	M.Tech/M.E in Civil Engineering/ Earthquake Engineering or a similar discipline with first Division.
688	QIP0072	G. B. Pant Institute of Engineering & Technology, Pauri	Ph.D Engineering	Electrical Engineering	DN000016	Power Electronics, Electrical Drives, Power Quality, Renewable Energy Systems, Electric Vehicles, Signal & Image Processing, Biomedical Signal & Image Processing, Machine Learning, AI in Healthcare, Machine Modelling, Power Systems, Control Systems, and Instrumentation.	The applicant must have passed B.Tech/BE (Electrical Engineering or Electrical & Electronics Engineering or allied disciplines) with first Division AND M.Tech/M.E in Electrical Engineering, Bio-Medical Engineering or Renewable Energy, or a similar discipline with first Division.
689	QIP0072	G. B. Pant Institute of Engineering & Technology, Pauri	Ph.D Engineering	Computer Science & Engineering	DN000017	Image Processing, Signal Processing, Software Engineering, Biomedical Image & Signal Processing, Soft Computing, Artificial Intelligence & Machine Learning (AI & ML),	M.Tech/M.E in Computer Science and Engineering or Information Technology or Similar disciplines with first Division.

						Cyber Security, Internet of Things (IOT), Remote Sensing	
690	QIP0072	G. B. Pant Institute of Engineering & Technology, Pauri	Ph.D Engineering	Mechanical Engineering	DN000018	Production & Manufacturing, Industrial, Design, Thermal, Fluids, Renewable Energy, Materials, Composites, Metallurgy	The applicant must have passed First Class B.Tech/BE (Mechanical Engineering, Production Engineering, Manufacturing Engineering, or Industrial Engineering) with First class M.Tech/ME (Production, Industrial, Manufacturing, Thermal & Fluids, Design, CAD/CAM, Automation, Materials, Metallurgy)
691	QIP0072	G. B. Pant Institute of Engineering & Technology, Pauri	Ph.D Engineering	Electronics & Communication Engineering	DN000019	Microstrip Antennas, UWB, MIMO, 5G Antennas, Solid state Devices and circuits, Image Processing, Signal Processing, Software Engineering, Biomedical Image & Signal Processing, Artificial Intelligence & MachineLearning (AI & ML), Robust control & Automation, Modeling & simulation, Intelligent control & Instrumentation, Optical-OFDM systems, Optical Communication, Nano-Optics, Nano Materials, Analog Circuits design, Fractional order Analog Circuits and systems, Wireless Communication, Wireless Propagation Channel Modelling, Cognitive Radio	B. Tech/BE and MTech/M. E in ElectronicsEngineering or Electronics & Communication Engineering, Electrical & Electronics Engineering, or Electronics & Instrumentation or allied disciplines or a similar discipline with first Division at either master or bachelor level
692	QIP0072	G. B. Pant Institute of Engineering & Technology, Pauri	Ph.D Engineering	Biotechnology	DN000020	Molecular Biology, Genetics, Microbiology& Microbial Biotechnology, Agricultural Biotechnology, Plant Biotechnology, Biochemical Engineering, Biochemistry, Bioinformatics,	M.Tech degree in Biotechnology, Chemical/ Biochemical Engineering, Bioinformatics, Food Technology, Environmental Biotechnology, Biophysics, Pharmaceutical Biotechnology, Industrial Biotechnology, Microbial Technology, Biomedical Engineering, Nanotechnology, or any related disciplines with First division Or

						Nanobiotechnology Bioremediation and Environmental Biotechnology: Prospecting of Plants/ Microbes & their applications in wastewater treatment and agriculture.	M.Sc in any relevant discipline of Life science/ Biological science with First division
693	QIP0072	G. B. Pant Institute of Engineering & Technology, Pauri	M.Tech	Electrical Engineering	DN000096	Power Systems	B.Tech in Electrical Engineering (or similar branch) or equivalent.
694	QIP0072	G. B. Pant Institute of Engineering & Technology, Pauri	M.Tech	Electronics & Communication Engineering	DN000097	Digital Signal Processing, Electronics & Communication Engineering	B.Tech in Electronics & Communication Engineering (or similar branch) or equivalent.
695	QIP0072	G. B. Pant Institute of Engineering & Technology, Pauri	M.Tech	Biotechnology	DN000098	Biotechnology	B.Tech in Biotechnology (or similar branch) or equivalent
696	QIP0072	G. B. Pant Institute of Engineering & Technology, Pauri	M.Tech	Mechanical Engineering	DN000100	Production Engineering, Thermal Engineering	B.Tech in Mechanical Engineering (or similar branch) or equivalent.
697	QIP0072	G. B. Pant Institute of Engineering & Technology, Pauri	M.Tech	Civil Engineering	DN000101	Infrastructure Engineering, Geotechnology	B.Tech in Civil Engineering (or similar branch) or equivalent.

698	QIP0073	Indian Institute of Technology (IIT), Indore	Ph.D Engineering	Computer Science & Engineering	DN000612	Computer Networks/ Software Engineering/ Machine Learning and Applications/ Artificial Intelligence/ Hardware Security/ Algorithms/ Cyber Physical Systems/ Information Retrieval/Computational Science and Engineering and other relevant areas For more details, please visit to department website (http://cse.iiti.ac.in/)	Master's degree, preferably M. Tech/ME/MS(Research), in CSE, IT, Electronics, and Electrical Engineering/ Technology (with first division as defined the awarding Institute/ University).
699	QIP0073	Indian Institute of Technology (IIT), Indore	Ph.D Engineering	Electrical Engineering	DN000615	Communication, Signal and Image Processing / Nano Electronics / Power Electronics and Power Systems and other relevant areas For more details, please visit to department website (http://ee.iiti.ac.in/)	Masters' degree in Electrical/ Electronics/ Electronics & Communication / Physics / Instrumentation and Control Engineering / Material Science & Engineering or any other equivalent degree with specialization in the areas of communication and signal processing or micro/nanoelectronics & VLSI area (with first division as defined by the awarding Institute/University)
700	QIP0073	Indian Institute of Technology (IIT), Indore	Ph.D Engineering	Mechanical Engineering	DN000621	Design / Industrial/Manufacturing / Thermal-Science/ Production / Manufacturing/Materials /Metallurgy and other relevant areas For more details, please visit to department website (http://me.iiti.ac.in/)	Masters' degree in the Mechanical Engineering / Technology / Metallurgy Engineering / Energy Systems Engineering / Energy and Environment / Energy Engineering / Automobile Engineering / Thermal Engineering / Heat Power / Energy Materials / Fluids & Thermal Engineering / Cryogenics & Vacuum Technology / Hydraulic Engineering / Material Science and Engineering / Manufacturing Engineering / Industrial Engineering / Production Engineering / Reliability Engineering / Machine Design / Biotechnology / Bio Engineering / Biomedical Engineering / CAD/CAM (with first division as defined by the awarding Institute/ University)

701	QIP0073	Indian Institute of Technology (IIT), Indore	Ph.D Engineering	Civil Engineering	DN000622	Structural Engineering / Geotechnical Engineering / Water Resource Engineering / Environmental Engineering and other relevant areas For more details, please visit to department website (http://ce.iiti.ac.in/)	Masters' degree in the relevant Department of Science / Engineering / Technology in the relevant Department of engineering (with first division as defined by the awarding Institute/ University)
702	QIP0073	Indian Institute of Technology (IIT), Indore	Ph.D Engineering	Metallurgy Engineering and Materials Science	DN000623	Smart Material / Nano Materials / Functional Devices / Condensed Matter Physics / Device Physics / Computational Materials and other relevant areas For more details, please visit to department website (http://mems.iiti.ac.in/)	Masters' degree in the Department of Engineering / Technology (such as in Metallurgy / Materials Science and Engineering/ Mechanical/ Manufacturing/ Production Engineering/. Nanotechnology / Engineering Science / Engineering Physics / Ceramics Engineering / Electronics/ Chemical Engineering / Energy Science and Engineering/ Chemistry/ Physics/ Materials Science/ Applied Electronics/ Nanoscience and Technology (with first division as defined by the awarding Institute/ University)

703	QIP0073	Indian Institute of Technology (IIT), Indore	Ph.D Engineering	Biosciences & Biomedical Engineering	DN000624	Bio-sensors and Bio-electronics / Biomedical Signal Processing / Biofluid mechanics, CFD and Heat Transfer, Blood flow analysis, Non-Newtonian fluid flows / Biological / Networks / Bio photonics / Cancer Biology / Chromatin structure and gene regulation / Cytoplasmic flows / Detection and role of delay in large extended systems / Disease spreading, co-evolution and adaptation / Drug delivery systems, near-infra red fluorescence, nuclear Imaging and bio-conjugate chemistry / Human Factors / Molecular / Biology / Molecular Immunology / Photo-acoustic microscopy for biomedical applications / Photothermal response and photothermal imaging Design, synthesis and diagnostic applications of new targeting ligands for cancers and inflammatory diseases / Raman imaging and Spectroscopy / Systems Biology / Somatic hypermutation of immunoglobulin genes / Spectral analysis of gene expression profile of zebra-fish under various toxic/environmental perturbation/Spectral properties of directed networks / Synchronization of coupled dynamics on networks and its application to neurosciences/ Synthesis of Inhibitors for drug	Masters' degree in Life Sciences / Microbiology / Biotechnology / Bioinformatics / Physics / Biophysics / Chemistry / Biochemistry / Biomedical Science / Computer Science and Engineering / Electrical / Electronics/ Mechanical / Biomedical / Chemical / Biotechnology / Pharmaceutical Engineering / Agricultural Engineering (with first division as defined by the awarding Institute/ University)

						target and other relevant areas. For more details, please visit to department website (https://bsbe.iiti.ac.in/index.php/main)	
704	QIP0073	Indian Institute of Technology (IIT), Indore	Ph.D Engineering	Astronomy, Astrophysics and Space Engineering	DN000625	Astronomy and Astrophysics / Space Sciences and Engineering / Earth and Atmospheric Sciences / Instrumentation in Astronomy, Atmospheric and Space Sciences and other relevant areas. For more details, please visit to department website (https://aase.iiti.ac.in/)	Masters' degree in the relevant Department of Science/ Engineering/ Technology (with first division as defined by the awarding Institute/ University)

705	QIP0073	Indian Institute of Technology (IIT), Indore	Ph.D Science	Chemistry	DN000626	Inorganic Chemistry / Organic Chemistry / Physical Chemistry / Theoretical & Computational Chemistry and other relevant areas. For more details, please visit to department website (https://chemistry.iiti.ac.in/)	Master's degree in Chemistry or other fields relevant to Chemical Sciences (with first division as defined by the awarding Institute/University)
706	QIP0073	Indian Institute of Technology (IIT), Indore	Ph.D Science	Physics	DN000627	Condensed Matter Physics / High Energy Physics / Non-Linear Dynamics and Complex Networks and other relevant areas. For more details, please visit to department website (https://physics.iiti.ac.in/)	Masters' degree in Physics / Optoelectronics / Solid State Physics / Nanotechnology / Nano-sciences / Applied Physics or Applied Mathematics (with first division as defined by the awarding Institute/University)
707	QIP0073	Indian Institute of Technology (IIT), Indore	Ph.D Science	Mathematics	DN000628	Algebra / Applied Dynamical Systems and Modeling / Complex Analysis / Differential Equations / Harmonic Analysis / Mathematical Logic / Mechanics of Solids / Optimization / Probability and Statistics and other relevant areas. For more details, please visit to department website (https://math.iiti.ac.in/)	Masters' degree in Mathematics / Statistics / Computer Science or other field relevant to Mathematical Sciences (with first division as defined by the awarding Institute/ University)
708	QIP0073	Indian Institute of Technology (IIT), Indore	Ph.D Humanities	Humanities and Social Science	DN000629	Economics / English / Philosophy / History / Psychology / Sociology and other relevant areas. For more details, please visit to department website (http://hss.iiti.ac.in/main)	Master's degree (MA/MSc/MS/MPhil) in an HSS specialization / Masters' degree in Business Administration / Masters' degree in a Department of Engineering / Technology /Sciences (with first division as defined by the awarding Institute/ University)

709	QIP0073	Indian Institute of Technology (IIT), Indore	M.Tech	Electrical Engineering	DN000650	Communication & Signal Processing / VLSI Design and Nanoelectronics	Four-year Bachelor's degree or five-year integrated degree with first division (as defined by the awarding Institute/University) in Electrical/ Electronics and Communication/ Electronics and Instrumentation/ Telecommunication/ Computer Science and Engineering/ Information Technology/ Instrumentation and Control Engineering and other relevant area. For more details, please visit to the institute academic website (https://academic.iiti.ac.in/)
710	QIP0073	Indian Institute of Technology (IIT), Indore	M.Tech	Mechanical Engineering	DN000651	Advanced Manufacturing (AM) / Mechanical Systems Design / Thermal Energy Systems	Four -year Bachelor's degree or five -year integrated degree with first division (as defined by the awarding Institute/University) in Mechanical/ Production/ Industrial/ Manufacturing, Materials and Metallurgy/ Mechatronics/ Automobile Engineering and other relevant area. For more details, please visit to the institute academic website (https://academic.iiti.ac.in/)
711	QIP0073	Indian Institute of Technology (IIT), Indore	M.Tech	Metallurgy Engineering and Materials Science	DN000652	Materials Science and Engineering / Metallurgy Engineering	Four -year bachelor's degree or five -years integrated degree (with the first division as defined by the awarding Institute/University) in Materials Science/ Physics/ Chemistry/ Nanoscience/ Nanotechnology/ Engineering Science/ Engineering Physics/ Metallurgical Engineering /Chemical Engineering/ Metallurgy/ Materials Science and Engineering/ Mechanical/ Manufacturing/ Production Engineering or two years master's degree in Chemistry/ Physics/ Materials Science/ Nanoscience/ Nanotechnology and other relevant area. For more details, please visit to the institute academic website (https://academic.iiti.ac.in/)
712	QIP0073	Indian Institute of Technology (IIT), Indore	M.Tech	Astronomy, Astrophysics and Space Engineering	DN000653	Space Engineering	Four-year Bachelor's degree or five-year integrated degree (with first division as defined by the awarding Institute/ University) in Electronics and Communication/ Electronics/ Engineering Physics / Aerospace, or M.Sc. in Physics/ Electronics/ Atmospheric science and other relevant area. For more details, please visit to the institute academic website (https://academic.iiti.ac.in/)

713	QIP0074	Shri G. S. Institute Of Technology And Science, Indore	Ph.D Engineering	Civil Engineering	DN000858	Structural Engineering, Water Resources Engineering, Transportation Engineering, Environmental Engineering, Geotechnical Engineering, Construction Engineering	Master of Engineering or Master of Technology in any of above specialization
714	QIP0074	Shri G. S. Institute Of Technology And Science, Indore	Ph.D Engineering	Computer Science & Engineering	DN000860	Computer Science & Engineering, Information Technology, Data Science and Analytics, Machine Learning, Soft Computing, Data Mining, Advanced Databases, Computer Networks, Information and Cyber Security, Cloud Computing, Software Engineering	Master of Engineering or Technology in Computer Science & engineering, Information Technology, any of above mentioned discipline or equivalent
715	QIP0074	Shri G. S. Institute Of Technology And Science, Indore	Ph.D Engineering	Electronics & Telecommunications Engineering	DN000861	Electronics and Telecommunication Engineering, Wireless Communication, Stochastic Modelling, Game Theory Based Approach, Cognitive Radio, Antenna Designs, 5 G Antenna, THz Antennas, 6 G Antennas, MIMO Antennas, Signal Processing, Soft Computing, RF Microwave, Antenna Engineering, Tera Hertz Antenna, Soft Computing in RF & Microwave, Q_0 Sin Wireless Networks, MPLS Networks, Various Wireless Networks in IoT	Master of Engineering or Technology in any of above specialization, Electronics and Communication Engineering or Equivalent

716	QIP0074	Shri G. S. Institute Of Technology And Science, Indore	Ph.D Engineering	Electrical Engineering	DN000862	High Voltage, Power Electronics, Electrical Drives, Green Energy, Energy Audit, Power System, Optimization Techniques, Renewable Energy System, Reliability Applied to Power System, Computer Architecture, Embedded System, Power System Operation and Control, Solar Power Conversion System, Wind Energy Conversion Systems, Hybrid Energy, Smart Loads, Power Quality, Custom Power Devices, LED based lighting System, Smart Grid Technology, Demand Side Energy Management, Renewable Energy Systems, Microgrid	Master of Engineering or Technology in Electrical Engineering or any one of above disciplines or Equivalent
717	QIP0074	Shri G. S. Institute Of Technology And Science, Indore	Ph.D Engineering	Mechanical Engineering	DN000863	Mechanical Engineering Design, Thermal Engineering, CAD/CAM/CAE, Industrial Engineering and Management, Manufacturing Engineering, Fluid Mechanics, Automobile Engineering, Production Engineering, Vibration Engineering, Dynamics of Machine, Machine Design, CNC or similar Specialization	Master of Engineering or Technology in Mechanical Engineering or Industrial Production Engineering or any one of above mentioned discipline or Equivalent
718	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Aerospace Engineering	DN000443	Fluid dynamics and Aerodynamics, Computational Fluid Dynamics, Experimental methods, Aircraft structures, Composite structures and Smart structures, Structural dynamics and aeroelasticity, Aircraft propulsion,Thermal Sciences and Engineering, Combustion, Flight mechanics and control.	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master’s degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).

719	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Architecture, Planning and Design	DN000450	Universal Design, Building Automation and Management Systems, Building Materials and Composites, Urban design, City Planning, Computer Applications in Architecture and Planning, Disaster Responsive design and planning, Green Architecture, Energy Efficient and Cost-effective Building Technology, GIS and Remote Sensing, Heritage Studies and Conservation, Housing and Community Planning, Infrastructure Planning and Systems Management, Metropolitan Planning, Recreation and Tourism Planning, Regional Planning, Spatial Environmental Planning and Design,Transportation Planning and Traffic Engineering, Urban Development Management, Urban Open Space, Water Sensitive Planning.	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master’s degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).
720	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Biotechnology	DN000452	Bioinformatics, Tissue Engineering, Bioreactor /Bioprocess Development, Enzyme Technology, Plant Biotechnology Down stream processing, Genetics, Environmental Biotechnology, Cell/Molecular Biology, Biochemistry, r-DNA Technology, Structural Biology.	Minimum 60% of marks (or equivalent Grade point average) is required in case of M.Sc./M.Tech degree.

721	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Chemical Engineering	DN000453	Transport Operations, Membranes and other Separation Processes, Reaction Engineering, Particulate Technology, Process Dynamics & Control, Fuel and Mineral Processing, Petroleum Refining & Petrochemicals, Industrial Pollution Control, Modeling & Simulation of Chemical Processes, Green Process Technology, Micro-Scale Heat Exchange &other processes, Advanced Materials Engineering using Plasma, Polymer Engineering etc.	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master’s degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).

722	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Science	Chemistry	DN000455	DNA Interacting Molecules, Enzyme Inhibitors, Bio-mimetic, Bio-Inorganic Chemistry, Protein Chemistry, Synthetic Organic Chemistry, Surface Chemistry & Catalysis, Nano Crystalline Semi –conducting Magnetic Metal Chalcogenides and Magnetic Ferrites, Biologically Active Compounds: Stereo selective Synthesis, Isolation and Characterization of Bioactive Materials, Macromolecules, Colloids and Drug Delivery, Environmental Chemistry,Energy from Non-conventional Sources, Aromaticity in Metal Clusters, Nanoparticle Catalysis, Nano Technology,Solid State Chemistry, Supra- molecular Chemistry, Transition Metal Chemistry, Self-assembly and Metallahelicates in Coordination Chemistry, Organometallic Chemistry, Homogeneous Polymer Anchored Catalysis, Photochemistry & Photophysics in Organized Assemblies, Carbohydrates and Nucleosides Biological Dual Perspectives, Enantiomeric Separation Using Capillary Electrophoresis, Density Functional Theory: Quantum Chaos, Chemical Reaction Dynamics in Liquids and Biological Systems, Computer Simulations of Complex Systems with Applications in Biology and	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master’s degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).

						Materials Science, Electrocatalysis, Electrochemical Biosensors, Chemical Reactivity, Quantum toxicology.	
723	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Civil Engineering	DN000456	Structural Engineering, Hydraulic and Water Resources Engineering, Geotechnical Engineering, Transportation Engineering, Environmental Engineering and Management.	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master’s degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).

724	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Computer Science & Engineering	DN000459	Artificial Intelligence, Speech and Language Processing, Software Reliability, Data-base systems, VLSI System Design, Embedded Systems, Fault Tolerant Computing, Distributed Systems, Computer Networks, Image Processing and Computer Vision, Computational Geometry, Theoretical Computer Science, Bioinformatics, Assistive Technology, Formal Verification, Cryptography and Network Security.	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master’s degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).

725	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Electrical Engineering	DN000462	Machine Drives and Power Electronics: Control of drives, Switched mode and resonant modepower supplies, Power Converters, Medium voltage converter topology and drives, Digital control of SMPS, EnergyEfficient drives, Electro-magneticLevitation, Variable Speed Constant Frequency Generation Systems, Automated Electrical Vehicles, Non-linear Phenomena in Power Electronics, Bifurcation and Chaos in Hybrid Dynamical Systems. Control System Engineering: System identification and modeling, Fault detection, Diagnosis and control, Learning control, Nonlinear control, Robust control, Intelligent control, System Theory, Large-scale systems, Reduced order modeling, Fuzzy control, Periodic controllers, Attitude and orbit control of launch vehicles and satellites,Embedded Systems Fractional-order systems and control, Control Allocation. Power & Energy Systems: Power Systems Analysis, Dynamics, Modeling and Control, Power System Stability,Protection, Real-time Simulation, High Voltage Engineering, Photovoltaic, Wind Energy, Energy modeling and	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master’s degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).

						Management, Insulation Engineering, Condition monitoring of power apparatus,Digital relaying, Power Quality,Electrical Power distribution systems, Power System deregulation, FACTS design including devices, Distributed generation, Microgrid. Instrumentation and Signal Processing: Instrumentation and signal Processing: Sensor development MEMS and Mixed signal VLSI design and validation, Magnetic sensing, Medical instrumentation and imaging, Embedded systems,Signal/Image processing, Machine learning.	

726	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	G S Sanyal School of Telecommunications	DN000463	Digital Communication, Mobile Communications, Information Theory and Capacity Analysis. Error Control Coding, Digital Signal Processing, Optical Communications, Tele Communication Networks, Multimedia Communications, Detection and Estimation Theory, RF and Digital Design for Telecommunication, Cognitive Radio.	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master's degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).
727	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Humanities	Humanities and Social Science	DN000464	English Language and literature, American Literature, Afro-American Literature, Comparative Literature, Postcolonial Literature, Indian Literature, Dalit Literature, Indian Aesthetics, Media Culture, Culture Studies, Communication Studies, Econometrics and Applied Economics, Financial Economics, Economic Planning and Policies, Managerial Economics, Organizational and Development Economics, Agricultural Economics, Manpower Planning. Human Resource Development and Management, Organizational and Social Psychology, Interpersonal Communications, Clinical Psychology and Neuropsychology, Philosophy of Mind, Logic, Applied Ethics, Rural and Urban Sociology, Sociology of Development and Sociology of Health.	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master's degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).

728	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Material Science & Technology	DN000465	Polymer composites, Polymer Synthesis & Characterization,Semiconductor Materials Opto-electronic Materials, Wide Bandgap Semiconductors, Synthesis and Processing of Glass and Ceramics, Nano and magnetic materials.	B.Tech/B.E Degree in Chemical Engineering/Technology, Ceramic and glass Technology,Materials Technology, Plastic and/or Rubber Technology, Polymer Science and Technology With 60% marks minimum.M.Sc. in Physics, Solid State Physics, Chemistry, Material Science, Polymer Chemistry, Electronic Science with 60% marks minimum.
729	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Science	Mathematics	DN000467	Fluid Mechanics, Numerical Analysis, Statistics, Operation Research, Computer Science, Functional Analysis,Complex Analysis, Computational Fluid Dynamics, Algebra, Fuzzy Mathematics, Artificial Intelligence, Data Base Management Systems. Cryptography, Graph Theory, Applied linear algebra.	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master’s degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).

730	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Mechanical Engineering	DN000595	Fluid Mechanics, CFD, Hydrodynamic stability, Multiphase flow, Numerical heat transfer, Experimental heat transfer and fluid flow, Liquid fuel atomization, and Spray combustion, I.C Engines, Fluidised bed combustion, Refrigeration and air conditioning, Transcritical CO 2 and natural refrigerant based heat pumps, Thermal systems modeling and optimization, Solar energy, Optical diagnostics of thermo-fluid systems, Thermal hydraulics of nuclear plants, Microfluidics and Micro- scale transport processes. Casting, Welding and Metal forming, Machine and grinding, Machine tools, Cutting tools and coating, Tool condition monitoring, Plasma-spray ceramic coating, Electrophysical machining process, Precision manufacturing and laser processing, Computer aided design and manufacturing, Computer Aided Process Planning, Rapid Prototyping, Intelligent Machines and Systems, Numerical Modeling of Manufacturing Process. Systems, Modeling and design using Bond Graphs, Modeling and control of Microsystems, MEMS, Automotive Engineering, Noise Vibration Control, Signal Processing in Mechanical	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master’s degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).

						Systems. Finite Element Method and Boundary Element Method, Computational solid mechanics, Non-linear Mechanics, Fracture mechanics, Composite materials, Smart materials and Structures, Biomechanics, Industrial, bio- and nano Tribology, Surface Engineering, Mechanical Systems Dynamics, Rotor Dynamics, Vehicle Dynamics ,Bifurcation and Chaos, Condition monitoring and Fault tolerant control, Mechanical handling systems and Industrial automation, Industrial fluid power and control.	

731	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Metallurgical & Materials Engineering	DN000596	Physical Metallurgy, Extractive Metallurgy and Mineral Processing, Steel Technology, Process Modeling, Corrosion Science and Technology, Mechanical Metallurgy, Structural Integrity, Casting and Solidification, Powder Metallurgy, Welding Metallurgy, Computational Material Science and Technology, Nanostructured Materials, Bulk Metallic Glasses, Biomaterials, Electronic and Magnetic Materials, Functionally graded Materials, Intermetallics, Composites, Tribology and Surface Engineering, Thin films and coatings.	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master's degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).
732	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Mining Engineering	DN000600	Experimental and computational geomechanics, Geostatistics, GIS and Remote Sensing: Subsurface and surface environment (heat, air, water and soil), waste (fly ash, mill testing) characterization and utilization. Occupational health and safety, Mining systems and management, Material- Rock Interaction, Mineral Economics and Mining Finance, Environmental Impact Assessment and Management, Waste Remediation, Mining Machinery & Bulk material Handling, clean coal technology; Coalbed methane and shale gas; Mineral processing. Explosive, Blasting and ground vibrations.	B.Tech/BE/in Mining Engineering, Civil, Mechanical Engineering, Petroleum Engineering, Chemical Engineering, Mining Machinery and Mineral Processing. M.Sc in Physics, Applied Geology, Mathematics and Geo-Informatics. M.Tech.in Chemistry, Geo-Informatics and Geo-Physics

733	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Science	Physics	DN000605	Astrophysics & Cosmology, Condensed Matter Physics, Ferroelectrics & Dielectrics, Fiber Optics, Magnetism, Multiferroics, Nanoscience & Nanotechnology, Nonlinear Optics, Nonlinear Instability, Nuclear Physics, Quantum Mechanics & Field Theory, Radiation Measurements, Semiconductor Devices, Solid State Ionics, Thin Films, Renewable Energy Sources.	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master's degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).
734	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Rural Development & Technology	DN000608	Transfer of technology; Socio-economic aspects of Rural Development, Planning and development models, Crop, water and land use planning; Information Technology in Rural Development, Tribal Development, Upgradation of technology.	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master's degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).

735	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Energy Science & Engineering	DN000609	Fundamentals of Energy Sciences: Thermodynamics, Thermochemical and Electrochemical Reactions, Transport phenomena including heat and mass transfer and electrochemical phenomena, Solid-state phenomena including photo, thermal and electrical aspects, Bioprocesses, Nano-sciences, Deep ocean processes, Gas and Fluid Dynamics, Nuclear sciences. Energy Resources and Recovery: Traditional resources - Coal, Petroleum, Natural Gas; Others - Solar, Wind, Geothermal, Wave, Ocean-thermal, Biomass, Hydrogen, Gas from non-conventional sources - Gas Hydrates, Coal beds, Tar sands. Energy Systems: Energy Conversion Systems for Oil, Gas, Coal, Solar, Wind, Biomass, Nuclear, Hydrogen, Ocean Waves, Waste. Power generation, distribution, transmission, access; Transportation Power Systems - IC Engine, Advanced Fuel Technology based combustion ignition, Electric, and Hybrid Systems. Embedded generation systems; Smart grids; Electrochemical systems; New age Fuel systems and process development; Hybrid and	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master’s degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).

						electrical systems; Battery & super-capacitors; Energy systems for marine, space and difficult terrains. Other Aspects of Energy Science & Engineering: Energy Materials; Energy Storage & Transportation; Energy Efficient Devices & Systems; Energy Efficient Design of equipment, buildings and appliances; Sustainable Energy; Conservation; Recycling and Management: Environment and Climate Change; Computational Aspects; Energy Economics; Energy by product (particularly carbon) recycling, capture, sequestration and storage; Rural and small scale energy research.	

736	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Agricultural & Food Engineering	DN000657	Farm Machinery and Power: Farm Machinery Design, Farm Power, Tractor hydraulic systems, Soil Dynamics in Tillage and Traction, Ergonomics, Biofuels, Solar and Wind Energy, Agricultural Mechanisation, Precision farming,Electronics and Computer application in Agriculture. Land and Water Resources Engineering: Watershed Modeling and Management, Irrigation Systems Management; Groundwater Modelling; Rainwater Harvesting, Flood Modeling, Non-point Source Pollution, Climate Change, Green House Technology. Food Process Engineering: Dairy and Food Engineering, High Pressure Processing, non-thermal processing of foods, Mechanised Processing of Food, Physical and Thermal Processing of Food, Packing of Fruits and Vegetables,Cryogenic Processing of Foods, Health Foods, Functional Foods, Cereal Processing, Grain Processing, Dairy Products, Solar-Thermal Applications in Foods, Processing of Horticultural and Plantation Crops. Agricultural Biotechnology: Microbial and Enzyme	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master’s degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).

						Technology; Plant Tissue Culture, Algal Biotechnology,Biotechnology of Medicinal and Aromatic Plants. Agronomy: Climate Change Impact Assessment on Crop Yields, Organic Farming, Tea Cultivation and Processing. Soil Science: Water and Nutrient Management, Soil Physics. Aquacultural Engineering: Waste Utilization and Agro Environmental Technology, Aerators, Cage Aquaculture, Fish Processing Technology, Biofloc Technology.	

737	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Cryogenic Engineering	DN000660	Production, Storage and Utilization of Industrial Gases, Air Separation, Mass Transfer and Separation Processes, Natural Gas Processing and Liquefaction. Hydrogen Energy, Low Temperature Adsorption of Gases, Gas Hydrates, Computer Aided Design of Cryogenic Process Plants, Closed Cycle Cryocoolers, Low Temperature Heat Exchangers, Expansion Machines, Heat Transfer, Cryogenic Rocket Propulsion, Magnetic Refrigeration Materials, Spintronics, Superconducting Magnets and Applications, Thermo Physical Properties of Nanoscale Materials, Magnetic Sensors, Vacuum Technology and Process Applications. Helium Liquefaction and Refrigeration, Oxygen Safety, Superconducting Magnetic Energy Storage, Cryogenic / Superconducting / Vaccum aspects for nuclear fusion and Power Applications.	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master’s degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).

738	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Electronics & Electrical Communication Engineering	DN000662	Device modeling, Technology CAD, Silicon Heterostructures, Compound Semiconductor Electronics and Optical Devices, MEMS and Nanotechnology, Mixed signal design, Low Voltage Low Power Circuit Design, Low Power RFIC Design, Design of VLSI based Signal Processing Chips, SOC based Embedded System /VLSI for Biomedical Instrumentation, VLSI Testing, Fault Diagnosis, Design Automation of Analog VLSI Circuits, Circuits for High Speed Wired Link, On-chip Power management. Antennas, Planar and Waveguide Circuits, RFICs; RF MEMS; Metamaterials; RF-VLSI Interconnects; EMI, EMC, EMP, Radar Cross section, Microwave Imaging; Channel Modeling for Wireless Communication.Image and Video Coding, Computer Vision, Video Surveillance, Medical Image processing Multimedia, Database,Multimedia Network, Parallel and distributed Processing, Audio coding, Computer Architecture, Embedded Systems, Network-on-Chip. Computer Networks, Wireless Communications and Networking, Wireless Internet, Multiuser Receiver, Multiband OFDM, Channel Coding, Link	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master’s degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).

						Adaptation Techniques, MIMO Systems, Capacity Mobile Adhoc Networks, Wireless Sensor Networks, Optical Communications and Networking, WDM Transmission, Fiber Nonlinearities, Wavelength Routed Networks, Passive Optical Networks, Optical Burst Switching, Cognitive Radio, 4G Cellular, Fiber Optics,Fiber Optic Sensors, Fiber Optic amplifiers and Lasers, Plasmonics, Photonic Crystal Fibers and Waveguides. Architectural Optimization, Adaptive Filters, Wavelets and Multirate-DSP, DSP Application in Wireless Communication, Biomedical Signature Analysis, Voice Signature Analysis, Detection and Estimation, Modeling of Signals and Systems	

739	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Science	Geology & Geophysics	DN000664	Igneous and Metamorphic Petrology, Ore Petrology, Geochemistry and Mineralogy, Isotope Geology, Precambrian Geology and Tectonics, Structural Geology, Microtectonics, Stratigraphy and Sedimentary Geology, Basin Analysis,Applied Micropaleontology, Paleoceanography and Paleoclimatology, Coastal and Quaternary Geology, Minera lExploration and Resource Potential Mapping, Hydrogeology, Groundwater Contamination, Remote Sensing and GIS, Environmental Geochemistry of water, soil and air-their contamination by natural and anthropogenic factors, Landslide Hazards, Gravity, Magnetic and Electrical Fields Electrical Fields (including modeling and numerical analysis),Seismic and Electromagnetic wave Propagation (including modeling and numerical analysis), Nuclear Geology and Geophysics, Geophysical Exploration of minerals, ground water and hydrocarbons, Airborne Electromagnetics & Exploration of Deep Seated Uranium Ores, Earthquake Hazard Assessment and Seismic Microzonation, Geotomography, Pattern Recognition in Geophysics,	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master’s degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).

						Strong Motion Seismometry, Computational Geophysics.	
740	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Ocean Engineering & Naval Architecture	DN000665	Marine Hydrodynamics, Marine & Ocean Structures, Ocean Engineering Materials, Fluid – Structure Interaction,Marine Design, Marine Production and welding,Ocean Engineering, Coastal Engineering, Water Wave Mechanics,Physical and Dynamical Oceanography, Ocean Wave Modeling, CFD. Numerical Simulation and Analysis of Ocean Structure.	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master's degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).

741	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Rubber Technology	DN000666	Polymer blend& alloys, Composites, Polymer and Rubber Processing, Product Development, Polymerization, Development of Novel Polymers, Structure-Property Correlation, Waste Polymer Recycling, Thermoplastic Elastomer, Adhesion and Surface Treatment, Nanocomposites, Polymer Rheology, Smart Polymers. Rubber Composities and Compounding, Rubber Product Design & Development.	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master's degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).
742	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Industrial & Systems Engineering	DN000669	Operations Research, Operations Management, Logistics and Supply Chain Management, Healthcare Systems Management, Project Management, Manufacturing/Production Planning and Control, Performance/Productivity Analysis,Quality Design, Control and Improvement, New Product Development, Process Transforma, Ions and Lean Six Sigma, Work Systems Design, Human Computer Interaction (HCI), Ergonomics and Human Factors Engineering, Safety Analytics, Operation Analytics, Quality Analytics, Industrial Analytics, Data Analytics and Big Data, Decision Support System, E-Business, Management Information System, Software Project Management, Service	B.Tech degree in any branch of Engineering and M.Tech in Industrial/Production/Mechanical/Manufacturing/Computer/ IT/Reliability & Safety/ Other related fields or MBA with a minimum of 60% marks or equivalent in all examinations from 10th standard onwards.

						Science, System Dynamics and Simulation, Systems Engineering.	
743	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Subir Chowdhury School of Quality & Reliability	DN000670	System Reliability Assessment, Reliability and Design, Reliability Simulation, Machinery Fault Diagnosis, Maintenance Engineering & Management, Risk and Safety Assessment, Software Reliability.	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master’s degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).

744	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Ranbir and Chitra Gupta School of Infrastructure Design and Management	DN000671	Project Engineering and Management; Financing Infrastructure Projects; Quantitative Methods for Decision Making; Simulation Laboratory; Environmental Impact Assessment; Infrastructure Regulatory Issues; Virtual Reality Lab.;Transportation: Urban Transportation Systems Analysis, Evaluation and Planning; Airport Planning; Bridges and Tunnels Engineering; Analysis and Design of Pavements, Traffic Engineering; Highway Construction Practice and Planning; Sea and Inland Port Infrastructure; Water Supply Systems; Waste Water Management; Solid Waste Management; Air Quality Management; Environment Sanitation; Hazardous Waste Management; Housing and Community Planning; Facility Programming & Specialized Building Design; Building Management Systems; Regional Infrastructure Development; Remote Sensing and GIS; Thermal, Hydel and Nuclear Power Generation; Power Infrastructure: Generation, Transmission and Distribution; Internal Combustion Engine; Power Transmission Systems; Non-conventional Energy Systems;	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master’s degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).

						High Voltage and Insulation Engineering; Power Infrastructure:Economics, Management, and Environment; Power System Planning and Reliability; Airconditioning and Ventilation; Power Systems Transients and Protection.	

745	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Centre for Ocean, Rivers, Atmosphere and Land Sciences	DN000672	The centre is involved in frontier research in oceanographic and atmospheric observational and modelling. In oceanography, the areas of present research activities include numerical modelling of Bay of Bengal and Indian Ocean, wave modelling and ocean circulation. In atmospheric research, the present focus is on the observations and modeling studies of severe thunderstorms. Besides, the centre is also involved in mesoscale modelling of extreme weather events viz., tropical cyclone, heavy rainfall, and flash floods etc. The areas of specific interest in this direction are mesoscale data assimilation and micro-physical processes. The centre is also involved in observational modeling studies of urban boundary layer, regional climate modelling and impact assessment studies. Space based observations, retrievals;validation and assimilation of geophysical parameters of ocean, atmosphere and land are another area of research of the Centre. In view of India's active research in Antarctica, the Centre is also focusing on the remote sensing of sea-ice and southern ocean in relation to climate studies.	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master’s degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).

746	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	Advanced Technology Development Centre	DN000673	Current areas of research focus in laboratories directly under ATDC include VLSI Design and CAD, MEMS and BIOMEMS, Nano-electronics and material sciences, MBE and MoCVD Technology, Bio-energy, Embedded Controls and Software, Plant Genetic Engineering, Communication Empowerment, High-speed and Heavy-Haul Technology for Railways, Reliability Analysis, Micro and nano-Fluidics, etc.	The minimum qualification for admission is a Master's degree in Engineering/Technology or its equivalent with minimum 60% marks or Master's degree in Sciences, Humanities or Social Sciences with minimum of 55 % marks (or equivalent grade point average).
747	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	School of Water Resource	DN000695	Integrated water resources planning and management; River basin planning and management (considering the aspects of flood, drought or contaminant); Water and Waste water treatment; Surface and groundwater quality control; Conjunctive use of surface water and groundwater; Urban, rural and industrial water supply and distribution systems; Remote sensing and GIS application in water resources; Modelling of fate and transport of contaminants; Water governance and policy issues; Environmental impact assessment; Surface water and groundwater interaction; Water resources system analysis; Irrigation and drainage system.	Minimum Qualification: Specialization M.Tech/M.E. in Water Resources, Environmental, Irrigation & Drainage, Soil & Water Conservation, Chemical Engineering and Biotechnology.

748	QIP0075	Indian Institute of Technology (IIT), Kharagpur	Ph.D Engineering	School of Medical Science and Technology	DN000696	Medical Imaging and Image Analysis; Rehabilitation Engineering; Biomedical Sensors and nstrumentation; Healthcare Information Management System; Preventive and Promotive healthcare System; Bio-markers and their application in Oncology; Tissue Engineering; Biomaterials; Nano-Technology and MEMS in Medicine;Prosthesis; Orthosis and Implant Design; Reproductive Biology.	Minimum qualification: Degree in any one of the areas (a) B.Tech. (Bachelor of Technology, M.Sc. (Master of Science), MBA (after BA/ B.Sc/ B.Com) MA (Master of Arts), B.Arch. (Bachelor of Architecture) B.Sc (Engg.), PG Diploma in Management of 2-year duration (after BA/ B.Sc/ B.Com), MBBS degree with compulsory one year internship completed OR A degree equivalent to any of the above. (b) M. Tech (Master of Technology), M. S., M. C. P. (Master of City planning) M. E., M. R. P. (Master of Regional Planning) M. Sc. (Engg.), M. Arch. (Master of Architecture) M. Phil., M.B.A. (after B. Tech./ M.Sc./ M.Com.) 2 year M.B.M., 2 years of LLM programme after either at least 5 years of integrated LLBdegree after 10+2 examination OR 3 years LLB degree after 10+2+3 examination OR A degree equivalent to any of the above.
749	QIP0076	Sant Longowal Institute of Engineering & Technology, Longowal	Ph.D Engineering	Mechanical Engineering	DN000278	Industrial & Production Engineering (Quality & Reliability Engineering; Supply Chain Management, TPM, TQM), Thermal Engineering, Non-Conventional Machining, Hybrid Machining Process, Welding Engineering, Agri- Waste Management, Simulation Vibration, Precision Metrology, Metal Machining/ Cutting, Product Design Management, Automobile Engineering, Composite & Advanced Materials.	M.Tech. / M.E.
750	QIP0076	Sant Longowal Institute of Engineering & Technology, Longowal	Ph.D Engineering	Food Engineering and Technology	DN000279	Food Engineering, Food Processing & Preservation, Food Processing Engineering, Food Processing Technology, Food Technology, Agricultural and Food Engineering, Food Science and Technology, Food Science or relevant field	M.Sc. / M.Tech.

751	QIP0076	Sant Longowal Institute of Engineering & Technology, Longowal	Ph.D Engineering	Electronics and Instrumentation	DN000280	Electronics & Instrumentation Engineering Biomedical Engineering Control Engineering Electrical Engineering Electrical Engineering (Power) Electrical Power Engineering Electronics Engineering Instrumentation & Control Engineering Instrumentation Engineering Instrumentation Technology Power Electronics Biomedical Instrumentation Control & Instrumentation Control System Engineering Instrument Technology Instrumentation & Process Control Medical Electronics Engineering Medical Instrumentation Medical Electronics	M.E. / M.Tech. or equivalent
752	QIP0076	Sant Longowal Institute of Engineering & Technology, Longowal	Ph.D Engineering	Chemical Engineering	DN000281	Biomass and Bioenergy Conventional and Non-conventional Energy Sources Environmental Engineering Industrial Pollution Control Hydrogen Energy Biorefineries (Energy and Biomaterials) Biomaterials Controlled Drug Delivery Waste Water Treatment using Polymeric Materials Energy Conservation Polymer Engineering Modelling Simulation and Optimization Polymer Composites	1(a). Candidate should have B.E. / B.Tech. or equivalent in Chemical Engineering / Chemical Technology / Chemical Engineering(Plastic & Polymer) / Chemical & Polymer Engineering, Chemical & Alcohol Technology / Chemical & Bio-Engineering or equivalent. (b). The candidate must have secured at least 55% marks (50% for reserved categories) - aggregate in B.E. / B.Tech. 2. Candidate must have M.E. / M.Tech. in Chemical & allied fields with 60% marks (55% for reserved categories)

753	QIP0076	Sant Longowal Institute of Engineering & Technology, Longowal	Ph.D Engineering	Computer Science & Engineering	DN000282	Natural Language Processing, Machine Learning, Soft Computing, Image Processing, Cloud Computing, Internet of Things, Wireless Sensor Networks	M.E/M.Tech/M.S in Computer Science & Engineering/IT or equivalent with B.E/B.Tech in Computer Science & Engineering/IT or equivalent
754	QIP0076	Sant Longowal Institute of Engineering & Technology, Longowal	Ph.D Engineering	Electronics & Communication Engineering	DN000283	Applied Electronics/ Electronics & Communication/ Electronics & Instrumentation/ Electronics/ Applied branches of Electronics/ Computer/ IT/ Instrumentation/ Mechatronics/ Nanotechnology/ Allied branches of Communication Engineering.	M.E. / M.Tech

755	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	Ph.D Science	Physics	DN001029	Condensed Material Physics (Experimental): Glasses/ Glass ceramics / Multiferroics / Composites/ Semiconducting oxides/ Conducting Polymers/ Sensing materials etc. Nuclear Physics (Theoretical) : Breakup reaction involving exotic nuclei/Charge exchange reaction/Fusion Reaction etc.	1. 1.1. Candidates who have completed: i. A 1-year/2-semester master's degree programme after a 4-year/8-semester bachelor's degree programme or a 2-year/4-semester master's degree programme after a 3-year bachelor's degree programme or qualifications declared equivalent to the master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade in a point scale wherever grading system is followed or equivalent qualification from a foreign educational institution accredited by an assessment and accreditation agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country to assess, accredit or assure quality and standards of the educational institution. As per Govt. letter no. 42/158/2016-5GS1 dated 19.01.2018 issued by the chief secretary to Govt. of Haryana, the candidates who have obtained degrees/diplomas through distance education mode after getting enrolled during 2001-2005 and also who were admitted after the academic session 2001-2005, their degrees/diploma are to be treated as cancelled. Accordingly, such degrees/diplomas will not be considered for admission purposes. MHRD, Govt. of India, through an order (vide OM no. 11-15/2011-AR (TS.II) dated 06.12.2012) withdrew the recognition granted to all certificates/ qualifications awarded by professional bodies/institutions in the field of technical education. The MHRD further stipulated that from 01.06.2013 onwards the courses for equivalence will cease (Refer AICTE Letter F. No.2-PC/ACITE/Gen. Dust, Edu. Policy/2018/439 Dated: 23.08.2018). 2. A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time. Provided that a candidate seeking admission after a 4-year/8-semester bachelor's degree programme should have a minimum of 75% marks in aggregate or its equivalent grade

							on a point scale wherever the grading system is followed. A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time., or for those who had obtained their Master's degree prior to 19th September 1991. The eligibility marks of 55% (or an equivalent grade in a point scale wherever the grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedures.

756	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	Ph.D Science	Chemistry	DN001030	Organic Chemistry (Experimental): Supercapacitors/ Drug delivery etc. Inorganic Chemistry (Experimental) : Phosphor/ Metal oxides/ Fluorescent materials etc. Physical Chemistry (Experimental) : Corrosion materials/ Supercapacitors/ Metal oxides etc.	1.1. Candidates who have completed: i. A 1-year/2-semester master's degree programme after a 4-year/8-semester bachelor's degree programme or a 2-year/4-semester master's degree programme after a 3-year bachelor's degree programme or qualifications declared equivalent to the master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade in a point scale wherever grading system is followed or equivalent qualification from a foreign educational institution accredited by an assessment and accreditation agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country to assess, accredit or assure quality and standards of the educational institution. As per Govt. letter no. 42/158/2016-5GS1 dated 19.01.2018 issued by the chief secretary to Govt. of Haryana, the candidates who have obtained degrees/diploma through distance education mode after getting enrolled during 2001-2005 and also who were admitted after the academic session 2001-2005, their degrees/diploma are to be treated as cancelled. Accordingly, such degrees/diploma will not be considered for admission purposes. MHRD, Govt. of India, through an order (vide OM no. 11-15/2011-AR (TS.II) dated 06.12.2012) withdrew the recognition granted to all certificates/ qualifications awarded by professional bodies/institutions in the field of technical education. The MHRD further stipulated that from 01.06.2013 onwards the courses for equivalence will cease (Refer AICTE Letter F. No.2-PC/ACITE/Gen. Dust, Edu. Policy/2018/439 Dated: 23.08.2018). 1.2 A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time. Provided that a candidate seeking admission after a 4-year/8-semester bachelor's degree programme should have a minimum of 75% marks in aggregate or its equivalent grade

							on a point scale wherever the grading system is followed. A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time., or for those who had obtained their Master's degree prior to 19th September 1991. The eligibility marks of 55% (or an equivalent grade in a point scale wherever the grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedures.

757	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	Ph.D Science	Mathematics	DN001031	Applied Mathematics: Seismology/ Fluid Dynamics etc. Pure Mathematics: Function analysis/ Algebra/ Coding Theory etc.	1.1. Candidates who have completed: i. A 1-year/2-semester master's degree programme after a 4-year/8-semester bachelor's degree programme or a 2-year/4-semester master's degree programme after a 3-year bachelor's degree programme or qualifications declared equivalent to the master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade in a point scale wherever grading system is followed or equivalent qualification from a foreign educational institution accredited by an assessment and accreditation agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country to assess, accredit or assure quality and standards of the educational institution. As per Govt. letter no. 42/158/2016-5GS1 dated 19.01.2018 issued by the chief secretary to Govt. of Haryana, the candidates who have obtained degrees/diploma through distance education mode after getting enrolled during 2001-2005 and also who were admitted after the academic session 2001-2005, their degrees/diploma are to be treated as cancelled. Accordingly, such degrees/diploma will not be considered for admission purposes. MHRD, Govt. of India, through an order (vide OM no. 11-15/2011-AR (TS.II) dated 06.12.2012) withdrew the recognition granted to all certificates/ qualifications awarded by professional bodies/institutions in the field of technical education. The MHRD further stipulated that from 01.06.2013 onwards the courses for equivalence will cease (Refer AICTE Letter F. No.2-PC/ACITE/Gen. Dust, Edu. Policy/2018/439 Dated: 23.08.2018). 1.2 A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time. Provided that a candidate seeking admission after a 4-year/8-semester bachelor's degree programme should have a minimum of 75% marks in aggregate or its equivalent grade

							on a point scale wherever the grading system is followed. A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time., or for those who had obtained their Master's degree prior to 19th September 1991. The eligibility marks of 55% (or an equivalent grade in a point scale wherever the grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedures.

758	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	Ph.D Engineering	Electronics & Communication Engineering	DN001032	VLSI/ Signal Processing/ Bio-Medical Signal Processing/ Communication Networks/ Wireless Communications/ Devices and Circuit/ Embedded Systems/ Machine Learning/ Soft Computing Techniques/ Microwave etc.	1.1. Candidates who have completed: i. A 1-year/2-semester master's degree programme after a 4-year/8-semester bachelor's degree programme or a 2-year/4-semester master's degree programme after a 3-year bachelor's degree programme or qualifications declared equivalent to the master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade in a point scale wherever grading system is followed or equivalent qualification from a foreign educational institution accredited by an assessment and accreditation agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country to assess, accredit or assure quality and standards of the educational institution. As per Govt. letter no. 42/158/2016-5GS1 dated 19.01.2018 issued by the chief secretary to Govt. of Haryana, the candidates who have obtained degrees/diploma through distance education mode after getting enrolled during 2001-2005 and also who were admitted after the academic session 2001-2005, their degrees/diploma are to be treated as cancelled. Accordingly, such degrees/diploma will not be considered for admission purposes. MHRD, Govt. of India, through an order (vide OM no. 11-15/2011-AR (TS.II) dated 06.12.2012) withdrew the recognition granted to all certificates/ qualifications awarded by professional bodies/institutions in the field of technical education. The MHRD further stipulated that from 01.06.2013 onwards the courses for equivalence will cease (Refer AICTE Letter F. No.2-PC/ACITE/Gen. Dust, Edu. Policy/2018/439 Dated: 23.08.2018). 1.2 A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time. Provided that a candidate seeking admission after a 4-year/8-semester bachelor's degree programme should have a minimum of 75% marks in aggregate or its equivalent grade

							on a point scale wherever the grading system is followed. A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time., or for those who had obtained their Master's degree prior to 19th September 1991. The eligibility marks of 55% (or an equivalent grade in a point scale wherever the grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedures.

759	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	Ph.D Engineering	Civil Engineering	DN001033	Structural/ Transportation/ Environmental Engineering etc.	1.1. Candidates who have completed: i. A 1-year/2-semester master's degree programme after a 4-year/8-semester bachelor's degree programme or a 2-year/4-semester master's degree programme after a 3-year bachelor's degree programme or qualifications declared equivalent to the master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade in a point scale wherever grading system is followed or equivalent qualification from a foreign educational institution accredited by an assessment and accreditation agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country to assess, accredit or assure quality and standards of the educational institution. As per Govt. letter no. 42/158/2016-5GS1 dated 19.01.2018 issued by the chief secretary to Govt. of Haryana, the candidates who have obtained degrees/diploma through distance education mode after getting enrolled during 2001-2005 and also who were admitted after the academic session 2001-2005, their degrees/diploma are to be treated as cancelled. Accordingly, such degrees/diploma will not be considered for admission purposes. MHRD, Govt. of India, through an order (vide OM no. 11-15/2011-AR (TS.II) dated 06.12.2012) withdrew the recognition granted to all certificates/ qualifications awarded by professional bodies/institutions in the field of technical education. The MHRD further stipulated that from 01.06.2013 onwards the courses for equivalence will cease (Refer AICTE Letter F. No.2-PC/ACITE/Gen. Dust, Edu. Policy/2018/439 Dated: 23.08.2018). 1.2 A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time. Provided that a candidate seeking admission after a 4-year/8-semester bachelor's degree programme should have a minimum of 75% marks in aggregate or its equivalent grade

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760	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	Ph.D Science	Centre for Energy and Environment	DN001034	Environmental Chemistry/ Solar energy/ Nano-remediation Techniques/ etc.	1.1. Candidates who have completed: i. A 1-year/2-semester master's degree programme after a 4-year/8-semester bachelor's degree programme or a 2-year/4-semester master's degree programme after a 3-year bachelor's degree programme or qualifications declared equivalent to the master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade in a point scale wherever grading system is followed or equivalent qualification from a foreign educational institution accredited by an assessment and accreditation agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country to assess, accredit or assure quality and standards of the educational institution. As per Govt. letter no. 42/158/2016-5GS1 dated 19.01.2018 issued by the chief secretary to Govt. of Haryana, the candidates who have obtained degrees/diploma through distance education mode after getting enrolled during 2001-2005 and also who were admitted after the academic session 2001-2005, their degrees/diploma are to be treated as cancelled. Accordingly, such degrees/diploma will not be considered for admission purposes. MHRD, Govt. of India, through an order (vide OM no. 11-15/2011-AR (TS.II) dated 06.12.2012) withdrew the recognition granted to all certificates/ qualifications awarded by professional bodies/institutions in the field of technical education. The MHRD further stipulated that from 01.06.2013 onwards the courses for equivalence will cease (Refer AICTE Letter F. No.2-PC/ACITE/Gen. Dust, Edu. Policy/2018/439 Dated: 23.08.2018). 1.2 A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time. Provided that a candidate seeking admission after a 4-year/8-semester bachelor's degree programme should have a minimum of 75% marks in aggregate or its equivalent grade

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761	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	Ph.D Engineering	Mechanical Engineering	DN001035	Machine Design/ Thermal System Design/ Industrial and Production Engineering/ Biomaterials etc.	1.1. Candidates who have completed: i. A 1-year/2-semester master's degree programme after a 4-year/8-semester bachelor's degree programme or a 2-year/4-semester master's degree programme after a 3-year bachelor's degree programme or qualifications declared equivalent to the master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade in a point scale wherever grading system is followed or equivalent qualification from a foreign educational institution accredited by an assessment and accreditation agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country to assess, accredit or assure quality and standards of the educational institution. As per Govt. letter no. 42/158/2016-5GS1 dated 19.01.2018 issued by the chief secretary to Govt. of Haryana, the candidates who have obtained degrees/diploma through distance education mode after getting enrolled during 2001-2005 and also who were admitted after the academic session 2001-2005, their degrees/diploma are to be treated as cancelled. Accordingly, such degrees/diploma will not be considered for admission purposes. MHRD, Govt. of India, through an order (vide OM no. 11-15/2011-AR (TS.II) dated 06.12.2012) withdrew the recognition granted to all certificates/ qualifications awarded by professional bodies/institutions in the field of technical education. The MHRD further stipulated that from 01.06.2013 onwards the courses for equivalence will cease (Refer AICTE Letter F. No.2-PC/ACITE/Gen. Dust, Edu. Policy/2018/439 Dated: 23.08.2018). 1.2 A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time. Provided that a candidate seeking admission after a 4-year/8-semester bachelor's degree programme should have a minimum of 75% marks in aggregate or its equivalent grade

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762	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	Ph.D Engineering	Electrical Engineering	DN001036	Power System/ Artificial Intelligence/ Signal Processing/ Power Quality/ Electric vehicles etc.	1.1. Candidates who have completed: i. A 1-year/2-semester master's degree programme after a 4-year/8-semester bachelor's degree programme or a 2-year/4-semester master's degree programme after a 3-year bachelor's degree programme or qualifications declared equivalent to the master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade in a point scale wherever grading system is followed or equivalent qualification from a foreign educational institution accredited by an assessment and accreditation agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country to assess, accredit or assure quality and standards of the educational institution. As per Govt. letter no. 42/158/2016-5GS1 dated 19.01.2018 issued by the chief secretary to Govt. of Haryana, the candidates who have obtained degrees/diploma through distance education mode after getting enrolled during 2001-2005 and also who were admitted after the academic session 2001-2005, their degrees/diploma are to be treated as cancelled. Accordingly, such degrees/diploma will not be considered for admission purposes. MHRD, Govt. of India, through an order (vide OM no. 11-15/2011-AR (TS.II) dated 06.12.2012) withdrew the recognition granted to all certificates/ qualifications awarded by professional bodies/institutions in the field of technical education. The MHRD further stipulated that from 01.06.2013 onwards the courses for equivalence will cease (Refer AICTE Letter F. No.2-PC/ACITE/Gen. Dust, Edu. Policy/2018/439 Dated: 23.08.2018). 1.2 A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time. Provided that a candidate seeking admission after a 4-year/8-semester bachelor's degree programme should have a minimum of 75% marks in aggregate or its equivalent grade

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763	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	Ph.D Engineering	Computer Science & Engineering	DN001037	Artificial Intelligence/ Signal Processing/ Deep Learning/ Block Chain/ Cyber security/ Wireless Networks/ Health Care/ Precision Agriculture/ Vehicular Networks etc.	1.1. Candidates who have completed: i. A 1-year/2-semester master's degree programme after a 4-year/8-semester bachelor's degree programme or a 2-year/4-semester master's degree programme after a 3-year bachelor's degree programme or qualifications declared equivalent to the master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade in a point scale wherever grading system is followed or equivalent qualification from a foreign educational institution accredited by an assessment and accreditation agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country to assess, accredit or assure quality and standards of the educational institution. As per Govt. letter no. 42/158/2016-5GS1 dated 19.01.2018 issued by the chief secretary to Govt. of Haryana, the candidates who have obtained degrees/diploma through distance education mode after getting enrolled during 2001-2005 and also who were admitted after the academic session 2001-2005, their degrees/diploma are to be treated as cancelled. Accordingly, such degrees/diploma will not be considered for admission purposes. MHRD, Govt. of India, through an order (vide OM no. 11-15/2011-AR (TS.II) dated 06.12.2012) withdrew the recognition granted to all certificates/ qualifications awarded by professional bodies/institutions in the field of technical education. The MHRD further stipulated that from 01.06.2013 onwards the courses for equivalence will cease (Refer AICTE Letter F. No.2-PC/ACITE/Gen. Dust, Edu. Policy/2018/439 Dated: 23.08.2018). 1.2 A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time. Provided that a candidate seeking admission after a 4-year/8-semester bachelor's degree programme should have a minimum of 75% marks in aggregate or its equivalent grade

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764	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	Ph.D Engineering	Chemical Engineering	DN001038	Waste Water Treatment/ Thermodynamic Properties/ Nanomaterials etc.	1.1. Candidates who have completed: i. A 1-year/2-semester master's degree programme after a 4-year/8-semester bachelor's degree programme or a 2-year/4-semester master's degree programme after a 3-year bachelor's degree programme or qualifications declared equivalent to the master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade in a point scale wherever grading system is followed or equivalent qualification from a foreign educational institution accredited by an assessment and accreditation agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country to assess, accredit or assure quality and standards of the educational institution. As per Govt. letter no. 42/158/2016-5GS1 dated 19.01.2018 issued by the chief secretary to Govt. of Haryana, the candidates who have obtained degrees/diploma through distance education mode after getting enrolled during 2001-2005 and also who were admitted after the academic session 2001-2005, their degrees/diploma are to be treated as cancelled. Accordingly, such degrees/diploma will not be considered for admission purposes. MHRD, Govt. of India, through an order (vide OM no. 11-15/2011-AR (TS.II) dated 06.12.2012) withdrew the recognition granted to all certificates/ qualifications awarded by professional bodies/institutions in the field of technical education. The MHRD further stipulated that from 01.06.2013 onwards the courses for equivalence will cease (Refer AICTE Letter F. No.2-PC/ACITE/Gen. Dust, Edu. Policy/2018/439 Dated: 23.08.2018). 1.2 A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time. Provided that a candidate seeking admission after a 4-year/8-semester bachelor's degree programme should have a minimum of 75% marks in aggregate or its equivalent grade

							on a point scale wherever the grading system is followed. A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time., or for those who had obtained their Master's degree prior to 19th September 1991. The eligibility marks of 55% (or an equivalent grade in a point scale wherever the grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedures.

765	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	Ph.D Engineering	Biotechnology	DN001039	Plant biotechnology/ Microbiology/ Bioinformatics/ Biochemistry etc.	1.1. Candidates who have completed: i. A 1-year/2-semester master's degree programme after a 4-year/8-semester bachelor's degree programme or a 2-year/4-semester master's degree programme after a 3-year bachelor's degree programme or qualifications declared equivalent to the master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade in a point scale wherever grading system is followed or equivalent qualification from a foreign educational institution accredited by an assessment and accreditation agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country to assess, accredit or assure quality and standards of the educational institution. As per Govt. letter no. 42/158/2016-5GS1 dated 19.01.2018 issued by the chief secretary to Govt. of Haryana, the candidates who have obtained degrees/diploma through distance education mode after getting enrolled during 2001-2005 and also who were admitted after the academic session 2001-2005, their degrees/diploma are to be treated as cancelled. Accordingly, such degrees/diploma will not be considered for admission purposes. MHRD, Govt. of India, through an order (vide OM no. 11-15/2011-AR (TS.II) dated 06.12.2012) withdrew the recognition granted to all certificates/ qualifications awarded by professional bodies/institutions in the field of technical education. The MHRD further stipulated that from 01.06.2013 onwards the courses for equivalence will cease (Refer AICTE Letter F. No.2-PC/ACITE/Gen. Dust, Edu. Policy/2018/439 Dated: 23.08.2018). 1.2 A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time. Provided that a candidate seeking admission after a 4-year/8-semester bachelor's degree programme should have a minimum of 75% marks in aggregate or its equivalent grade

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766	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	Ph.D Engineering	Biomedical Engineering	DN001040	Biomedical signal processing/ image processing/ Biomaterials and drug delivery/ Biomechanics/ Bio nano technology/ 3D Printing technology etc.	1.1. Candidates who have completed: i. A 1-year/2-semester master's degree programme after a 4-year/8-semester bachelor's degree programme or a 2-year/4-semester master's degree programme after a 3-year bachelor's degree programme or qualifications declared equivalent to the master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade in a point scale wherever grading system is followed or equivalent qualification from a foreign educational institution accredited by an assessment and accreditation agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country to assess, accredit or assure quality and standards of the educational institution. As per Govt. letter no. 42/158/2016-5GS1 dated 19.01.2018 issued by the chief secretary to Govt. of Haryana, the candidates who have obtained degrees/diploma through distance education mode after getting enrolled during 2001-2005 and also who were admitted after the academic session 2001-2005, their degrees/diploma are to be treated as cancelled. Accordingly, such degrees/diploma will not be considered for admission purposes. MHRD, Govt. of India, through an order (vide OM no. 11-15/2011-AR (TS.II) dated 06.12.2012) withdrew the recognition granted to all certificates/ qualifications awarded by professional bodies/institutions in the field of technical education. The MHRD further stipulated that from 01.06.2013 onwards the courses for equivalence will cease (Refer AICTE Letter F. No.2-PC/ACITE/Gen. Dust, Edu. Policy/2018/439 Dated: 23.08.2018). 1.2 A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time. Provided that a candidate seeking admission after a 4-year/8-semester bachelor's degree programme should have a minimum of 75% marks in aggregate or its equivalent grade

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767	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	Ph.D Engineering	Architecture and Planning	DN001041	Architecture/ Urban Planning/ Conservation/ Sustainable architecture	1.1. Candidates who have completed: i. A 1-year/2-semester master's degree programme after a 4-year/8-semester bachelor's degree programme or a 2-year/4-semester master's degree programme after a 3-year bachelor's degree programme or qualifications declared equivalent to the master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade in a point scale wherever grading system is followed or equivalent qualification from a foreign educational institution accredited by an assessment and accreditation agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country to assess, accredit or assure quality and standards of the educational institution. As per Govt. letter no. 42/158/2016-5GS1 dated 19.01.2018 issued by the chief secretary to Govt. of Haryana, the candidates who have obtained degrees/diploma through distance education mode after getting enrolled during 2001-2005 and also who were admitted after the academic session 2001-2005, their degrees/diploma are to be treated as cancelled. Accordingly, such degrees/diploma will not be considered for admission purposes. MHRD, Govt. of India, through an order (vide OM no. 11-15/2011-AR (TS.II) dated 06.12.2012) withdrew the recognition granted to all certificates/ qualifications awarded by professional bodies/institutions in the field of technical education. The MHRD further stipulated that from 01.06.2013 onwards the courses for equivalence will cease (Refer AICTE Letter F. No.2-PC/ACITE/Gen. Dust, Edu. Policy/2018/439 Dated: 23.08.2018). 1.2 A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time. Provided that a candidate seeking admission after a 4-year/8-semester bachelor's degree programme should have a minimum of 75% marks in aggregate or its equivalent grade

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768	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	Ph.D Management	Management Studies	DN001042	Finance/ Human resources/ Operational management/ Health Care/ Economics etc.	1.1. Candidates who have completed: i. A 1-year/2-semester master's degree programme after a 4-year/8-semester bachelor's degree programme or a 2-year/4-semester master's degree programme after a 3-year bachelor's degree programme or qualifications declared equivalent to the master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade in a point scale wherever grading system is followed or equivalent qualification from a foreign educational institution accredited by an assessment and accreditation agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country to assess, accredit or assure quality and standards of the educational institution. As per Govt. letter no. 42/158/2016-5GS1 dated 19.01.2018 issued by the chief secretary to Govt. of Haryana, the candidates who have obtained degrees/diploma through distance education mode after getting enrolled during 2001-2005 and also who were admitted after the academic session 2001-2005, their degrees/diploma are to be treated as cancelled. Accordingly, such degrees/diploma will not be considered for admission purposes. MHRD, Govt. of India, through an order (vide OM no. 11-15/2011-AR (TS.II) dated 06.12.2012) withdrew the recognition granted to all certificates/ qualifications awarded by professional bodies/institutions in the field of technical education. The MHRD further stipulated that from 01.06.2013 onwards the courses for equivalence will cease (Refer AICTE Letter F. No.2-PC/ACITE/Gen. Dust, Edu. Policy/2018/439 Dated: 23.08.2018). 1.2 A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time. Provided that a candidate seeking admission after a 4-year/8-semester bachelor's degree programme should have a minimum of 75% marks in aggregate or its equivalent grade

							on a point scale wherever the grading system is followed. A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time., or for those who had obtained their Master's degree prior to 19th September 1991. The eligibility marks of 55% (or an equivalent grade in a point scale wherever the grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedures.

769	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	Ph.D Humanities	Humanities and Social Science	DN001043	Literature and Cinema/ Comparative Studies/ Gender Studies/ Dalit Writings/ Literature and language etc.	1.1. Candidates who have completed: i. A 1-year/2-semester master's degree programme after a 4-year/8-semester bachelor's degree programme or a 2-year/4-semester master's degree programme after a 3-year bachelor's degree programme or qualifications declared equivalent to the master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade in a point scale wherever grading system is followed or equivalent qualification from a foreign educational institution accredited by an assessment and accreditation agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country to assess, accredit or assure quality and standards of the educational institution. As per Govt. letter no. 42/158/2016-5GS1 dated 19.01.2018 issued by the chief secretary to Govt. of Haryana, the candidates who have obtained degrees/diploma through distance education mode after getting enrolled during 2001-2005 and also who were admitted after the academic session 2001-2005, their degrees/diploma are to be treated as cancelled. Accordingly, such degrees/diploma will not be considered for admission purposes. MHRD, Govt. of India, through an order (vide OM no. 11-15/2011-AR (TS.II) dated 06.12.2012) withdrew the recognition granted to all certificates/ qualifications awarded by professional bodies/institutions in the field of technical education. The MHRD further stipulated that from 01.06.2013 onwards the courses for equivalence will cease (Refer AICTE Letter F. No.2-PC/ACITE/Gen. Dust, Edu. Policy/2018/439 Dated: 23.08.2018). 1.2 A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time. Provided that a candidate seeking admission after a 4-year/8-semester bachelor's degree programme should have a minimum of 75% marks in aggregate or its equivalent grade

							on a point scale wherever the grading system is followed. A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time., or for those who had obtained their Master's degree prior to 19th September 1991. The eligibility marks of 55% (or an equivalent grade in a point scale wherever the grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedures.
770	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	M.Tech	Electronics & Communication Engineering	DN001045	VLSI/ Signal Processing/ Bio-Medical Signal Processing/ Communication Networks/ Wireless Communications/ Devices and Circuit/ Embedded Systems/ Machine Learning/ Soft Computing Techniques/ Microwave etc	B.E./B.Tech or equivalent in Electronics Communication Engineering / Electronics & Instrumentation Engg. Control/ Instrumentation &Control/ Electronics& Communication Engg./Electronics &Telecommunication Engg./Electronics Instt. &Control/Electrical & Electronics Engg./ Instrumentation Engg./M.Sc. (Electronics) scoring at least 50%(47.50%for SC/DSC/PH) marks in aggregate
771	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	M.Tech	Civil Engineering	DN001047	Structural/ Transportation/ Environmental Engineering etc.	B.E./B. Tech. or equivalent in Civil Engg. scoring at least 50% (47.50%for SC/DSC/PH) marks in aggregate
772	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	M.Tech	Mechanical Engineering	DN001049	Machine Design/ Thermal System Design/ Industrial and Production Engineering/ Biomaterials etc.	B.E./B.Tech.or equivalent in Mechanical Engg./Production Engg./Automobile Engg./IndustrialEngg./ Aeronautical Engg. Scoring at least 50%(47.50% for SC/DSC/PH) marks in aggregate.

773	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	M.Tech	Electrical Engineering	DN001051	Power Systems/ Artificial Intelligence/ Signal Processing/ Power Quality/ Electric vehicles etc.	B.E./B.Tech or equivalent in Electrical Engineering / Electrical &Electronics Engineering /Power Engineering scoring at least50% (47.50% for SC/DSC/PH) marks in aggregate
774	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	M.Tech	Computer Science & Engineering	DN001052	Artificial Intelligence/ Signal Processing/ Deep Learning/ Block Chain/ Cyber security/ Wireless Networks/ Health Care/ Precision Agriculture/ Vehicular Networks etc.	B.E./B.Tech.or equivalent in Computer Science& Engg./ Information Tech./Electronics/Electronics &CommunicationEngg./Electronics & Telecommunication/ Electronics & Instrumentation Control M.Sc. (Maths/Physics/Computer/Electronics)/ MCA scoring at least 50%(47.50%for SC/DSC/PH) marks in aggregate
775	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	M.Tech	Chemical Engineering	DN001053	Waste Water Treatment/ Thermodynamic Properties/ Nanomaterials etc.	B.E./B.Tech. in Chemical Engg./Bio-Chemical Engg./Chemical Technology/ Food Technology/ Environmental Engg./ Polymer Tech. / Paper Tech./ Petroleum Engg. / Chemical Science/ Sugar Tech./OilTech./Plastic Tech./Paint Tech./ Leather Tech./CeramicEngg./ Metallurgical Engg. Scoring at least 50%(47.50% for SC/DSC /PH) marks in aggregate
776	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	M.Tech	Biomedical Engineering	DN001054	Biomedical signal processing/ image processing/ Biomaterials and drug delivery/ Biomechanics/ Bio nano technology/ 3D Printing technology etc.	B.E./B.Tech./ M.Sc. or equivalent degree inanydiscipline scoring at least 50%(47.50%for SC/DSC/PH) marks in aggregate.
777	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	M.Tech	Biotechnology	DN001055	Plant biotechnology/ Microbiology/ Bioinformatics/ Biochemistry etc.	B.E/ B.Tech or equivalent in Biotechnology/ M.Sc in Biotechnology, Microbiology, Biochemistry, Genetics, Molecular Biology, Biophysics, Bioinformatics, Biosciences, Life Sciences, Medical Sciences, Veterinary Sciences scoring at least50% (47.50% for SC/DSC /PH) marks in aggregate

778	QIP0081	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonepat	M.Tech	Centre for Energy and Environment	DN001056	Environmental Chemistry/ Solar energy/ Nano-remediation Techniques/ etc	B.E./B.Tech./ M.Sc. or equivalent degree inanydiscipline scoring at least 50%(47.50%for SC/DSC/PH) marks in aggregate.
779	QIP0084	The National Institute of Engineering, Mysuru	Ph.D Engineering	Civil Engineering	DN000147	Structural Engineering Geotechnical Engineering, Water Resources & Environmental Engineering, Fire Resistance of Structures Transportation Engineering Remote sensing and Geoinformatics	M.E/M.Tech in Civil Engineering with at least 60% marks or equivalent grade. However, for Water Resources & Environmental Engineering, candidates with M.E/M.Tech in Environmental Engineering with at least 60% marks or equivalent grade are also eligible.
780	QIP0084	The National Institute of Engineering, Mysuru	Ph.D Engineering	Electrical & Electronics Engineering	DN000346	Power System Analysis and Stability, Renewable energy, Microgrid and Smart Grid, Power Quality, Voltage Stability, Artificial intelligence applications to Power systems Electrical vehicles/ Battery management systems, Power electronics and drives	First class in M. E. / M. Tech. / or Integrated M. Tech. in Electrical Engineering and other relevant branch.
781	QIP0084	The National Institute of Engineering, Mysuru	M.Tech	Civil Engineering	DN000409	Structural Engineering Hydraulics Engineering	B.E/B.Tech in Civil Engineering with at least 60% marks or equivalent grade. However, for Hydraulics Engineering, candidates with B.E/B.Tech in Environmental Engineering with at least 60% marks or equivalent grade are also eligible.
782	QIP0084	The National Institute of Engineering, Mysuru	Ph.D Engineering	Computer Science & Engineering	DN000413	Data mining, Cloud computing, Network security, Big data analysis, Machine Learning, Computer Networks, Artificial Intelligence, Data Science, Cyber security, Block Chain Technology , Ad-hoc Networks, wireless sensor Networks , fibre optics network, quantum Computing,	M.E./M.Tech in Computer Science & Engineering/ Information Science & Engineering/Software Engineering/AIML/Data Science/Computer Engineering/Information Technology with a minimum of 60% marks or equivalent grade from UGC recognized universities.

						Software defined networks and related fields.	
783	QIP0084	The National Institute of Engineering, Mysuru	Ph.D Engineering	Electronics & Communication Engineering	DN000427	Industrial Electronics, VLSI design, Embedded system design, Digital Signal Processing, Image Processing, Internet of Things, Robotics and automation, Advanced analog and digital communication, Communication Networks, AI and Machine Learning	M.E./M.Tech in Electronics and Communication Engineering with at least 60% aggregate marks or equivalent grade
784	QIP0084	The National Institute of Engineering, Mysuru	M.Tech	Computer Science & Engineering	DN000431	Information Technology	B.E./B.Tech in Computer Science & Engineering/ Information Science & Engineering/Software Engineering/AIML/Data Science/Computer Engineering/Information Technology with a minimum of 60% marks or equivalent grade from UGC recognized universities.
785	QIP0084	The National Institute of Engineering, Mysuru	Ph.D Engineering	Mechanical Engineering	DN000490	Biodiesel, Composite Material, Mechanical Vibration, Automotive Safety, Industrial Automation, Additive Manufacturing, Tribology, Machine Design, Thermal Engineering, Management Engineering and related fields	M.E./M.Tech in Design/ Production/Thermal/ Management Engineering with at least 60% aggregate marks or equivalent grade.
786	QIP0084	The National Institute of Engineering, Mysuru	M.Tech	Mechanical Engineering	DN000491	Industrial Automation and Robotics Machine Design	B.E./B.Tech in Mechanical Engineering with 60% marks (aggregate of all years/ semesters)

787	QIP0085	Moti Lal Nehru National Institute Of Technology (MNNIT), Prayagraj (Engg.)	Ph.D Engineering	Applied Mechanics	DN000441	Materials Science and Engineering, Fluids Engineering	M.Tech. or Equivalent degree Mechanical Engineering, Civil Engineering, Metallurgical Engineering, Production Engineering, Ceramics, Materials Engineering, Textile Engineering, Ocean Engineering, Naval Architecture, Marine Structure, Materials Science, Applied Mechanics, Fluid Engineering, Aeronautical Engineering, Chemical Engineering, Marine Engineering, Biomedical Engineering, M.Sc of equivalent degree in Physics/ Mathematics with 60% marks or equivalent CPI/CGPA (55% marks or equivalent CPI/CGPA for SC/ST candidates).
788	QIP0085	Moti Lal Nehru National Institute Of Technology (MNNIT), Prayagraj (Engg.)	Ph.D Engineering	Biotechnology	DN000583	Environmental Biotechnology Plant Microbe interaction, Microbiology, Biology Genetic Engineering Genomics and proteomics, Metabolic Engineering Genetics modification of plant and microbes for application in food quality improvement, bioenergy and environmental plant biotechnology plant tissue culture and modification of plant for medical importance. Processing and modelling of plants and microbial nanomolecules for drug development. Medical Micrology, Immuno – modulation Biofilm based infection & Therapy. Enzymology, Product and process development, enzyme technology, bio-chemistry, bio-remediation, environmental micro- biology, industrial micro-biology. Molecular Biology, Epigenetic and Chromatin	M.Tech (biotechnology), Bioinformatics and Biochemical Engineering, or M.Sc. in Biotechnology or M.Sc. in Applied Biological Science Such as Microbiology, Biochemistry, Genetics, Molecular Biology and Biophysics, MTech/MS/MSc Bioprocess Eng, Food Science/Technology, Nutrition, Industrial Biotechnology/Microbiology, Applied Botany or any allied branch of biotechnology/ biology with 60% marks or equivalent CPI/CGPA (55% marks or equivalent CPI/CGPA for SC/ST candidates).

						Remodeling Immunodiagnostics/nanobiotechnology, Development of diagnostic assays for microbes or clinically important molecules, nanoparticle based diagnostic systems, synthesis and use of nanoparticles and their use in diagnostics. Bioinformatics: Molecular Modeling and Drug Designing, Molecular Evolution & Comparative Genomics, Molecular Biology of Cancer and Alzheimer's disease Medical Biotechnology: Immunology of Intracellular Infections(s), Immune regulation. Environmental Biotechnology, Applications of Bioreactor for Wastewater treatment, Bioremediation and Resource recovery, environmental nanotechnology, Food and Nutrition, biopolymers and biocompites.	

789	QIP0085	Moti Lal Nehru National Institute Of Technology (MNNIT), Prayagraj (Engg.)	Ph.D Engineering	Chemical Engineering	DN000584	Chemical Engineering Chemical Technology, Biotechnology, Biochemical Engineering; Bioprocess Engineering, Food Engineering Polymer Technology; Petroleum Engineering; Petrochemicals Technology Material Engineering; Energy Engineering Thermal Engineering; Environmental Engineering Pharmaceutical Engineering Leather Technology; Paint Technology, Oil, fats, and Surfactant Technology; Pulp and Paper Technology; Biomedical Engineering Control System Engineering; Agricultural Engineering and any other relevant discipline Industrial Chemistry, Applied Chemistry, Physical Chemistry, Green Chemistry, Food Chemistry, Biochemistry, Environmental Science, Polymer Science and any other relevant discipline.	M.Tech or Equivalent degree in Chemical Engineering, Petroleum Studies, Environment, Biotechnology with 60% marks or equivalent CPI/CGPA (55% marks or equivalent CPI/CGPA for SC/ST candidates).
790	QIP0085	Moti Lal Nehru National Institute Of Technology (MNNIT), Prayagraj (Engg.)	Ph.D Science	Chemistry	DN000585	Polymer Chemistry, Chemistry of Metal/ mixed metal alkoxides for oxide Nano materials and chemistry of metal Organic Framework compounds. Cation/anion sensor.	M.Sc. in Chemistry/ Applied Chemistry With 60% marks (55% or Equivalent for SC/ST candidates) For interdisciplinary Field of Research Master degree in any Discipline of Science with 60% marks (55% marks or equivalent CPI/CGPA for SC/ST candidates) B.Tech. 75% marks (70% marks or equivalent CPI/CGPA for SC/ST candidates).
791	QIP0085	Moti Lal Nehru National Institute Of Technology	Ph.D Engineering	Civil Engineering	DN000586	Structural Engineering, Transportation Engineering, Environmental Engineering, Geotechnical Engineering,	M.Tech. or Equivalent degree in Civil Engineering, Construction Engineering & Management and Applied Mechanics with 60% marks or C.P.I. 6.5, and 55% or C.P.I. 6.0 for SC/ST candidates.

		(MNNIT), Prayagraj (Engg.)				Geoinformatics, Water Resources Engineering.	
792	QIP0085	Moti Lal Nehru National Institute Of Technology (MNNIT), Prayagraj (Engg.)	Ph.D Engineering	Computer Science & Engineering	DN000587	Data, System, & Network centric Computing, Real Time Systems, Fault Tolerant System, Computer Network, Distributed System, Networking , Operating Systems, Service Oriented Architecture, AI, Machine Learning, Deep Learning IOT, Formal Methods	M.Tech or Equivalent degree in Computer Science & Engineering, Software Engineering, Information Technology, Electrical Engineering, Electronics Engineering and Communication Engineering with 60% marks or equivalent CPI/CGPA (55% marks or equivalent CPI/CGPA for SC/ST candidates).
793	QIP0085	Moti Lal Nehru National Institute Of Technology (MNNIT), Prayagraj (Engg.)	Ph.D Engineering	Electrical Engineering	DN000588	Power System — Power system dynamics and stability, optimal operation and planning. Power system protection. Power quality, Wide Area Monitoring and Control, Power Systems Regulation, Electricity Market, Smart grid, Micro Grid, Active Distribution, Intelligent Agents and their Applications, Cyber-Physical Security of a Smart Grid Infrastructure, Grid Integration of Renewable sources & Storage, and protection, Power Electronics- Power Electronics and its Control, Power Converters, and Electrical Drives, Utility Interfaces for Renewable Sources and Energy Storage, Reliability of Converters, Wide Band gap Semiconductors (GaN/SiC)-based converters, Thermal management in Power Electronics, Power Converters and Modulation methods,	M.Tech or Equivalent degree in Electrical Engineering, Electronics and Communication Engineering and Electronics Electrical Engineering, Electronics Engineering and Communication Engineering with 60% marks or equivalent CPI/CGPA (55% marks or equivalent CPI/CGPA for SC/ST candidates).

						Hybrid AC and DC Micro grid, Electrical Vehicle Charging, Control System - Practical/ real-time applications of Control Systems theory, Linear and Nonlinear Systems, Adaptive & Optimal Control, Robust control, Time-delay systems, Stochastic Processes, Detection, and Estimation, Multi-agent systems and coordinated control, Intelligent Systems and Control, Robotic Systems, Manipulators, System Health Monitoring and Intelligent Fault Diagnosis Systems, Cyber-Physical Systems, Intelligent Informatics, Unmanned Aerial Vehicles.	
794	QIP0085	Moti Lal Nehru National Institute Of Technology (MNNIT), Prayagraj (Engg.)	Ph.D Engineering	Electronics & Communication Engineering	DN000589	VLSI: Analog IC Design, VLSI design, Device Modeling, Low Power VLSI Circuit, Analog Circuit Design, Residue Number System based Circuit Design, Mixed Mode VLSI Design, Semiconductor Device Modeling and Simulation, Fabrication and modeling of Thin Film Devices for Electronics, Spintronics, Gas Sensing and Optoelectronic Applications, LED and Photodetector fabrication for biomedical applications etc. Communication: Digital Communication, Optical Communication, Wireless & Mobile Communication, Data Communication and Networks,	M.Tech. or Equivalent degree in Electrical Engineering, Electronics and Communication Engineering and Electronics Electrical Engineering, Electronics Engineering and Communication Engineering with 60% marks or equivalent CPI/CGPA (55% marks or equivalent CPI/CGPA for SC/ST candidates).

						Cognitive Radio Networks, Wireless Sensor Networks, IoT, Ad-hoc Networks, Telemedicine Networks, Antenna design, RF & Microwave, Microwave Radar Imaging, Stealth Technology- Microwave absorber, Microwave sensors for non-destructive testing etc. Signal Processing: Finite wordlength effects in digital filters, Multidimensional Systems, Delayed systems, Signal & Image Processing, Embedded Signal Processing, Digital Filter Structures, Multiplierless Filters, Biomedical Signal & Image Processing, Digital Watermarking and Data Hiding, Data Compression, Medical Instrumentation etc.	
795	QIP0085	Moti Lal Nehru National Institute Of Technology (MNNIT), Prayagraj (Engg.)	Ph.D Humanities	Humanities and Social Science	DN000590	Human Resource Management Public Policy Accounting and Finance Economics English Literature Applied Psychology Industrial Psychology Organisational Behaviour English Language Teaching Applied Linguistics	M.A in English or Psychology/ MBA/MSW With 60% aggregate marks or equivalent CPI/CGPA (55% or equivalent CPI/CGPA for SC/ST Candidates).

796	QIP0085	Moti Lal Nehru National Institute Of Technology (MNNIT), Prayagraj (Engg.)	Ph.D Science	Mathematics	DN000591	Algebra , Fuzzy Analytics, Fluid Dynamics, Differential Equation, Nonlinear Waves, Magnetogasdynamics. Partial Differential Equations, Lie Group Theory, Similarity Transformations method, Fluid Mechanics, Bio-Fluid Mechanics, Cryptography, Computational Fluid Dynamics, Numerical Analysis, Topology, Rough Set Theory, Fuzzy Subset Theory, Applied Functional Analysis	M.Sc. in Math./M.Tech. in Mathematics with 60% aggregate marks or equivalent CPI/CGPA (55% marks or equivalent CPI/CGPA for SC/ST Candidates).
797	QIP0085	Moti Lal Nehru National Institute Of Technology (MNNIT), Prayagraj (Engg.)	Ph.D Engineering	Mechanical Engineering	DN000592	Design Engineering, Production and Industrial Engineering, Thermal Engineering.	M.Tech or Equivalent degree in Mechanical, Aeronautical, Automobile, Production, Metallurgical Engineering, Industrial Engineering. With 60% marks or equivalent CPI/CGPA (55% marks or equivalent CPI/CGPA for SC/ST candidates).

798	QIP0085	Moti Lal Nehru National Institute Of Technology (MNNIT), Prayagraj (Engg.)	Ph.D Science	Physics	DN000593	Experimental Condensed Matter Physics: Synthesis, and Optical Properties of Graphene, Graphene Quantum Dots, Graphene-metal Oxide Composites and Their Applications as Charged Storage and Photo-catalytic Materials. Synthesis and Studies on Size and Shape Dependent Optical and Magnetic Properties of Low Dimensional Materials. Experimental Condensed Matter Physics: Functional oxide, magnetic, and multiferroic materials (Nanostructures and thin films) for biomedical, chemical/gas sensing and energy applications. Theoretical Physics: Quantum chaos, Random matrix theory and its applications, Embedded ensembles of random matrices, Dissipative/open quantum systems, Nonlinear dynamics and complex systems, Quantum entanglement, Out-of-time-order-correlators. Entanglement entropy and operator entanglement.	M.Sc. in Physics/ M.Tech in appropriate branch of Engineering or With 60% aggregate marks or equivalent CPI/CGPA (55% marks or equivalent CPI/CGPA for SC/ST Candidates).

799	QIP0085	Moti Lal Nehru National Institute Of Technology (MNNIT), Prayagraj (Engg.)	Ph.D Management	School of Management	DN000594	Financial Derivatives, Investment Analysis, Risk Management, Investor Behaviour, Management Information Systems, E-governance, IS/IT Planning, E-business, Digital Marketing, Supply Chain Management, Relationship Marketing, Green IT, Entrepreneurship and Small Business, Human Resource Management, Organisational Behaviour, Consumer Behaviour, Social Marketing, Advertising, Ethical Marketing, Brand Management, Retail Management, Strategic Management, Sustainability Marketing, Green Consumption, Customer engagement, Sustainable Consumption, Green Business Practices, Green Marketing, Innovation Operations Management, Manufacturing Strategy, Strategic Information Systems (IS), Production Planning and Control, Operations Research, Optimization Techniques, Data Mining and its Applications in Manufacturing.	Master Degree in Management/ Technology/Engineering/ Economics/ Commerce/ Science/Computer Applications/ Social Science with minimum of 60% marks or equivalent CPI/CGPA (55% marks or equivalent CPI/CGPA for SC/ST candidates) or Bachelor degree in Engineering with a minimum of 75% marks or equivalent CPI/CGPA (70% marks or equivalent CPI/CGPA for SC/ST candidates).

800	QIP0085	Moti Lal Nehru National Institute Of Technology (MNNIT), Prayagraj (Engg.)	Ph.D Engineering	Geographic Information System (GIS)	DN000690	GNSS and advance InSAR, Artificial Intelligence (AI) for Earth Observation, Atmospheric Remote Sensing, Space Geodesy. LiDAR data generation, processing, and innovative applications of LiDAR data; Multi-sensor integration and data fusion for precision remote sensing. GIS, Web GIS, Image Processing, Neural Networks. Neural network and Fuzzy applications in image processing. Spatial Data Infrastructure, Climate Change, Glaciology, Urban Planning. GIS Application in Environmental Engineering. Location Based Sensing Technologies, Application of Geospatial Technologies to Transportation Engineering. Multi-criteria decision Making using GIS and Remote Sensing.	Applicant with M. Tech. or equivalent degree in GIS & Remote Sensing or equivalent discipline/Civil Engineering/ Computer Science and Engineering/Electronics/Electrical Engineering/ Mechanical Engineering/Information Technology/Agriculture Engineering/Mining Engineering; with minimum marks 60% or CPI 6.5. OR Applicant with M.Sc. or equivalent degree in GIS & Remote Sensing/ Applied Geology/Geophysics/Geography/Environmental Science/Computer Science/Mathematics. OR degree in Master of Computer Application with minimum marks 75% or CPI 8.0 OR Applicant with Bachelor's degree in Engineering with a minimum of 75% marks or CPI 8.0 (Candidates meeting above mentioned eligibility criteria must have Mathematics as subject up to 10+2 level)
801	QIP0087	Indian Institute of Technology (IIT), Bhubaneswar	Ph.D Engineering	Civil Engineering	DN000256	Environmental Engineering Geo-technical Engineering Structural Engineering Transportation Engineering Water Resources Engineering	M. Tech./ME or equivalent degree in appropriate disciplines, with minimum 60% marks or 6.5 CGPA (in a 10-point scale). OR B Tech/BE or equivalent degree in appropriate disciplines with minimum 70% marks or 7.5 CGPA (in a 10-point scale). Minimum 60% marks or 6.5 CGPA (in a 10-point scale) required in all other examinations from Class 10 onwards. A single relaxation up to 5% marks in secondary/higher secondary/equivalent is permitted.

802	QIP0087	Indian Institute of Technology (IIT), Bhubaneswar	Ph.D Engineering	Electrical Engineering	DN000259	Renewable Energy Systems, Micro-Grid and Smart-Grid, Power System Protection, Power Quality, Power System Operation and Planning, Power Electronics and Drives, Control System, Electric Vehicle, High Voltage Engineering.	M. Tech./ME or equivalent degree in appropriate disciplines, with minimum 60% marks or 6.5 CGPA (in a 10-point scale). OR B Tech/BE or equivalent degree in appropriate disciplines with minimum 70% marks or 7.5 CGPA (in a 10-point scale). Minimum 60% marks or 6.5 CGPA (in a 10-point scale) required in all other examinations from Class 10 onwards. A single relaxation up to 5% marks in secondary/higher secondary/equivalent is permitted.
803	QIP0087	Indian Institute of Technology (IIT), Bhubaneswar	Ph.D Engineering	Electronics & Communication Engineering	DN000260	Integrated Circuits and VLSI Systems, Semiconductor devices, Antennas and Arrays, Augmented and Virtual Reality, Biomedical Signal Processing, Cognitive Radio, Digital Signal Processing, Image and Video Processing, Computer Vision, Information Theory and Coding, RF and Microwave , Multimedia, Communication Systems, Optical Communication, Fiber Sensors, Speech Processing, Wireless Communications.	M. Tech./ME or equivalent degree in appropriate disciplines, with minimum 60% marks or 6.5 CGPA (in a 10-point scale). OR B Tech/BE or equivalent degree in appropriate disciplines with minimum 70% marks or 7.5 CGPA (in a 10-point scale). Minimum 60% marks or 6.5 CGPA (in a 10-point scale) required in all other examinations from Class 10 onwards. A single relaxation up to 5% marks in secondary/higher secondary/equivalent is permitted.
804	QIP0087	Indian Institute of Technology (IIT), Bhubaneswar	Ph.D Engineering	Computer Science & Engineering	DN000261	Artificial Intelligence & Machine Learning, Internet-of-Things & Cyber-Physical Systems, Multi-Robot Systems, Distributed Systems & Algorithms, Computer Vision & Visual Surveillance, Intelligent Transportation Systems, Software Defined Networks, Cryptography and Network Security, Formal Methods for Testing and Verification, Languages & Compilers, High Performance Computing Architecture.	M. Tech./ME or equivalent degree in appropriate disciplines, with minimum 60% marks or 6.5 CGPA (in a 10-point scale). OR B Tech/BE or equivalent degree in appropriate disciplines with minimum 70% marks or 7.5 CGPA (in a 10-point scale). Minimum 60% marks or 6.5 CGPA (in a 10-point scale) required in all other examinations from Class 10 onwards. A single relaxation up to 5% marks in secondary/higher secondary/equivalent is permitted.

805	QIP0087	Indian Institute of Technology (IIT), Bhubaneswar	Ph.D Engineering	Mechanical Engineering	DN000263	Fluid Mechanics, Turbulence, Computational Fluid Dynamics, Large Eddy Simulation, Fluid-structure interaction, Aero and hydrodynamic propulsion, Heat Transfer, Inverse Heat Transfer, Two Phase Heat Transfer, Bio-Heat Transfer, Thermal System Optimization, Radiation Heat Transfer in Participating Medium, Conjugate Heat Transfer, Thermal energy storage system, modelling of cryopreservation, Atmospheric Radiation, Acoustics, Composite Materials, Sandwich Structures, Fracture Mechanics, Composite Materials, Smart Composite Structures, Vibration, Solid Mechanics, Robotics, Biologically inspired robotics, Human assistive devises, Industrial Noise Control, Condition Monitoring, Multiscale methods for Fracture, Molecular Dynamics; Fracture in Multiphysics problems; structural dynamics, Non-linear elasticity, Mechanics of inflatable structures, Experimental modal analysis, Sensors, Conventional Machining, Modelling & Simulation of Machining Process, Sustainable Machining, Machining of Super alloys, Computer Aided Manufacturing, Cellular Manufacturing, Reverse Engineering, Laser Material Processing, Laser based additive	M. Tech./ME or equivalent degree in appropriate disciplines, with minimum 60% marks or 6.5 CGPA (in a 10-point scale). OR B Tech/BE or equivalent degree in appropriate disciplines with minimum 70% marks or 7.5 CGPA (in a 10-point scale). Minimum 60% marks or 6.5 CGPA (in a 10-point scale) required in all other examinations from Class 10 onwards. A single relaxation up to 5% marks in secondary/higher secondary/equivalent is permitted.

						manufacturing/cladding, Pulse Heat Transfer in Manufacturing Analysis, Non-conventional Machining, Hybrid machining techniques, Machining of ceramic and hard materials, Surface texturing, Micro-machining and Tribology. Dissimilar high strength alloy welding, Hot wire TIG welding of super alloys, Modelling of arc welding processes, residual stress and distortion control in welded structures, TIG cladding and laser treatment for cutting tool life enhancement, Residual stress control in multi-metallic wire arc additive manufacturing (WAAM), LVOF and HVOF based TBC and wear resistance coating, Modelling and Friction stir welding (FSW) of Al and Mg alloys, FSW tool design, residual stress control in friction stir welded joints, investment casting of high temperature alloys, manufacturability and synthesis of in-situ MMC of Al and Mg alloys.	

806	QIP0087	Indian Institute of Technology (IIT), Bhubaneswar	Ph.D Science	Physics	DN000265	Accelerator based atomic, molecular and surface physics, Atomistic Modeling and Molecular Simulation, Experimental Condensed Matter Physics, Experimental High Energy Physics, Nanophotonics and Plasmonics, Theoretical Condensed Matter Physics/Statistical Mechanics, Theoretical High Energy Physics	Minimum 60% marks or 6.5 CGPA (in a 10-point scale) in Master's or equivalent degree in appropriate disciplines. Minimum 60% marks or 6.5 CGPA (in a 10-point scale) required in all other examinations from Class 10 onwards. A single relaxation up to 5% marks in secondary/higher-secondary/bachelor's degree/equivalent is permitted.
807	QIP0087	Indian Institute of Technology (IIT), Bhubaneswar	Ph.D Science	Chemistry	DN000266	Biochemistry and Biophysical Chemistry, Organic and Inorganic Chemistry, Physical, Theoretical and Computational Chemistry	Minimum 60% marks or 6.5 CGPA (in a 10-point scale) in Master's or equivalent degree in appropriate disciplines. Minimum 60% marks or 6.5 CGPA (in a 10-point scale) required in all other examinations from Class 10 onwards. A single relaxation up to 5% marks in secondary/higher-secondary/bachelor's degree/equivalent is permitted.
808	QIP0087	Indian Institute of Technology (IIT), Bhubaneswar	Ph.D Science	Mathematics	DN000267	Complex Analysis, Complex Dynamics and Fractals, Functional Analysis, Vibrational inequalities, Complementarity problems, Algebra, Combinatorial Matrix Theory, Spectral Graph Theory, Data mining, and Portfolio Analysis, Soft Computing, Optimization Theory, Numerical Analysis, Fluid Dynamics, Bio-fluid dynamics, Computational Fluid dynamics, Numerical Methods for PDEs, Probability Theory and Random Matrix Theory, Queueing Theory, Stochastic models, Applied Probability, Control of Queues	Minimum 60% marks or 6.5 CGPA (in a 10-point scale) in Master's or equivalent degree in appropriate disciplines. Minimum 60% marks or 6.5 CGPA (in a 10-point scale) required in all other examinations from Class 10 onwards. A single relaxation up to 5% marks in secondary/higher-secondary/bachelor's degree/equivalent is permitted.

809	QIP0087	Indian Institute of Technology (IIT), Bhubaneswar	Ph.D Engineering	Biosciences & Bioengineering	DN000268	BIO-SCIENCE Biophysical Chemistry, Biochemistry and Microbiology Cancer Biology Chemical and Molecular Biology	Minimum 60% marks or 6.5 CGPA (in a 10-point scale) in Master's or equivalent degree in appropriate disciplines. Minimum 60% marks or 6.5 CGPA (in a 10-point scale) required in all other examinations from Class 10 onwards. A single relaxation up to 5% marks in secondary/higher-secondary/bachelor's degree/equivalent is permitted.
810	QIP0087	Indian Institute of Technology (IIT), Bhubaneswar	Ph.D Engineering	Earth Sciences	DN000269	Atmosphere and Ocean Sciences Satellite and Physical Oceanography; Ocean Dynamics; Monsoon; Extreme Weather Events; Atmosphere and Ocean Modeling; Atmospheric Aerosols and Climate; Energy and Climate; Urban Weather and Climate; Ocean Biogiochemistry; Machine learning applications in Climate Sciences. Geology Structural Geology; Landslides; Hydrogeochemisty; Geothermics; Environmental Geochemistry	Minimum 60% marks or 6.5 CGPA (in a 10-point scale) in Master's or equivalent degree in appropriate disciplines. OR B Tech/BE or equivalent degree in appropriate disciplines with minimum 70% marks or 7.5 CGPA (in a 10-point scale). Minimum 60% marks or 6.5 CGPA (in a 10-point scale) required in all other examinations from Class 10 onwards. A single relaxation up to 5% marks in secondary/higher-secondary/bachelor's degree/equivalent is permitted.
811	QIP0087	Indian Institute of Technology (IIT), Bhubaneswar	Ph.D Humanities	Humanities and Social Science	DN000270	Economics English Psychology	Minimum of 55% marks or 6.0 CGPA (in a 10-point scale) in Master's degree in appropriate Humanities and Social Sciences disciplines. Minimum 55% marks or 6.0 CGPA (in a 10-point scale) required in all other examinations from Class 10 onwards. A single relaxation up to 5% marks in secondary/higher secondary/bachelor's degree/equivalent is permitted.

812	QIP0087	Indian Institute of Technology (IIT), Bhubaneswar	Ph.D Engineering	Metallurgical & Materials Engineering	DN000271	Minerals, Metallurgical and Materials Engineering Additive Manufacturing, Phase-field modelling of microstructural evolution; Advanced composite materials, Biomaterials and Biomechanics; Aluminium-based alloys and composites, Recycling of aluminium alloys, Semisolid metal processing, Tribology of aluminium alloys; Process metallurgy, Iron and Steel Making, Non-ferrous Extractive Metallurgy, Stainless steel and Ferroalloy Production, Process Optimization, Chaos control and dynamic process control, Nonlinear dynamical systems' control in iron and steelmaking; Application of AI techniques; Processing, Characterization and Modelling of High Entropy Alloys; Light weight High Entropy Alloys; Metal - Metal composites; Specialty alloys for marine applications; Coatings for technological applications, Corrosion of advanced materials, Powder metallurgy of nanocrystalline materials, Surface engineering; Perovskite solar cell materials; Piezoelectric polymer composite for energy harvesting; Energy materials, Batteries, Eletro-spraying, Multi-ferroic oxide solar cells and Conventional solar cells. Ab-	M. Tech./ME or equivalent degree in appropriate disciplines, with minimum 60% marks or 6.5 CGPA (in a 10-point scale). OR B Tech/BE or equivalent degree in appropriate disciplines with minimum 70% marks or 7.5 CGPA (in a 10-point scale). Minimum 60% marks or 6.5 CGPA (in a 10-point scale) required in all other examinations from Class 10 onwards. A single relaxation up to 5% marks in secondary/higher secondary/equivalent is permitted.

						initio studies in functional and energy materials, Thermoelectric materials, Thermal and electrical properties of nanostructured materials, Doping modulation and compositional tailoring in materials; Friction Stir Welding, Hybrid joining; Recrystallization behaviour and grain boundary engineering, Severe plastic deformation of light metals and alloys, Strain-rate sensitivity in metals and alloys, Superplasticity, Virtual characterization using crystal plasticity based finite element modelling;	
813	QIP0091	Indian Institute of Technology (ISM), Dhanbad	M.Tech	Chemical Engineering	DN000496	Chemical Engineering	a) B.E./B.Tech. in Chemical Engineering/ Petrochemical Engineering/ Biochemical Engineering/Polymer Science & Engineering from Institutes recognized by the Government. b) The minimum marks are 60% or CGPA of 6.0 (on a 10-point scale) in Bachelors' degree in Engineering. c) Candidates belonging to SC / ST and who have the basic qualifying degree is eligible to apply, provided s/he has secured marks not less than 55% or CGPA not less than 5.5 in the relevant degree. d) Candidate must be an Indian National. e) Candidates with an equivalent degree and discipline recognized by professional bodies, such as the Institution of Engineers (India), the Institute of Chemical Engineers, are not eligible.

814	QIP0091	Indian Institute of Technology (ISM), Dhanbad	M.Tech	Civil Engineering	DN000498	Civil Engineering	a)B.E./B.Tech or equivalent degree in Civil Engineering from Institutes recognized by the Government. b) The minimum marks are 60% or CGPA of 6.0 (on a 10-point scale) in Bachelors' degree in Engineering. c) Candidates belonging to SC / ST and who have the basic qualifying degree is eligible to apply, provided s/he has secured marks not less than 55% or CGPA not less than 5.5 in the relevant degree. d) Candidate must be an Indian National. e) Candidates with an equivalent degree and discipline recognized by professional bodies, such as the Institution of Engineers (India) is not eligible
815	QIP0091	Indian Institute of Technology (ISM), Dhanbad	M.Tech	Computer Science & Engineering	DN000500	Computer Science & Engineering	a)B.E./B.Tech. or equivalent in Computer Science and Engineering/ Information Technology/Electronics and Communication/ Telecommunication/ Electronics and Instrumentation/Electronics/ Electronics and Electrical/Electrical Engineering from Institutes recognized by the Government. b) The minimum marks are 60% or CGPA of 6.0 (on a 10-point scale) in Bachelors' degree in Engineering. c) Candidates belonging to SC / ST and who have the basic qualifying degree is eligible to apply, provided s/he has secured marks not less than 55% or CGPA not less than 5.5 in the relevant degree. d) Candidate must be an Indian National. e) Candidates with an equivalent degree and discipline recognized by professional bodies, such as the Institution of Engineers (India), the Institute of Electronics and Telecommunication Engineers, etc. are not eligible.

816	QIP0091	Indian Institute of Technology (ISM), Dhanbad	M.Tech	Electrical Engineering	DN000502	Electrical Engineering	a)B.E./B.Tech or equivalent degree in Electrical/ Electronics/ Electrical & Electronics/Electrical & Communication/Electronics & Communication/Instrumentation/Electronics & Instrumentation/Power Electronics & Drives from Institutes recognized by the Government. b) The minimum marks are 60% or CGPA of 6.0 (on a 10-point scale) in Bachelors' degree in Engineering. c) Candidates belonging to SC / ST and who have the basic qualifying degree is eligible to apply, provided s/he has secured marks not less than 55% or CGPA not less than 5.5 in the relevant degree. d) Candidate must be an Indian National. e) Candidates with an equivalent degree and discipline recognized by professional bodies, such as the Institution of Engineers (India), the Institute of Electronics and Telecommunication Engineers etc. are not eligible.
817	QIP0091	Indian Institute of Technology (ISM), Dhanbad	M.Tech	Electronics Engineering	DN000504	Electronics and Communication Engineering	a)B. Tech./B.E. or equivalent degree in Electronics Engineering/Electronics & Communication Engineering/Electronics & Telecommunication Engineering/Telecommunication Engineering/Information Technology/Electronics and Instrumentation Engineering from Institutes recognized by the Government. b) The minimum marks are 60% or CGPA of 6.0 (on a 10-point scale) in Bachelors' degree in Engineering. c) Candidates belonging to SC / ST and who have the basic qualifying degree is eligible to apply, provided s/he has secured marks not less than 55% or CGPA not less than 5.5 in the relevant degree. d) Candidate must be an Indian National. e) Candidates with an equivalent degree and discipline recognized by professional bodies, such as the Institution of Engineers (India), the Institute of Electronics and Telecommunication Engineers etc. are not eligible.

818	QIP0091	Indian Institute of Technology (ISM), Dhanbad	M.Tech	Environmental Science & Engineering	DN000506	Environmental Science & Engineering	a)Any one of the following from Institutes recognized by the Government • M.Sc. Degree in Environmental Science/Chemistry/Zoology/ Botany/Geology/Microbiology/Atmospheric Science/ Biochemistry/Biotechnology/Earth Science/Geochemistry/ Remote Sensing and GIS • M.Sc. Tech. Degree in Environmental Science/ Biotechnology/Atmospheric Science/Remote Sensing and GIS • B.E./B.Tech or equivalent degree in Environmental/Civil/ Chemical/Mining/Biotechnology. b) The minimum marks are 60% or CGPA of 6.0 (on a 10-point scale) in Bachelors' degree in Engineering or a Masters' degree in Science. c) Candidates belonging to SC / ST and who have the basic qualifying degree is eligible to apply, provided s/he has secured marks not less than 55% or CGPA not less than 5.5 in the relevant degree. d) Candidate must be an Indian National. e) Candidates with an equivalent degree and discipline recognized by professional bodies, such as the Institution of Engineers (India) is not eligible.
819	QIP0091	Indian Institute of Technology (ISM), Dhanbad	M.Tech	Mathematics & Computing	DN000511	Data Analytics	a)Any one of the following from Institutes recognized by the Government • B.E./B. Tech. in Computer Science and Engineering and equivalent • B.E./B.Tech. in Information Technology • Four year B.S./B.Tech. in Mathematics & Computing • M.Sc. in Computer Science • MCA • M.Sc./MS In Mathematics/Mathematics & Computing/ Statistics/Statistics & Informatics • 5 Year Integrated M.Sc./M.Tech. in Mathematics & Computing • 5 Year Integrated M.Sc. in Statistics & Informatics. b) The minimum marks are 60% or CGPA of 6.0 (on a 10-point scale) in Bachelors' degree in Engineering or a Masters' degree in Science. c) Candidates belonging to SC / ST and who have the basic qualifying degree is eligible to apply, provided s/he has

							secured marks not less than 55% or CGPA not less than 5.5 in the relevant degree. d) Candidate must be an Indian National. e) Candidates with an equivalent degree and discipline recognized by professional bodies, such as the Institution of Engineers (India) is not eligible.
820	QIP0091	Indian Institute of Technology (ISM), Dhanbad	M.Tech	Mechanical Engineering	DN000512	Mechanical Engineering	a)B. E./B. Tech. or equivalent degree in from Institutes recognized by the Government. Mechanical Engineering/Aerospace Engineering/Aeronautical Engineering/Automobile Engineering/Manufacturing Engineering/Production Engineering/ Production and Industrial Engineering/ Energy Engineering/ Automation Engineering/ Mechatronics Engineering/Robotics/ Marine Engineering/Mining Machinery Engineering/Engineering and Computational Mechanics/Any combination of the disciplines given as mentioned. b) The minimum marks are 60% or CGPA of 6.0 (on a 10-point scale) in Bachelors' degree in Engineering. c) Candidates belonging to SC / ST and who have the basic qualifying degree is eligible to apply, provided s/he has secured marks not less than 55% or CGPA not less than 5.5 in the relevant degree. d) Candidate must be an Indian National. e) Candidates with an equivalent degree and discipline recognized by professional bodies, such as the Institution of Engineers (India), the Institute of Chemical Engineers, the Aeronautical Society of India, the Indian Institute of Metals, etc. are not eligible

821	QIP0091	Indian Institute of Technology (ISM), Dhanbad	M.Tech	Mining Engineering	DN000514	Mining Engineering	a)Any one of the followings from Institutes recognized by the Government.: • B.E./B.Tech. or equivalent degree in Mining/Opencast Mining/Mining Machinery Engineering. • B.E./B.Tech. or equivalent degree in Civil/Mechanical/Electrical Engineering with 2 years working experience in mines. • M.Sc. Tech. (Geology/Applied Geology) with 60% marks in Mathematics at graduate level and 2 years working experience in mines. b) The minimum marks are 60% or CGPA of 6.0 (on a 10-point scale) in Bachelors' degree in Engineering or a Masters' degree in Science. c) Candidates belonging to SC / ST and who have the basic qualifying degree is eligible to apply, provided s/he has secured marks not less than 55% or CGPA not less than 5.5 in the relevant degree. d) Candidate must be an Indian National. e) Candidates with an equivalent degree and discipline recognized by professional bodies, such as the Institution of Engineers (India), the Institute of Chemical Engineers, the Aeronautical Society of India, the Institute of Electronics and Telecommunication Engineers, the Indian Institute of Metals, etc. are not eligible Note: Candidates with colour blindness / uniocularity are not permissible.
822	QIP0091	Indian Institute of Technology (ISM), Dhanbad	Ph.D Engineering	Chemical Engineering	DN000515	Chemical Engineering	a)An applicant must have a Master's degree in Engineering in the relevant subject with first class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale). b)M.Tech or equivalent in Chemical Engineering or its related discipline WITH B Tech/B.E in Chemical Engineering or Chemical Technology or Polymer Science and Engineering or Biochemical Engineering or Petrochemical Engineering.

823	QIP0091	Indian Institute of Technology (ISM), Dhanbad	Ph.D Engineering	Computer Science & Engineering	DN000516	Computer Science & Engineering	a)An applicant must have a Master's degree in Engineering in the relevant subject with first class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale). b)M.Tech or equivalent in Computer Science & Engg. / Information Technology / Computer Application / Software Engineering / Electronics Engg. / Electronics and Communication Engg. / Electrical Engg. WITH B. Tech. or equivalent in Computer Science & Engg. / Information Technology / Electronics Engg. / Electronics and Communication Engg. / Electrical Engg
824	QIP0091	Indian Institute of Technology (ISM), Dhanbad	Ph.D Engineering	Civil Engineering	DN000517	Civil Engineering	a)An applicant must have a Master's degree in Engineering in the relevant subject with first class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale). b)M.Tech. / M.E. in Civil Engg. With B.Tech. / B.E. in Civil Engg. / Construction Management, Aerospace Engg., Naval Architecture, Agricultural Engg. and Technology having specialization in their M. Tech./M. E. as Structural Engg./ Geotechnical Engg./ Water Resources Engg./ Environmental Engg./Transportation Engg./ Remote Sensing & GIS/ Construction Management/ Aerospace Engg./ Naval Architecture/ Agricultural Engg. and Technology.
825	QIP0091	Indian Institute of Technology (ISM), Dhanbad	Ph.D Engineering	Electronics Engineering	DN000519	Electronics Engineering	a)An applicant must have a Master's degree in Engineering in the relevant subject with first class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale). b)M. Tech. / M.E. / MS in Electronics/Electronics & Communication/ Electronics & Tele-communication/Electronics & Instrumentation/ Instrumentation/ Instrumentation & control/ Electronics & Electrical Engineering/Computer Science Engg/ Information Technology or related field WITH B. Tech./B.E. or equivalent degree in Electronics / Electronics & Communication /Electronics & Tele-communication / Electronics & Instrumentation/Instrumentation/ Instrumentation & control/ Electronics & Electrical Engineering/ Computer Science Engg/Information Technology

826	QIP0091	Indian Institute of Technology (ISM), Dhanbad	Ph.D Engineering	Electrical Engineering	DN000521	Electrical Engineering	a)An applicant must have a Master's degree in Engineering in the relevant subject with first class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale). b)M.Tech. or equivalent in Electrical Engg. / Control System Engg. / Power System Engg. / Electrical Machines / Power Electronics and Drives / High Voltage Engg. / Instrumentation Engg. / Power Apparatus & Devices / Electronics WITH B.Tech or equivalent in Electrical/Electrical & Electronics Engg.
827	QIP0091	Indian Institute of Technology (ISM), Dhanbad	Ph.D Engineering	Environmental Science & Engineering	DN000524	Environmental Science & Engineering	a) • An applicant must have a Master's degree in Engineering in the relevant subject with first class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale), OR • An applicant must have a Master's degree in Science or an allied area with first-class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale). b)M.Tech. / M.E. or equivalent in Environmental Science & Engineering / Biotechnology / Civil / Chemical / Water Resource Engg / Mining / Atmospheric Science. OR M.Phil. / M.Sc. / M.Sc. Tech. or equivalent in Atmospheric science/ Botany / Microbiology / Biotechnology / Chemistry / Physics / Environmental Science / Environmental Science & Management / Geology / Hydrology / Soil Science / Remote sensing and GIS / Forestry.

828	QIP0091	Indian Institute of Technology (ISM), Dhanbad	Ph.D Science	Mathematics & Computing	DN000529	1. Mathematics 2. Statistics	1. For Mathemetics a) • An applicant must have a Master's degree in Engineering in the relevant subject with first class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale), OR • An applicant must have a Master's degree in Science or an allied area with first-class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale). b)M.Phil/ M. Tech. / M.Sc. or equivalent in Mathematics / Applied Mathematics / Mathematics & Computing / M.Tech. in Computer Science. 2. For Statistics a)An applicant must have a Master's degree in Science or an allied area with first-class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale). b)M.Phil/M.Sc. or equivalent in Statistics/Applied Statistics/Bio-Statistics.

829	QIP0091	Indian Institute of Technology (ISM), Dhanbad	Ph.D Engineering	Mechanical Engineering	DN000532	Mechanical Engineering	a) • An applicant must have a Master's degree in Engineering in the relevant subject with first class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale), OR • An applicant must have a Bachelor's degree in Engineering with a minimum of 70% marks/CGPA of 7.0 (on a 10 point scale), b)M. Tech. or equivalent degree with specialization in Mechanical /Production / Manufacturing / Industrial Production / CAD/CAM /Machine Design / Mechatronics / Thermal / Heat Power / Energy /Power Plant Engg. / Automobile / Maintenance Engg./Tribology/Welding Technology/Mechanical Science/Hydro and Renewable Energy/Renewable Energy/Energy Environment and Management/ Applied Mechanics/Engineering Mechanics/Stress and Vibration Analysis/Aerospace Engineering/Robotics/Nano Technology/Fluid power and Control/Mechanical Engg with Thermal/Fluid Mechanics as major or in Aerospace Engineering with aerodynamics as Major or in Civil Engineering with Fluid Mechanics/Hydraulics as Major/MME or any combinations of these specializations. WITH B. E. / B.Tech./B.Sc. in Engineering or equivalent degree in Mechanical / Production / Manufacturing / Aerospace / Energy Engineering /Power Plant Engineering/Automobile Engineering/Mechanical Science/ Aeronautical Engineering/ Industrial Engineering/ Automation Engineering/ Mechatronics Engineering/Robotics/Marine Engineering/ Mining Machinery Engineering/Engineering and Computational Mechanics/ or Any combination of the disciplines given as mentioned.

830	QIP0091	Indian Institute of Technology (ISM), Dhanbad	Ph.D Engineering	Mining Engineering	DN000533	Mining Engineering	a) • An applicant must have a Master's degree in Engineering in the relevant subject with first class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale), OR • An applicant must have a Master's degree in Science or an allied area with first-class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale). b)M.Tech. or equivalent in Mining Engg. / Opencast Mining / Mine Planning & Design / Rock Excavation Engg. / Geomatics / Tunnelling and Underground Space Technology / Rock Mechanics/Geotechnical Engg/ Civil Engg. / Engineering Geology; with B.Tech or equivalent in Mining Engg. / Civil Engg. / Opencast Mining/Mining Machinery/Environmental Engg; M.Sc. Tech. (Applied Geology); M.Sc. (Geospatial Science), Minerals & Metallurgical Engg, Mineral Engg, Electronics Engg, Electronics & Communication Engg, Computer Science Engg.
831	QIP0091	Indian Institute of Technology (ISM), Dhanbad	Ph.D Science	Physics	DN000534	Physics	a) • An applicant must have a Master's degree in Engineering in the relevant subject with first class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale), OR • An applicant must have a Master's degree in Science or an allied area with first-class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale). b)M.Sc./Integrated M.Sc./M.Phil or equivalent in Physics/Applied Physics or B.Tech./M.Tech./Integrated M.Tech. or equivalent in Engineering Physics/Material Science/Nanoscience and Technology/Optoelectronics or equivalent.

832	QIP0091	Indian Institute of Technology (ISM), Dhanbad	Ph.D Humanities	Humanities and Social Science	DN000538	1. English Language/Literature 2. Philosophy 3. Psychology 4. Sociology	1.1.3 Essential criteria for Ph.D. in Humanities and Social Sciences • An applicant must have a Master's degree in the relevant subject, Arts, Commerce, Humanities and Social Sciences with first class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale), Essential qualification for 1. English Language/Literature: Masters or equivalent in English/ELT/Linguistics. 2. Philosophy: Masters or equivalent in Philosophy or related discipline. 3. Psychology: Masters or equivalent in Psychology or related discipline. 4. Sociology: Masters or equivalent in Sociology or related discipline.
833	QIP0091	Indian Institute of Technology (ISM), Dhanbad	M.Tech	Petroleum Engineering	DN000610	Petroleum Engineering	a)B. E./B. Tech. or equivalent degree in Petroleum Engineering/ Applied Petroleum Engineering/Gas Engineering/Petroleum Management/Petroleum Studies/Petroleum Technology/Petroleum Science/Petroleum Science and Engineering from Institutes recognized by the Government. b) The minimum marks are 60% or CGPA of 6.0 (on a 10-point scale) in Bachelors' degree in Engineering. c) Candidates belonging to SC / ST and who have the basic qualifying degree is eligible to apply, provided s/he has secured marks not less than 55% or CGPA not less than 5.5 in the relevant degree. d) Candidate must be an Indian National. e) Candidates with an equivalent degree and discipline recognized by professional bodies, such as the Institution of Engineers (India), the Institute of Chemical Engineers, etc. are not eligible Note: Candidates with colour blindness / uniocularity are not permissible.

834	QIP0091	Indian Institute of Technology (ISM), Dhanbad	M.Tech	Applied Geophysics	DN000611	Earthquake Science & Engineering	a) The candidate should have any one of the followings degree from Institutes recognized by the Government. • 2-years M.Sc./3-years M.Sc. Tech./5-years integrated M.Tech. in Geophysics/Applied Geophysics/Exploration Geophysics/Geology/ Applied Geology • 5-years integrated M.Tech. in Geophysical Technology • B.E./B.Tech. degree in Mining Engineering/ Civil Engineering. b) The minimum marks are 60% or CGPA of 6.0 (on a 10-point scale) in Bachelors' degree in Engineering or a Masters' degree in Science. c) Candidates belonging to SC / ST and who have the basic qualifying degree is eligible to apply, provided s/he has secured marks not less than 55% or CGPA not less than 5.5 in the relevant degree. d) Candidate must be an Indian National. e) Candidates with an equivalent degree and discipline recognized by professional bodies, such as the Institution of Engineers (India), the Institute of Chemical Engineers, the Aeronautical Society of India, the Institute of Electronics and Telecommunication Engineers, the Indian Institute of Metals, etc. are not eligible.
835	QIP0091	Indian Institute of Technology (ISM), Dhanbad	M.Tech	Chemistry and Chemical Biology	DN000613	Pharmaceutical Science and Engineering	a) Candidates with B.E./B.Tech degree in Chemical Engineering /Biotechnology/Chemical Techology or M. Sc. (Chemistry/Biochemistry). b) The minimum marks are 60% or CGPA of 6.0 (on a 10-point scale) in Bachelors' degree in Engineering or a Masters' degree in Science. c) Candidates belonging to SC / ST and who have the basic qualifying degree is eligible to apply, provided s/he has secured marks not less than 55% or CGPA not less than 5.5 in the relevant degree. d) Candidate must be an Indian National. e) Candidates with an equivalent degree and discipline recognized by professional bodies, such as the Institution of Engineers (India), the Institute of Chemical Engineers, the Aeronautical Society of India, the Institute of Electronics and Telecommunication Engineers, the Indian Institute of Metals, etc. are not eligible.

836	QIP0091	Indian Institute of Technology (ISM), Dhanbad	M.Tech	Fuel, Minerals and Metallurgical Engineering	DN000614	Fuel Mineral and Metallurgical Engineering	a)B.E./B.Tech. or equivalent degree in Mineral/Mining/ Metallurgy/ Chemical/Ceramic Engineering from Institutes recognized by the Government. b) The minimum marks are 60% or CGPA of 6.0 (on a 10-point scale) in Bachelors' degree in Engineering. c) Candidates belonging to SC / ST and who have the basic qualifying degree is eligible to apply, provided s/he has secured marks not less than 55% or CGPA not less than 5.5 in the relevant degree. d) Candidate must be an Indian National. e) Candidates with an equivalent degree and discipline recognized by professional bodies, such as the Institution of Engineers (India), the Institute of Chemical Engineers, the Aeronautical Society of India, the Indian Institute of Metals, etc. are not eligible.
837	QIP0091	Indian Institute of Technology (ISM), Dhanbad	Ph.D Science	Applied Geology	DN000616	Applied Geology	a) • An applicant must have a Master's degree in Engineering in the relevant subject with first class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale), OR • An applicant must have a Master's degree in Science or an allied area with first-class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale). b)M.Sc./M.Sc. Tech in Geology / Applied Geology or M.Sc./M.Sc. Tech. in Geology/Applied Geology with specialization in Marine Geology / Oceanography / Hydrogeology / Geochemistry/ Applied Geochemistry / Geoinformatics / Natural Hazards & Disaster Risk Management / Remote Sensing and GIS / Geophysics / Petroleum Geosciences. OR Integrated M.Sc./M.Sc.Tech/M.Tech. in Geology/Applied Geology or M. Tech. in Geological Technology. OR M.Tech in Mineral Exploration/Engineering Geology/Petroleum Exploration/Geo-exploration/ Exploration Geosciences / Remote Sensing / Remote Sensing and GIS applications / Geoinformatics/ Petroleum Geosciences/ Marine Geosciences having M.Sc./M.Sc. Tech in Geology/Applied Geology or Integrated M.Sc./M.Sc. Tech./

							M.Tech. in Geology/Applied Geology or M. Tech. in Geological Technology.
838	QIP0091	Indian Institute of Technology (ISM), Dhanbad	Ph.D Science	Applied Geophysics	DN000617	Applied Geophysics	a) • An applicant must have a Master's degree in Engineering in the relevant subject with first class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale), OR • An applicant must have a Master's degree in Science or an allied area with first-class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale). b)M.Sc/M.Sc. Tech/./Integrated M. Tech. /M. Tech. in Applied Geophysics/ Exploration Geophysics/ Geophysics or M.Sc.Tech. in Marine Geophysics or M.Tech in Earthquake Science and Engineering or M. Tech. in Geo-exploration or M. Tech. in other relevant fields.
839	QIP0091	Indian Institute of Technology (ISM), Dhanbad	Ph.D Science	Chemistry and Chemical Biology	DN000618	Chemistry	a) • An applicant must have a Master's degree in Engineering in the relevant subject with first class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale), OR • An applicant must have a Master's degree in Science or an allied area with first-class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale). b)M.Tech. / M.Phil. / M.Sc. or equivalent in Chemistry / Applied Chemistry / Industrial Chemistry.
840	QIP0091	Indian Institute of Technology (ISM), Dhanbad	Ph.D Engineering	Fuel, Minerals and Metallurgical Engineering	DN000619	Fuel, Minerals and Metallurgical Engineering	a) • An applicant must have a Master's degree in Engineering in the relevant subject with first class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale), OR • An applicant must have a Bachelor's degree in Engineering with a minimum of 70% marks/CGPA of 7.0 (on a 10 point scale), b)B.Tech / M.Tech. or equivalent in Mineral / Fuel / Chemical / Energy / Metallurgical / Mining / Mechanical / Production / Manufacturing or its related discipline.

841	QIP0091	Indian Institute of Technology (ISM), Dhanbad	Ph.D Engineering	Petroleum Engineering	DN000620	Petroleum Engineering	a) • An applicant must have a Master's degree in Engineering in the relevant subject with first class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale), OR • An applicant must have a Bachelor's degree in Engineering with a minimum of 70% marks/CGPA of 7.0 (on a 10 point scale), OR • An applicant must have a Master's degree in Science or an allied area with first-class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale). b)M. Tech. in Petroleum / Chemical / Petroleum & Petrochemical / Mechanical / Civil / Computer Science & Engineering OR M.Sc. in Chemistry, Mathematics, Geology and Geophysics and B. Tech. in Petroleum Engineering.
842	QIP0091	Indian Institute of Technology (ISM), Dhanbad	M.Tech	Management Studies and Industrial Engineering	DN000630	Industrial Engineering & Management	a)B.E./B.Tech. or equivalent degree in any branch of Engineering from Institutes recognized by the Government. b) The minimum marks are 60% or CGPA of 6.0 (on a 10-point scale) in Bachelors' degree in Engineering. c) Candidates belonging to SC / ST and who have the basic qualifying degree is eligible to apply, provided s/he has secured marks not less than 55% or CGPA not less than 5.5 in the relevant degree. d) Candidate must be an Indian National. e) Candidates with an equivalent degree and discipline recognized by professional bodies, such as the Institution of Engineers (India), the Institute of Chemical Engineers, the Aeronautical Society of India, the Institute of Electronics and Telecommunication Engineers, the Indian Institute of Metals, etc. are not eligible.
843	QIP0091	Indian Institute of Technology (ISM), Dhanbad	Ph.D Engineering	Management Studies and Industrial Engineering	DN000631	Industrial Engineering & Management	a)An applicant must have a Master's degree in Engineering in the relevant subject with first class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale). b)Postgraduate Degree in Industrial Engg. and Management / Industrial Engg. / Production Engineering / Mechanical Engg. / Electrical Engg. / Civil Engg. or equivalent.

844	QIP0091	Indian Institute of Technology (ISM), Dhanbad	Ph.D Management	Management Studies and Industrial Engineering	DN000632	Management	a) • An applicant must have a Master's degree in Engineering in the relevant subject with first class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale), OR • An applicant must have a Master's degree in Science or an allied area with first-class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale). b)MBA degree / Postgraduate degree or diploma recognized as equivalent to postgraduate in Management by AICTE / UGC / AIU / Postgraduate degree in Economics / Commerce / Psychology / Professional qualifications like CA / CS / ICWA / Postgraduate degree in Industrial Engg. and Management / Industrial Management / Industrial Engg. / Production Engg.
845	QIP0093	Visvesvaraya National Institute of Technology (VNIT), Nagpur	Ph.D Engineering	Electrical Engineering	DN001119	Evaluation test will be on the basis of: 1.Objective type question a) Electrical Machines b) Control Systems and Instrumentation c) Power Systems and Protections d) Power Electronics and Drives e) Circuit and Electromagnetic Field Theory f) Signals and Systems g) Microprocessor and Microcontrollers 2.Subjective type question (any two to be attempt) a) Electrical Machines b) Control Systems and Instrumentation c) Power Systems and Protections d) Power Electronics and Drives	I)B.E./B.Tech in Electrical Engineering / Allied branches such asElectrical & Electronics, Power Engineering, Electrical & Power,Energy Systems, Electronics & Instrumentation, Control &Instrumentation, Instrumentation. II)M.E/M.Tech in Electrical Engineering/ Allied Specializations Such as Power Electronics, Control systems, Power Systems, Power Electronics & Drives, Electrical Machines, Instrumentation, Condition Monitoring, Bio-medical Instrumentation & Control, Industrial Automation & Control, Signal Processing, Power & Control, Smart Grid, Electric Vehicles, Energy systems etc. III)Minimum first class or 6.75 CPI / CGPA on a 10 point scale at Bachelor's or Master's level. IV)Qualified GATE Score in Electrical Engineering (EE) OR Instrumentation (IN) in the past.

846	QIP0093	Visvesvaraya National Institute of Technology (VNIT), Nagpur	Ph.D Engineering	Metallurgical & Materials Engineering	DN001120	a) Physical Metallurgy b) Extractive Metallurgy c) Foundry Technology d) Mechanical Processing e) Testing of Materials f) Polymeric and Ceramic Materials g) Composites h) Advanced Materials i) Characterization of Materials	I) M E / M. Tech in Metallurgical and Materials Engineering / Mechanical / Production / Industrial / Chemical and M.Sc (Physics or Chemistry or Materials Science) II) Minimum first class or 6.75 CPI / CGPA on a 10 point scale at Bachelor's or Master's level. III) Qualified GATE score in the past in the discipline of UG/M.Sc.
847	QIP0094	Basaveshwar Engineering College, (Autonomous), Bagalkot	Ph.D Engineering	Civil Engineering	DN000921	1. Structural Engineering 2. Geotechnical Engineering 3. Environmental Engineering	ME/MTech in 1. Structural Engineering 2. Geotechnical Engineering 3. Environmental Engineering 4.Transportation Engineering 5. Construction Technology
848	QIP0094	Basaveshwar Engineering College, (Autonomous), Bagalkot	Ph.D Engineering	Computer Science & Engineering	DN000922	Computer Science & Engineering	ME/MTech in Computer Science & Engineering
849	QIP0094	Basaveshwar Engineering College, (Autonomous), Bagalkot	Ph.D Engineering	Mechanical Engineering	DN000923	1. Design Engineering 2. Material Science and Engineering 3. Thermal Engineering 4. Management	MTech/ME in (i) Mechanical Engineering (ii) Industrial and Production Engineering (iii) Automobile Engineering (iv) Industrial Engineering and Management (v) Manufacturing Science and Engineering
850	QIP0094	Basaveshwar Engineering College, (Autonomous), Bagalkot	Ph.D Engineering	Electronics & Communication Engineering	DN000924	1. Signal Processing 2. Very Large Scale Integration (VLSI) 3. Computer Networks	ME/MTech in 1. Communication Engineering 2. Signal Processing 3. Very Large Scale Integration (VLSI) 4. Computer Networks
851	QIP0094	Basaveshwar Engineering College, (Autonomous), Bagalkot	Ph.D Engineering	Electrical & Electronics Engineering	DN000925	1. Power Systems 2. Power Electronics 3. Renewable energy (Solar-Wind systems) 4. Smart Grid	ME/MTech in any specialization of Electrical & Electronics Engineering/Electronics & Communication Engineering

852	QIP0095	Delhi Technological University (DTU), Delhi	Ph.D Engineering	Applied Chemistry	DN000942	Chemical Engineering	Master's degree in Engineering/Technology in Chemical Engineering/ Chemical Technology / Polymer Engineering / Polymer Technology / Textile Engineering / Textile Technology / Nanotechnology / Biotechnology / Biochemical Technology / Biochemical Engineering / Bioprocess Engineering / Environmental Engineering / Food Technology and Chemical Engineering related disciplines with a minimum 55% marks in aggregate or equivalent CGPA as determined by DTU. OR Bachelor's degree in Engineering/Technology in Chemical Engineering / Chemical Technology / Polymer Engineering / Polymer Technology / Textile Engineering / Textile Technology / Nanotechnology/ Biotechnology/ Biochemical technology/ Biochemical Engineering / Bioprocess Engineering / Environmental Engineering / Food Technology and Chemical Engineering related disciplines with a minimum 75% marks in aggregate or equivalent CGPA and having proven research capability.
853	QIP0095	Delhi Technological University (DTU), Delhi	M.Tech	Applied Chemistry	DN000943	Polymer Technology	B.E. / B. Tech / M.Sc. / Integrated M.Sc. in any of the following Discipline: Biochemical Engineering; Biomedical Engineering; Biomedical Instrumentation:; Biotechnology; Chemical Engineering; Chemical Technology; Environmental Engineering; Environmental Science & Technology; Fibre & Textiles Processing Technology; Food Engineering & Technology; Food Processing Engineering; Processing & Preservation Engineering; Leather / Foot Wear Technology; Man- Made Textile Technology; Material Science and Engineering/Technology; Mechanical Engineering; Paint Technology; Petro-Chemical Engineering; Petroleum Engineering/Technology; Petroleum Refinery Engineering; Plastic Engineering/Technology; Polymer Engineering / Science / Technology; Polymer Science & Chemical Technology; Printing & Packing Technology; Production & Industrial Engineering: Rubber Technology; Textile Engineering/ Technology; Biochemistry; Bio-Sciences;

							Chemistry: Industrial Chemistry; Nano Science Technology; Pharmaceutical Chemistry & Technology; Textile Chemistry.
854	QIP0095	Delhi Technological University (DTU), Delhi	M.Tech	Applied Physics	DN000944	Material Science And Technology	M.Sc. / B.E. / B.Tech. in Physics / Applied Physics/ Chemistry/ Material Science/ Nuclear Physics/ Solid State Physics/ Astrophysics/ Electronics/ Electrical/ Biotechnology/ Allied life Science/ Engineering Physics / Biophysics/ Biochemistry/ Environmental Science/ M.Sc. (CS/IT with Mathematics, Physics and Chemistry at B.Sc. level)
855	QIP0095	Delhi Technological University (DTU), Delhi	M.Tech	Biotechnology	DN000945	1. Bioinformatics 2. Industrial Biotechnology	Bioinformatics- B.Tech/ M.Sc. degree in Biotechnology/ Bioinformatics / Biomedical Engineering/ Biochemical Engineering/ Life Sciences/ Biochemistry/ Computer Science/ Electronics & Communications/ Pharmaceutical Sciences & Technology. Industrial Biotechnology- B.Tech/ M. Tech / M.Sc. degree/ degree in Biotechnology / Bioinformatics / Biomedical Engineering / Biochemical Engineering / Life Sciences / Biochemistry / Zoology / Botany / Plant Molecular Biology / Microbiology / Environmental Sciences / Agriculture Sciences / Pharmaceutical Sciences & Technology.
856	QIP0095	Delhi Technological University (DTU), Delhi	M.Tech	Civil Engineering	DN000946	1. Geotechnical Engineering 2. Hydraulics and Water Resources Engineering 3. Structural Engineering 4. Geoinformatics	1.Geotechnical Engineering- B. Tech./B.E. Degree in CE 2.Hydraulics and Water Resources Engineering- B. Tech./B.E. Degree in CE 3.Structural Engineering- B. Tech./B.E. Degree in CE 4.Geoinformatics - BE/B.Tech. or equivalent in any branch of Engineering and Technology / M.Sc. in Architecture/Remote Sensing / GIS / Geomatics / Geo-informatics/ Geography / Environment Science /Mathematics/ Physics/ Geology/ MCA or equivalent

857	QIP0095	Delhi Technological University (DTU), Delhi	M.Tech	Computer Science & Engineering	DN000947	1. Computer Science & Engineering 2. Artificial Intelligence 3. Software Engineering 4. Data Science	1. Computer Science & Engineering- B. Tech./B.E. Degree in CS / SE / IT / MC/ ECE/ EEE or M.C.A /M. Sc (CS/IT) (with Mathematics at B.Sc./B.C.A level). 2. Artificial Intelligence - B. Tech./B.E. Degree in CS / SE / IT / MC/ ECE/ EEE or M.C.A /M. Sc (CS/IT) (with Mathematics at B.Sc./B.C.A level). 3. Software Engineering- B. Tech./B.E. Degree in CS / SE / IT / MC / ECE / EEE or M.C.A /M. Sc (CS/IT) (with Mathematics at B.Sc./B.C.A level). 4. Data Science - B. Tech./B.E. Degree in CS / SE / IT / MC / ECE / EEE or M.C.A /M. Sc (CS/IT) (with Mathematics at B.Sc./B.C.A level).
858	QIP0095	Delhi Technological University (DTU), Delhi	M.Tech	Information Technology	DN000948	Information Systems	B. Tech./B.E. Degree in CS / SE / IT / MC/ ECE/ EEE or M.C.A /M. Sc (CS/IT) (with Mathematics at B.Sc./B.C.A level).
859	QIP0095	Delhi Technological University (DTU), Delhi	M.Tech	Electronics & Communication Engineering	DN000949	1. Microwave & Optical Communication 2. Signal Processing 3. VLSI Design and Embedded System	1. Microwave & Optical Communication - B.E./B. Tech. Exam in ECE/ EP/ M.Sc. Electronics/ M. Sc.in Physics with Electronics/ Radio Physics/ Solid State Physics. 2. Signal Processing- B.E./B. Tech Exam in ECE 3. VLSI Design and Embedded System- B.E./B. Tech Exam in ECE
860	QIP0095	Delhi Technological University (DTU), Delhi	M.Tech	Electrical Engineering	DN000950	1. Control and Instrumentation 2. Power System 3. Power Electronics And Systems	1. Control and Instrumentation - B. Tech./B.E. Exam in EE/EEE/ECE C&I 2. Power System - B. Tech./B.E .Exam in EE/EEE 3. Power Electronics And Systems- B. Tech./B.E .Exam in EE/EEE/C&I
861	QIP0095	Delhi Technological University (DTU), Delhi	M.Tech	Environmental Engineering	DN000951	Environmental Engineering	B. Tech./B.E. Exam in EN/CE/BT/CH/ PT

862	QIP0095	Delhi Technological University (DTU), Delhi	M.Tech	Mechanical Engineering	DN000952	1.Production and Industrial Engineering 2.Thermal Engineering 3. Industrial Engineering and Management 4. Energy Systems and Management 5. Computer Aided Analysis and Design	1.Production and Industrial Engineering- B. Tech / B.E. in ME / PE / Industrial / Manufacturing Science/ Welding Technology / Automation Engineering. 2.Thermal Engineering- B.Tech/B.E. in ME/PE/AE/ Manufacturing Science / Automation Engineering 3. Industrial Engineering and Management- Students with Bachelor degree (4-years degree Programs; B.Tech./B.E/B.Sc.Engg., and equivalent degree) in any branch of Engineering will be eligible to take admission in this program. This program (M.Tech. in Industrial Engineering and Management) is interdisciplinary in nature. For scholarship a valid GATE Score is mandatory. 4. Energy Systems and Management- Students with a Bachelor degree (4-years degree Programs; B.Tech./B.E/B.Sc.Engg., and equivalent degree) in any engineering branch will be eligible to take admission in this program. This program (M.Tech. in Energy Systems and Management) is interdisciplinary. For scholarship a valid GATE Score is mandatory. 5. Computer Aided Analysis and Design- Students with Bachelor degree (4-years degree Programs; B.Tech./B.E/B.Sc.Engg., and equivalent degree) in the branch of Mechanical Engineering or Production Engineering or Civil Engineering will be eligible to take admission in this program. For scholarship a valid GATE Score is mandatory.
863	QIP0095	Delhi Technological University (DTU), Delhi	Ph.D Science	Applied Chemistry	DN000953	Chemistry	Master's degree in Sciences in Chemistry / Applied Chemistry / Industrial Chemistry / Polymer Chemsitry / Polymer Science / Electrochemistry / Pharmaceutical Chemistry / Material Chemistry / Material Science / Drug Chemistry / Medicinal Chemistry / Green Chemistry / Environment Chemistry / Environment Science / Chemical Science / Biochemistry / Nanomaterials / Nanoscience / Food Science / Metallurgy / Agrochemicals / and Chemistry related disciplines with a minimum 55% marks in aggregate or equivalent CGPA as determined by DTU

864	QIP0095	Delhi Technological University (DTU), Delhi	Ph.D Engineering	Applied Physics	DN000954	Engineering Physics	Master's degree in Engineering/Technology in relevant disciplines or equivalent with a minimum 55% marks in aggregate or equivalent CGPA as determined by DTU OR Bachelor's degree in Engineering/Technology in relevant discipline or equivalent with a minimum 75% marks in aggregate or equivalent CGPA and having proven research capability.
865	QIP0095	Delhi Technological University (DTU), Delhi	Ph.D Science	Applied Physics	DN000955	Physics	Master's degree in Engineering / Technology / Sciences in relevant disciplines or equivalent with a minimum 55% marks in aggregate or equivalent CGPA as determined by DTU OR Bachelor's degree in Engineering/Technology in relevant discipline or equivalent with a minimum 75% marks in aggregate or equivalent CGPA and having proven research capability.
866	QIP0095	Delhi Technological University (DTU), Delhi	Ph.D Engineering	Applied Mathematics	DN000956	Mathematics and Computing	Bachelor's degree in Engineering / Technology and Master's degree in Engineering / Technology in relevant disciplines or equivalent with a minimum 55% marks in aggregate or equivalent CGPA as determined by DTU OR Bachelor's degree in Engineering/Technology in relevant discipline or equivalent with a minimum 75% in aggregate or equivalent CGPA as determined by DTU and having proven research capability
867	QIP0095	Delhi Technological University (DTU), Delhi	Ph.D Science	Applied Mathematics	DN000957	Mathematics	Master's degree in Sciences / Arts in relevant disciplines or equivalent with a minimum 55% marks in aggregate or equivalent CGPA as determined by DTU
868	QIP0095	Delhi Technological University (DTU), Delhi	Ph.D Engineering	Biotechnology	DN000958	Biotechnology	Master's degree in Engineering/Technology/Sciences in relevant discipline or equivalent with a minimum 55% marks in aggregate or equivalent CGPA as determined by DTU OR Bachelor's degree in Engineering/Technology relevant to Life Sciences with a minimum 75% marks in aggregate or equivalent CGPA and having proven research capability.

869	QIP0095	Delhi Technological University (DTU), Delhi	Ph.D Science	Biotechnology	DN000959	Biotechnology	Master's degree in Engineering/Technology/Sciences in relevant discipline or equivalent with a minimum 55% marks in aggregate or equivalent CGPA as determined by DTU OR Bachelor's degree in Engineering/Technology relevant to Life Sciences with a minimum 75% marks in aggregate or equivalent CGPA and having proven research capability.
870	QIP0095	Delhi Technological University (DTU), Delhi	Ph.D Engineering	Civil Engineering	DN000960	1. Civil Engineering 2. Geoinformatics	Master's degree in Engineering / Technology in relevant discipline or equivalent with a minimum 55% marks in aggregate or equivalent CGPA as determined by DTU OR Bachelor's degree in Engineering / Technology in relevant discipline or equivalent with a minimum 75% marks in aggregate or equivalent CGPA and having proven research capability.
871	QIP0095	Delhi Technological University (DTU), Delhi	Ph.D Engineering	Computer Science & Engineering	DN000961	1. Computer Science and Engineering 2. Software Engineering 3. Computer Science	1. Computer Science and Engineering- Bachelor's degree in Engineering/Technology and Master's degree in Engineering / Technology in Computer Science and Engineering / Software Engineering / Information Technology/ Mathematics and Computing / Electronics and Communication Engineering or equivalent with a minimum 55% in aggregate or equivalent CGPA as determined by DTU OR Bachelor's degree in Sciences/Computer Applications and Master's degree in Computer Applications (with Mathematics at B.Sc./B.C.A level) with a minimum 75% in aggregate or equivalent CGPA as determined by DTU and having proven research capability OR Bachelor's degree in Engineering/Technology in Computer Science and Engineering/Software Engineering/Information Technology/Mathematics and Computing/Electronics and Communication Engineering. or equivalent with a minimum 75% in aggregate or equivalent CGPA as determined by DTU and having proven research capability 2. Software Engineering and Computer Science - Bachelor's degree in Engineering/Technology and Master's degree in Engineering / Technology in Computer Science and

							Engineering / Software Engineering / Information Technology/ Mathematics and Computing / Electronics and Communication Engineering or equivalent with a minimum 55% in aggregate or equivalent CGPA as determined by DTU OR Bachelor's degree in Sciences/Computer Applications and Master's degree in Computer Applications (with Mathematics at B.Sc./B.C.A level) with a minimum 75% in aggregate or equivalent CGPA as determined by DTU and having proven research capability OR Bachelor's degree in Engineering/Technology in Computer Science and Engineering/Software Engineering/Information Technology/Mathematics and Computing/Electronics and Communication Engineering. or equivalent with a minimum 75% in aggregate or equivalent CGPA as determined by DTU and having proven research capability
872	QIP0095	Delhi Technological University (DTU), Delhi	Ph.D Engineering	Electrical Engineering	DN000962	Electrical Engineering	Master's degree in Engineering / Technology in relevant discipline or equivalent with a minimum 55% marks in aggregate or equivalent CGPA as determined by DTU OR Bachelor's degree in Engineering / Technology in relevant discipline or equivalent with a minimum 75% marks in aggregate or equivalent CGPA and having proven research capability.
873	QIP0095	Delhi Technological University (DTU), Delhi	Ph.D Engineering	Electronics & Communication Engineering	DN000963	Electronics and Communication Engineering	Master's degree in Engineering/Technology in relevant discipline or equivalent with a minimum 55% marks in aggregate or equivalent CGPA as determined by DTU OR Bachelor's degree in Engineering/Technology in relevant discipline or equivalent with a minimum 75% marks in aggregate or equivalent CGPA and having proven research capability.

874	QIP0095	Delhi Technological University (DTU), Delhi	Ph.D Engineering	Environmental Engineering	DN000964	Environmental Engineering	Master's degree in Engineering / Technology / Sciences / Management in the relevant discipline (Environmental Engineering / Civil Engg. / Biotechnology / Chemical Engg. / other relevant branch) or equivalent with a minimum 55% marks in aggregate or equivalent CGPA as determined by DTU OR Bachelor's degree in Engineering / Technology in relevant discipline or equivalent with a minimum 75% marks in aggregate or equivalent CGPA and having proven research capability.
875	QIP0095	Delhi Technological University (DTU), Delhi	Ph.D Engineering	Information Technology	DN000965	Information Technology	Bachelor's degree in Engineering/Technology and Master's degree in Engineering / Technology in Computer Science and Engineering / Software Engineering / Information Technology/ Mathematics and Computing / Electronics and Communication Engineering or equivalent with a minimum 55% in aggregate or equivalent CGPA as determined by DTU OR Bachelor's degree in Sciences/Computer Applications and Master's degree in Computer Applications (with Mathematics at B.Sc./B.C.A level) with a minimum 75% in aggregate or equivalent CGPA as determined by DTU and having proven research capability OR Bachelor's degree in Engineering/Technology in Computer Science and Engineering/Software Engineering/Information Technology/Mathematics and Computing/Electronics and Communication Engineering. or equivalent with a minimum 75% in aggregate or equivalent CGPA as determined by DTU and having proven research capability

876	QIP0095	Delhi Technological University (DTU), Delhi	Ph.D Engineering	Mechanical Engineering	DN000966	Mechanical Engineering	Master's degree in Engineering/Technology or a Master's degree by Research in Engineering/Technology in Mechanical with specialization in Thermal/ Production / Design / Industrial Engineering having a minimum 55% marks in aggregate or equivalent CGPA as determined by DTU with Bachelor's degree in Engineering / Technology in Mechanical / Production / Production and Industrial / Mechanical and Automation / Automobile Engineering or Equivalent OR Bachelor's degree in Engineering/Technology in Mechanical/ Production / Production and Industrial / Mechanical and Automation / Automobile Engineering or equivalent having a minimum 75% marks in aggregate or equivalent CGPA and having proven research capability.
877	QIP0095	Delhi Technological University (DTU), Delhi	Ph.D Engineering	Design	DN000967	Design	Master's degree in Design or equivalent with a minimum 55% marks in aggregate or equivalent CGPA as determined by DTU.
878	QIP0095	Delhi Technological University (DTU), Delhi	Ph.D Humanities	Humanities and Social Science	DN000968	1. English 2. Economics	1. English - Master's degree in Sciences/ Management/Humanities and Social Sciences in relevant discipline or equivalent with a minimum 55% marks in aggregate or equivalent CGPA as determined by DTU. 2. Economics - Master's degree in Sciences/ Management/Humanities and Social Sciences in relevant discipline or equivalent with a minimum 55% marks in aggregate or equivalent CGPA as determined by DTU. OR Master's degree in Economics / Business Economics /Behavioral economics/allied social sciences; humanities and management in relevant disciplines; or equivalent with a minimum 55% marks in aggregate or equivalent CGPAas determined by the DTU OR Bachelor's degree in Engineering/Technology in relevant discipline or equivalent with a minimum 75% marks in aggregate or equivalent CGPA and having proven research capability.

879	QIP0095	Delhi Technological University (DTU), Delhi	Ph.D Management	Management Studies	DN000969	1. Management 2. Innovation, Entrepreneurship & Venture Development	1. Management - Master's degree in Engineering / Technology / Sciences / Management / Humanities and Social Sciences in relevant discipline or equivalent with a minimum 55% marks in aggregate or equivalent CGPA as determined by DTU. OR Master's degree in Management/Engineering/Technology/ Commerce/Economics and other behavioral sciences and allied relevant disciplines, or equivalent, with a minimum 55% marks in aggregate or equivalent CGPA as determined by DTU. OR Bachelor's degree in Engineering/Technology in relevant discipline or equivalent with a minimum 75% marks in aggregate or equivalent CGPA and having proven research capability. 2. Innovation, Entrepreneurship & Venture Development - Master's degree in Management/Entrepreneurship/ allied areas related to innovation, venture development and in relevant disciplines, or equivalent, with a minimum 55% marks in aggregate or equivalent CGPA as determined by the DTU OR Bachelor's degree in Engineering/Technology in relevant discipline or equivalent with a minimum 75% marks in aggregate or equivalent CGPA and having proven research capability.
880	QIP0096	Guru Nanak Dev Engineering College, Ludhiana	Ph.D Engineering	Civil Engineering	DN000116	Structural Engineering Environment Science Geo-technical	M.E/M.Tech. Civil Engg.
881	QIP0096	Guru Nanak Dev Engineering College, Ludhiana	Ph.D Engineering	Mechanical Engineering	DN000118	Thermal Engg Manufacturing Engg Design	M.Tech. /M.E Mechanical/Production Engg.

882	QIP0096	Guru Nanak Dev Engineering College, Ludhiana	Ph.D Engineering	Electrical Engineering	DN000120	Power Systems Renewable Energy Reliability	M.Tech. /ME Power/Electrical Engg.
883	QIP0096	Guru Nanak Dev Engineering College, Ludhiana	M.Tech	Mechanical Engineering	DN000727	Thermal Engineering Design Manufacturing	BE/B.Tech. Mechanical/Production Engg.
884	QIP0096	Guru Nanak Dev Engineering College, Ludhiana	M.Tech	Civil Engineering	DN000728	Structural Engineering Geo-technical Environmental Sc. & Engg	BE/B.Tech. Civil Engg.
885	QIP0096	Guru Nanak Dev Engineering College, Ludhiana	M.Tech	Electrical Engineering	DN000729	Electrical Engg.	BE/B.Tech Electrical Engg.
886	QIP0098	CoimbatoreCoimbatore Institute of Technology (CIT)	Ph.D Engineering	Civil Engineering	DN000135	Structural Engineering, Geotechnical Engineering, Water Resources Engineering, Environmental Engineering, Remote Sensing & GIS, Construction Management.	M.E./M.Tech. degree in relevant fields of Engineering
887	QIP0098	CoimbatoreCoimbatore Institute of Technology (CIT)	Ph.D Engineering	Chemical Engineering	DN000137	Chemical Engineering, Process Control, Nano Technology, Membrane Technology, Environmental Engineering, Bio Technology.	M.E./M.Tech. degree in relevant fields of Engineering
888	QIP0098	CoimbatoreCoimbatore Institute of Technology (CIT)	Ph.D Engineering	Electrical & Electronics Engineering	DN000138	Power Systems, Power Electronics & Drives, Control Systems, Embedded Systems, Analog and Digital Electronics.	M.E./M.Tech. degree in relevant fields of Engineering

889	QIP0098	CoimbatoreCoimbatore Institute of Technology (CIT)	Ph.D Engineering	Mechanical Engineering	DN000140	Welding Technology, Advanced Manufacturing Technology, Heat Power Engineering, Nano materials, Energy Engineering, Computational Fluid Dynamics.	M.E./M.Tech. degree in relevant fields of Engineering
890	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	Ph.D Engineering	Biotechnology	DN000412	Bioprocess Engineering, Industrial Biotechnology, Bioprocess and Bioreactor Design, Biohydrogen, Biofuels, Microbial and Environmental Biotechnology, Biorefinery, Bioplastics, Enzyme Engineering, Environmental Biotechnology, Microbial and Environmental Biotechnology, Enzyme Technology, Bioinformatics, Proteomics, Environmental Remediation, Environmental Microbiology, Applied Microbiology, Nanobiotechnology, Biofilms, Wastewater treatment, Bioremediation, Algal biotechnology, Bio-chemical/Bioprocess engineering for biorefinery, Bioenergy/Biofuels, Bioplastics production and degradation, Biosynthesis of value-added chemicals	Master's Degree in Engineering/Technology in the relevant area of research along with Bachelor's Degree in appropriate branch of Engineering/Technology/ are eligible to apply for admission to Ph.D. Programme of the Institute. In qualifying degree i.e. at postgraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10- point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.

891	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	Ph.D Engineering	Computer Science & Engineering	DN000414	Digital Image Processing, Machine Learning, Deep Learning Information Security, Big Data, Data Hiding, WSN's Internet of Things, Network Security, Computer Network, Data Science, Adversarial ML, Databases & Data Mining, Security, Explainable AI	Master's Degree in Engineering/Technology in the relevant area of research along with Bachelor's Degree in appropriate branch of Engineering/Technology/ are eligible to apply for admission to Ph.D. Programme of the Institute. In qualifying degree i.e. at postgraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10- point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.
892	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	Ph.D Engineering	Civil Engineering	DN000415	Structural Engineering, Geotechnical Engineering, Transportation Engineering, Environmental Engineering, Water Resources Engineering	Master's Degree in Engineering/Technology in the relevant area of research along with Bachelor's Degree in appropriate branch of Engineering/Technology/ are eligible to apply for admission to Ph.D. Programme of the Institute. In qualifying degree i.e. at postgraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10- point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.

893	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	Ph.D Engineering	Chemical Engineering	DN000416	Environment engineering, Advanced Oxidation Processes, Treatment of effluent of textile industry, Nanomaterials for Energy and Environment, Catalysis, Reaction Engineering and modelling, Selective hydrogenation, Remediation of Sugar industry waste, Conversion of biomass to fuels and chemicals, Lignin valorization, Biofuels and Bioproducts, Waste to energy, Solid waste Management, Thermochemical conversion Processes, Composite Materials and Corrosion, Multiphase Flow, CFD simulations of non-Newtonian fluids, Microfluidics, Heat transfer studies of Nano fluids(LSA), Rheology of complex fluids, Polymeric thin films Hydrogels, Bio-fluid mechanics, Fabrication of smart materials, Magnetic-field driven flow instabilities, Hydrodynamic stability, poroelasticity, CFD, Risk Assessment, Fire Dynamics, Fire Retardant Coatings, Chemical Process Safety, Modelling and Simulation, CO2 sequestration, waste water treatment utilization and management, Edible films and coatings, Nanomaterials Synthesis for Energy Application, Droplet-based microfluidics for sensing and Biomedical application, Heat transfer in	Master's Degree in Engineering/Technology in the relevant area of research along with Bachelor's Degree in appropriate branch of Engineering/Technology/ are eligible to apply for admission to Ph.D. Programme of the Institute. In qualifying degree i.e. at postgraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10- point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.

						porous media, Surfactant thin film stability analysis, New and Renewable Energy, Membrane Separation Process, Chemical Process Safety, polymers and composite, bio fuels, Nanomaterial / Nanocomposite, Multiphase flow, Polymer-nanoparticle composites, Photo-nano-catalysis, Thin Film Polymeric Coatings, Renewable hydrogen production and Antimicrobial coating, Hydrocarbon Engineering, Polymeric sensors, Anti-dust coatings, Biodegradable and edible films and composites, Anti dust coatings, Antifouling coatings, Modeling using Artificial Intelligence/Machine Learning Techniques, Bio-inspired adhesives, Building material, Porous media flow, Process Control, Process Safety, Renewable hydrogen production, Waste to wealth, Waste Utilization and Management	

894	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	Ph.D Engineering	Electronics & Communication Engineering	DN000417	Electromagnetic Applications in Biomedical, 5G Communication, RF/Wireless Communications, Human-computer interactions, RF Circuits Design, Assistive Technology Serious Games for learning / Health, Biomedical Signal/Image processing, Signal/Image Processing, Telemedicine, Healthcare, Digital Signal Processing and Its Applications, VLSI Circuit Design, Nanoscale Devices and Nanoelectronics, Analog and Digital Design, Low Power VLSI Design, Machine learning, Intelligent Networks Wireless & Adhoc N/W Signal Processing, Antenna Engineering- EBG based antenna, Beamforming Antenna, Aperture Antenna, Conformal Antenna, RF and Microwave components and systems- Filters, couplers, circulator, Communication Network, Machine to Machine Communications, Layer protocols for IoT, MAC Protocols,	Master's Degree in Engineering/Technology in the relevant area of research along with Bachelor's Degree in appropriate branch of Engineering/Technology/ are eligible to apply for admission to Ph.D. Programme of the Institute. In qualifying degree i.e. at postgraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10- point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.
895	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	Ph.D Engineering	Electrical Engineering	DN000418	Artificial Intelligence and computer vision, Field computations in HV environments, E-field reduction using Optimization techniques, Substation design, Illumination modeling, and design, Condition monitoring of transformers, Bio-systems, Exposure studies	Master's Degree in Engineering/Technology in the relevant area of research along with Bachelor's Degree in appropriate branch of Engineering/Technology/ are eligible to apply for admission to Ph.D. Programme of the Institute. In qualifying degree i.e. at postgraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10- point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the

							qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.

896	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	Ph.D Engineering	Instrumentation & Control Engineering	DN000419	Biomedical Instrumentation &amp, Signal Processing, Smart sensors and/or sensor systems, digital image processing and ML, machine vision and ML, WSN and applications, Intelligent IoT system, VI and AI applications, Power System Operation and Control, Microgrids, Renewable Energy, Applications of Soft Computing, Bio Medical Instrumentation, Deep learning, Process Control, Robotics and Industrial Automation, AI, Control System, Process Control &amp, Instrumentation, Application of Soft Computing Techniques, Model Predictive Control, Renewable Energy, Machine/Computer Vision, Machine/Deep/Quantum Learning, Soft Computing &amp, Optimization Techniques, Drone (UAV) Technology, Nonlinear Dynamical Control and Optimization, Optimal, Adaptive and Robust Control, Process Design, control and Integration, Green Energy (Bio-Fuel), Biomedical Instrumentation and Machine Learning, statistical applications based solutions to healthcare diseases, computational and experimental approaches for rehabilitation, Ayurveda and biomedical engineering, Biomedical Instrumentation and Machine Learning, statistical applications	Master's Degree in Engineering/Technology in the relevant area of research along with Bachelor's Degree in appropriate branch of Engineering/Technology/ are eligible to apply for admission to Ph.D. Programme of the Institute. In qualifying degree i.e. at postgraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10- point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.

						based solutions to healthcare diseases, computational and experimental approaches for rehabilitation, Control System, Sliding Mode Control, Fractional Order Control, Two-Wheeled Mobile Robot, UAVs, DC-DC Converters in LED Drivers, Applications of Machine Learning, Model Order Reduction Techniques, Applications in Load Frequency Control, Automatic Voltage Regulator in Power System, Solar System, Renewable Energy, Biomedical Engineering, Low Temp. Instrumentation, Thermal Properties, Aerospace Application	

897	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	Ph.D Engineering	Information Technology	DN000420	Cloud computing, Edge computing, IoT, Artificial Intelligence, Blockchain, Soft Computing	Master's Degree in Engineering/Technology in the relevant area of research along with Bachelor's Degree in appropriate branch of Engineering/Technology/ are eligible to apply for admission to Ph.D. Programme of the Institute. In qualifying degree i.e. at postgraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10- point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.
898	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	Ph.D Engineering	Industrial Production & Engineering	DN000421	Additive Manufacturing, Agriculture Machining, Business Excellence, Circular Economy Systems, Data Analytics, Quality Management, Decision Science, Design, Energy (Solar) and Sustainability, Ergonomics &amp, Human Factors Engineering, Hybrid Machining, Industrial Revolutionary Aspects, Internet of Things (IoT), Life Cycle Assessment, Machining, Materials and Sustainability, Nature Inspired Optimization Algorithms, Non-Conventional Manufacturing Processes, Non-Conventional, Non-Traditional Machining, Occupational Health And Safety, Operational Excellence, Advanced Manufacturing, Operations and Industrial Management, Operations And Supply Chain Management, Operations	Master's Degree in Engineering/Technology in the relevant area of research along with Bachelor's Degree in appropriate branch of Engineering/Technology/ are eligible to apply for admission to Ph.D. Programme of the Institute. In qualifying degree i.e. at postgraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10- point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.

						Management, Optimization, Optimization of Industrial Systems, Optimization of Manufacturing Systems, Optimizing Techniques, Planning, Quality Control, Reliability And Maintenance Engineering, Risk and Safety of Operational Processes, Scheduling and Performance Optimization of Manufacturing Systems (CMS, FMS, RMS), Simulation Of Production Systems, Solar Energy, Surface Coating, Supply Chain Management, Supply Chain Performance System, Surface Coating, Welding, Sustainable Environment, Sustainable Manufacturing, Theory of Constraints, Logistics &amp, Supply Chain, Optimization of Production Systems, Modelling of Manufacturing Processes, Industry 4.0, Advanced Manufacturing.	
899	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	Ph.D Engineering	Mechanical Engineering	DN000422	Mechatronics Robotics System Dynamics & Control Modeling and Simulation of Physical Systems, Biomechanics, Solar Thermal Energy desalination Tracking Mechanism and Systems) and Polygeneration, Fluid and Thermal Sciences	Master's Degree in Engineering/Technology in the relevant area of research along with Bachelor's Degree in appropriate branch of Engineering/Technology/ are eligible to apply for admission to Ph.D. Programme of the Institute. In qualifying degree i.e. at postgraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10- point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to

							percentage or vice versa given by individual Institute/university will not be allowed.
900	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	Ph.D Engineering	Textile Technology	DN000423	Yarn Manufacturing, Technical Textiles, Apparel Quality Characterization, Process Control in spinning, Medical Textiles, Liquid Filtration, Environmental Pollution Textile reinforced composites, Textile Chemical Processing	Master's Degree in Engineering/Technology in the relevant area of research along with Bachelor's Degree in appropriate branch of Engineering/Technology/ are eligible to apply for admission to Ph.D. Programme of the Institute. In qualifying degree i.e. at postgraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10- point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.
901	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	Ph.D Science	Physics	DN000425	Laser Plasma Interactions, Theoretical Nuclear Physics, Radiation Physics, Experimental Nuclear Physics, Theoretical High Energy Physics, Soft Condensed Matter Physics- Experimental (Liquid Crystals), Condensed Matter Physics (Experimental), Theoretical High Energy Physics, Theoretical Condensed Matter Physics, High Energy Physics, Experimental Condensed Matter Physics, Quantum	Master's Degree in Science in the relevant area of research along with Bachelor's Degree in appropriate branch of Science are eligible to apply for admission to Ph.D. Programme of the Institute. In qualifying degree i.e. at postgraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10- point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.

						Thermodynamics Nanomaterials and Nanotechnology	
902	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	Ph.D Science	Chemistry	DN000426	Superabsorbents/ Smart Nano-materials, Biodegradable Green Nano composites, Nano-science and Technology Nano and environment friendly functional smart materials, Materials chemistry/Surface Chemistry Smart Polymers, Organic Synthesis Nanocatalysis and Organic Synthesis, Advance Materials, Chemosensors for detection of hazardous and bioactive compounds Inorganic Chemistry (Synthesis of coordination complexes and their applications, sensors and Computational Chemistry Green nanomaterials for environmental remediation, Green synthesis of nanomaterials for pollutant detection and remediation of Water, Transition metal based nanostructures: Analytical methodologies and industrial applications 1. Multifunctional Porous Materials (Metal Organic Frameworks and Covalent Organic Frameworks) for Energy, Environment and Catalysis applications 2. Nanomaterials for Chemo- and Biosensing and Catalysis	Master's Degree in Science in the relevant area of research along with Bachelor's Degree in appropriate branch of Science are eligible to apply for admission to Ph.D. Programme of the Institute. In qualifying degree i.e. at postgraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10- point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.

						Inorganic Chemistry (Catalytic applications of metal complexes), Supramolecular chemistry (Optical Chemo-sensing Applications) Ionic liquid, Surface wettability, Oil-water and emulsion separation, Deep eutectic solvents, Thermodynamics, Superhydrophobic Superhydrophillic surfaces, Organic synthesis, fluororoganic chemistry, heterocycles	
903	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	Ph.D Science	Mathematics	DN000428	Applied Mathematics- (Solid Mechanics, Thermoelasticity)	Master's Degree in Science in the relevant area of research along with Bachelor's Degree in appropriate branch of Science are eligible to apply for admission to Ph.D. Programme of the Institute. In qualifying degree i.e. at postgraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10- point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.
904	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	Ph.D Management	Humanities and Management	DN000429	General Management, Marketing Management, Human Resource Management, Entrepreneurship development and Management.	Master's Degree in Management or Commerce are eligible to apply for admission to Ph.D. Programme of the Institute. In qualifying degree i.e. at postgraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10-point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree

							certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed
905	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	Ph.D Humanities	Humanities and Management	DN000430	Area of specialization: English Language and Literature, ELT, Professional Communication, Linguistics, Gender and Culture Studies, Feminism, 1.Schizoanalysis of Literature 2. Psychoanalysis and Popular Culture 3. Health Humanities 4. Literary and Critical Theory 5. American Literature 6. Comic Studies 7. Popular Culture	Master's Degree in English or English Language Teaching/ Linguistics or English or English Language Teaching are eligible to apply for admission to Ph.D. Programme of the Institute. In qualifying degree i.e. at postgraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10-point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.
906	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	M.Tech	Biotechnology	DN000432	Biotechnology	Candidates who have been awarded 4-year Bachelor's Degree in Engineering/Technology/ BSc (Engineering) or equivalent degree from recognized University or Master's Degree in appropriate branch of sciences are eligible to apply for admission to M. Tech. Programme of the Institute. In qualifying degree i.e. at undergraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10-point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.

907	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	M.Tech	Mechanical Engineering	DN000433	1. Design Engineering 2. Thermal Engineering	Candidates who have been awarded 4-year Bachelor's Degree in Engineering/Technology/ BSc (Engineering) or equivalent degree from recognized University or Master's Degree in appropriate branch of sciences are eligible to apply for admission to M. Tech. Programme of the Institute. In qualifying degree i.e. at undergraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10-point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.
908	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	M.Tech	Chemical Engineering	DN000434	Chemical Engineering	Candidates who have been awarded 4-year Bachelor's Degree in Engineering/Technology/ BSc (Engineering) or equivalent degree from recognized University or Master's Degree in appropriate branch of sciences are eligible to apply for admission to M. Tech. Programme of the Institute. In qualifying degree i.e. at undergraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10-point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.

909	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	M.Tech	Electronics & Communication Engineering	DN000435	1. Signal Processing and Machine Learning 2. VLSI Design	Candidates who have been awarded 4-year Bachelor's Degree in Engineering/Technology/ BSc (Engineering) or equivalent degree from recognized University or Master's Degree in appropriate branch of sciences are eligible to apply for admission to M. Tech. Programme of the Institute. In qualifying degree i.e. at undergraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10-point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.
910	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	M.Tech	Computer Science & Engineering	DN000436	1. Computer Science and Engineering 2. Computer Science and Engineering (Information Security)	Candidates who have been awarded 4-year Bachelor's Degree in Engineering/Technology/ BSc (Engineering) or equivalent degree from recognized University or Master's Degree in appropriate branch of sciences are eligible to apply for admission to M. Tech. Programme of the Institute. In qualifying degree i.e. at undergraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10-point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.

911	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	M.Tech	Industrial Production & Engineering	DN000437	1. Industrial Engineering and Data Analytics 2. Manufacturing Technology and Machine Learning	Candidates who have been awarded 4-year Bachelor's Degree in Engineering/Technology/ BSc (Engineering) or equivalent degree from recognized University or Master's Degree in appropriate branch of sciences are eligible to apply for admission to M. Tech. Programme of the Institute. In qualifying degree i.e. at undergraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10-point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.
912	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	M.Tech	Instrumentation & Control Engineering	DN000438	Control and Instrumentation Engineering	Candidates who have been awarded 4-year Bachelor's Degree in Engineering/Technology/ BSc (Engineering) or equivalent degree from recognized University or Master's Degree in appropriate branch of sciences are eligible to apply for admission to M. Tech. Programme of the Institute. In qualifying degree i.e. at undergraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10-point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.

913	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	M.Tech	Civil Engineering	DN000439	1. Structural and Construction Engineering 2. Geotechnical and Geo-Environmental Engineering	Candidates who have been awarded 4-year Bachelor's Degree in Engineering/Technology/ BSc (Engineering) or equivalent degree from recognized University or Master's Degree in appropriate branch of sciences are eligible to apply for admission to M. Tech. Programme of the Institute. In qualifying degree i.e. at undergraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10-point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.
914	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	M.Tech	Textile Technology	DN000440	Textile Engineering and Management	Candidates who have been awarded 4-year Bachelor's Degree in Engineering/Technology/ BSc (Engineering) or equivalent degree from recognized University or Master's Degree in appropriate branch of sciences are eligible to apply for admission to M. Tech. Programme of the Institute. In qualifying degree i.e. at undergraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10-point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.

915	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	M.Tech	Centre for Artificial Intelligence	DN000691	Artificial Intelligence	Candidates who have been awarded 4-year Bachelor's Degree in Engineering/Technology/ BSc (Engineering) or equivalent degree from recognized University or Master's Degree in appropriate branch of sciences are eligible to apply for admission to M. Tech. Programme of the Institute. In qualifying degree i.e. at undergraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10-point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.
916	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	M.Tech	Centre for Energy and Environment	DN000693	Renewable Energy	Candidates who have been awarded 4-year Bachelor's Degree in Engineering/Technology/ BSc (Engineering) or equivalent degree from recognized University or Master's Degree in appropriate branch of sciences are eligible to apply for admission to M. Tech. Programme of the Institute. In qualifying degree i.e. at undergraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10-point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.

917	QIP0099	Dr. B.R. Ambedkar National Institute of Technology (NIT), Jalandhar	Ph.D Engineering	Centre for Energy and Environment	DN000694	New and Renewable Energy, Solar Energy, Bio Energy, Biofuels, Hybrid Systems, Fuel cells, Climate Change, Environmental and allied area of Renewable Energy	Master's Degree in Engineering/Technology/Science in the relevant area of research along with Bachelor's Degree in appropriate branch of Engineering/Technology/Science are eligible to apply for admission to Ph.D. Programme of the Institute. In qualifying degree i.e. at postgraduate level, the candidates should have passed and secured atleast 6.5 CGPA (on a 10- point scale) or 60% for General/OBC/EWS candidates, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/university will not be allowed.
918	QIP0100	SRM Institute of Science and Technology (SRMIST), Chengalpattu, Tamilnadu	Ph.D Engineering	Nanotechnology	DN000295	Nanoscience and Nanotechnology, Nanomaterials and Devices, Nanosensors, Energy Harvesting and Storage, Nonlinear Optics, Photonics, Computational nanotechnology, Nanomedicine and Drug delivery, Thin Films, Computational Materials science, Nanomagnetism, Spintronics, and 2D layered materials.	A Master degree or an equivalent degree in an appropriate branch as prescribed by SRM Institute of Science and Technology for the admission into PhD program under AICTE-QIP scheme.
919	QIP0100	SRM Institute of Science and Technology (SRMIST), Chengalpattu, Tamilnadu	Ph.D Engineering	Biotechnology	DN000299	Biomaterials and Regenerative Medicine, Cancer Biology, Bioremediation, Oxidative stress, Natural products, Extremophils.	A Master degree or an equivalent degree in an appropriate branch as prescribed by SRM Institute of Science and Technology for the admission into PhD program under AICTE-QIP scheme.

920	QIP0100	SRM Institute of Science and Technology (SRMIST), Chengalpattu, Tamilnadu	Ph.D Engineering	Civil Engineering	DN000300	Structural Engineering, Geotechnical Engineering, Construction Engineering and Management, Environmental Engineering, Remote Sensing and GIS, Transportation Engineering, Water Resource Engineering.	A Master degree or an equivalent degree in an appropriate branch as prescribed by SRM Institute of Science and Technology for the admission into PhD program under AICTE-QIP scheme.
921	QIP0100	SRM Institute of Science and Technology (SRMIST), Chengalpattu, Tamilnadu	Ph.D Engineering	Mechanical Engineering	DN000301	Solar Energy & Applications, Biomechanics, Tribology, Corrosion, Surface Coating, Lubrication and Machining, Polymer Composites, Robotics, Ergonomics and Human Factors, Additive Manufacturing and Welding, Metal Forming and Machining, Composites Materials, Thermal energy and storage, Alternate fuels and Emission control Laminated/Graded Composites, High Entropy and Light, Alloys/Composites, Biomaterials, Computational Materials Design	A Master degree or an equivalent degree in an appropriate branch as prescribed by SRM Institute of Science and Technology for the admission into PhD program under AICTE-QIP scheme.
922	QIP0100	SRM Institute of Science and Technology (SRMIST), Chengalpattu, Tamilnadu	Ph.D Engineering	Electronics & Communication Engineering	DN000633	Passive Optical Networks, Optical Wireless Communication, All Optical Signal Processing, Bio photonics, Photovoltaics, 5G Networks, Wireless Body Area Network, Network Security, UWB System, Cognitive Radio, Wireless Sensor network, Under Water Communication, Quantum Computing, Wireless MIMO Communication, Wireless Sensor Network, Physical layer design, Realization of Communication design in SDR /FPGA, RF Circuit,	A Master degree or an equivalent degree in an appropriate branch as prescribed by SRM Institute of Science and Technology for the admission into PhD program.

						Machine learning Cognitive Network, Reconfiguration Architecture Design (FPGA) Micro Electronics, Nano Electronics, Image Processing RF Communications & Circuits, Mobile/Wireless Communications, Photonic Communications, LSI and Embedded System, Neural networks & Machine Learning, Embedded System Technology, Digital Image Processing, MEMS, Embedded System, Device Modeling, Internet of Things (IoT), Biomedical, Artificial Intelligence Soft Computing speech processing, Fiber Optic sensing, Quantum Optics, Energy Efficient Communication, RF/Microwave Engineering, Passive Component Design, Optical Computing, Embedded System, Medical image processing, Network Security, Solar cell.	
923	QIP0100	SRM Institute of Science and Technology (SRMIST), Chengalpattu, Tamilnadu	Ph.D Engineering	Electrical & Electronics Engineering	DN000634	Power Electronics Drives and Integrated Circuits, High efficient Power converter design for Electric Vehicles, Controller design for Microgrid, Wireless Power Transfer Charging modules, FACTS and their integration into Power Systems, Integrated design of Electrical Machines, and Drives and Electromagnetic Modelling. Please refer the department	A Master degree or an equivalent degree in an appropriate branch as prescribed by SRM Institute of Science and Technology for the admission into PhD program.

						website for additional information.	
924	QIP0100	SRM Institute of Science and Technology (SRMIST), Chengalpattu, Tamilnadu	M.Tech	Nanotechnology	DN000643	Nanotechnology.	A Bachelor degree or an equivalent degree in an appropriate branch as prescribed by SRM Institute of Science and Technology.
925	QIP0100	SRM Institute of Science and Technology (SRMIST), Chengalpattu, Tamilnadu	M.Tech	Biotechnology	DN000644	Biotechnology.	A Bachelor degree or an equivalent degree in an appropriate branch as prescribed by SRM Institute of Science and Technology.
926	QIP0100	SRM Institute of Science and Technology (SRMIST), Chengalpattu, Tamilnadu	M.Tech	Electrical & Electronics Engineering	DN000645	Power Electronics and Drives, Power Systems.	A Bachelor degree or an equivalent degree in an appropriate branch as prescribed by SRM Institute of Science and Technology.
927	QIP0100	SRM Institute of Science and Technology (SRMIST), Chengalpattu, Tamilnadu	M.Tech	Electronics & Communication Engineering	DN000646	VLSI Design, Embedded Systems Technology.	A Bachelor degree or an equivalent degree in an appropriate branch as prescribed by SRM Institute of Science and Technology.
928	QIP0100	SRM Institute of Science and Technology (SRMIST), Chengalpattu, Tamilnadu	M.Tech	Mechanical Engineering	DN000647	Computer-Aided Design (CAD), Robotics, Solar Energy, Thermal Engineering.	A Bachelor degree or an equivalent degree in an appropriate branch as prescribed by SRM Institute of Science and Technology.

929	QIP0100	SRM Institute of Science and Technology (SRMIST), Chengalpattu, Tamilnadu	M.Tech	Civil Engineering	DN000648	Structural Engineering, Construction Engineering and Management, Environmental Engineering.	A Bachelor degree or an equivalent degree in an appropriate branch as prescribed by SRM Institute of Science and Technology.
930	QIP0101	PSG College of Technology	Ph.D Engineering	Mechanical Engineering	DN001005	Machine Design, Finite Element Analysis, CAD/CAM, Automobile Engineering, Composite materials, Rapid Prototyping, Heat Power Engineering, Fluid Power Control & Automation, Energy Engineering, Simulation, Operations Management, Metal Forming. Casting Welding, Injection Molding, Precision Engineering Tolerance Engineering. Computer Aided Engineering, Smart Systems, Vibration & Noise Engineering, Product Life Cycle Management, Reliability Engineering, Machine Tool Design Safety Engineering, Innovation & Creativity, Value Engineering, Concurrent Engineering, Pneumatics, Manufacturing, Instrumentation, DFMA, TPM, Tribology, Ergonomics & Industrial Design, Refrigeration & Air Conditioning, Nano Technology.	A Master's degree in Mechanical Engineering, Production Engineering, Automobile Engineering and allied specializations

931	QIP0101	PSG College of Technology	Ph.D Engineering	Production Engineering	DN001006	CAD/CAM, Laser Material Processing, Fluid Power Control and Automation, Industrial Engineering, Value Engineering, Systems Engineering, Total Quality Management, Agile Manufacturing, Innovative Management, Metal Forming, Concurrent Engineering, Manufacturing Systems Analysis, Virtual Manufacturing, Lean Manufacturing, Precision Manufacturing, Product Data Management, Product Life cycle Management, Product Development, Metal Casting Injection Molding, Tool Design (Jigs & Fixtures), Welding.	A Master's degree in Mechanical Engineering, Production Engineering and other allied specializations
932	QIP0101	PSG College of Technology	Ph.D Engineering	Electronics & Communication Engineering	DN001007	RF and Microwave antennas, RF MEMS, Wireless Communication, Image Processing, Signal Processing, Speech signal Processing, VLSI Design, Networking, Wireless Sensor Networks Communication, Nano Technology and related domain, Embedded Systems, Wireless Security.	A Master's degree in any of the following specializations: Communication Systems, Wireless Communication, or Applied Electronics, Electrical Machines, Power Electronics & Drives, Embedded and Real Time systems, Computer Science and Engineering, Nanotechnology
933	QIP0101	PSG College of Technology	Ph.D Engineering	Biotechnology	DN001008	Human Genetics, Neuroscience, Cancer and Computation biology, Plant Molecular Biology and Biotechnology, Bio Process and Molecular Biology, Clinical Biotechnology & Microbiology, Environmental biotechnology, Plant Biotechnology, Biofuels and Biomass Energy.	A Master's degree (M.Tech or M.Sc) in the relevant filed

934	QIP0101	PSG College of Technology	Ph.D Engineering	Biomedical Engineering	DN001009	"Medical Image Processing & Analysis includes quantitative analysis and visualization of medical images. BioSignal Processing & Analysis includes HRV (Heart rate Variability) analysis, EEG analysis etc. Medical Instrumentation applications include Equipments used in the medical tests for diagnosis, screening, and monitoring of diseases. Body Sensor Networks application includes monitoring, diagnostic, or therapeutic levels and implantable biomedical systems. 3D modeling & printing includes customized implants and orthopedic replacement parts. Biomechanics explores biological problems in Cardiovascular and Respiration, Artificial Organs Includes blood purification, cardiovascular intervention, biomaterials, artificial metabolic organs and more. Bio sensors include immunosensors, enzyme- based biosensor and organism. Computational Methods in Biomedical Engineering - robust design solutions for artificial joints, stents, minimally invasive surgery, and assistive technology. Medical Data Processing- details decision support systems using heuristic, algorithmic and/ or statistical	A Master's degree (M.E., M.Tech or M.Sc) in the relevant filed

						methods. "	
935	QIP0101	PSG College of Technology	Ph.D Engineering	Instrumentation & Control Engineering	DN001010	Control Systems, Image Processing.	A Master's degree (M.E./ M.Tech) in the following specializations: Control & Instrumentation Engg/ Process Control & Instrumentation Engg Control Systems Engineering/ Applied Electronics/ Communication Engineering.
936	QIP0101	PSG College of Technology	Ph.D Engineering	Automobile Engineering	DN001011	Engine Manufacturing System, Alternate fuels/Fuel Cells, Automotive materials, Solar Power Vehicles, Electric and Hybrid Vehicles, Automotive Acoustics, Product Life Cycle Management, IC Engines.	A Master's degree in Automobile Engineering/ Mechanical Engg./ Production Engineering

937	QIP0101	PSG College of Technology	M.E	Mechanical Engineering	DN001012	Engineering Design, Industrial Engineering,	BE/B.Tech - Mechanical/Production/Manufacturing/Automobile/Industrial Engg./Mechatronics/Marine/Aeronautical/Metallurgical.
938	QIP0101	PSG College of Technology	M.E	Computer Science & Engineering	DN001013	Computer Science and Engineering	BE/B.Tech ECE/IT/CSE/ Software Engineering. (OR) MSc (2 Years/5Years) Software/ IT/CS/(OR)MCA
939	QIP0101	PSG College of Technology	M.E	Electrical & Electronics Engineering	DN001014	Power Electronics & Drives, Embedded & Real Time Systems	BE/B.Tech - EEE/ECE/EI/IC/Electronics
940	QIP0101	PSG College of Technology	M.E	Production Engineering	DN001015	Manufacturing Engineering	BE/B.Tech-Mechanical/ Production/ Auto/ Manufacturing/ Metallurgy/ Industrial Engg./Mechatronics/ Material Science.
941	QIP0101	PSG College of Technology	M.Tech	Textile Technology	DN001016	Textile Technology	BE/B.Tech - Textile Technology/ Textile chemistry/ Apparel Technology/ Fasion Techology (Textile Technology)
942	QIP0101	PSG College of Technology	Ph.D Engineering	Computer Science & Engineering	DN001017	Artificial Intelligence, Machine Learning, Deep Learning, Big Data Analytics, Computer Vision, Computer Networks, 5G networks, wireless and adhoc networks, Block chain technology, applying machine learning in various domains, Social Networks, Security and Privacy - ML/DL models, key generation, security protocols, Authentication models, social network privacy, web technology, recommender systems, privacy in recommender systems, malware analysis and detection	A Master's degree (ME/MTech) in CSE, IT, Applied Electronics, Communication Engineering, Embedded Systems, AI &ML, Cybersecurity, Information Systems or in other relevant areas
943	QIP0101	PSG College of Technology	Ph.D Engineering	Civil Engineering	DN001018	Civil Engineering, Structural Engineering, FRP Reinforced Concrete Structures, GIS Techniques, Town Planning, Concrete materials and structures, advanced materials	ME/MTech in Civil Engineering with relevant specializations

						in construction, air quality modeling	
944	QIP0101	PSG College of Technology	Ph.D Engineering	Metallurgical Engineering	DN001019	Surface Engineering, Casting Engineering, Welding Engineering, Powder Metallurgy, Metal Matrix Composites, Steel Metallurgy, Materials Engineering	ME/MTech specializing in Metallurgical Engineering and other related areas
945	QIP0101	PSG College of Technology	Ph.D Engineering	Information Technology	DN001020	Networks, Cognitive Radio Networks, Data Analytics, Security, Data Mining, Artificial Intelligence, Text and Speech recognition, Web Analytics, Swarm Intelligence, VRP, Evolutionary Computation, Cloud Computing, Social Security, Block Chain, Image Processing, Health Care, Medical data Analysis, Data Science, Deep Learning, Machine Learning, NLP, Bioinformatics, Sensor networks, IOT, Edge Computing, Federated learning, Transfer Learning	A Master's degree (M.E./M.Tech) in the relevant area

946	QIP0101	PSG College of Technology	Ph.D Engineering	Electrical & Electronics Engineering	DN001021	Control Systems, Electrical Machines and Drives, Power Systems, Instrumentation Systems, VLSI Design and testing, Digital Systems, Applied Electronics, Digital Signal Processing, Digital Image Processing, Computer Networks, Wireless Networks, Power Electronics, Automation and Control, Electric Drives and control, Embedded Systems, Renewable Energy systems, Electrical systems, Soft Computing, Wearable Electronics, Smart Grid, Electric Vehicles, EMI/EMC, Preactive Analysis using Deep Learning, Control Engineering, Internet of Things, Soft Computing Techniques in Power System Applications, Power System Operation and Control, Microgrid, Smart grid, Power Electronic Converters, Electric Vehicles, Wireless communication, Automotive Software, Model Based Design and Testing, Optimization, Medical Image Processing and Analysis, Computer & Industrial Networking, FPGA applications, Battery Management System, Internet of Things, IIoT, Industry 4.0, AI LML Applications, Signal Processing, Network security, Data Mining & Analytics	A Master's degree (M.E./ M.Tech) in any of the following specializations: Applied Electronics, Electrical Machines, Power Electronics & Drives, Embedded and Real Time systems, Computer Science and Engineering, Control & Instrumentation Engineering, Control Systems, Power Systems, Solar Energy, Energy Systems, Robotics & Automation or equivalent degree in relevant and related discipline.

947	QIP0101	PSG College of Technology	Ph.D Engineering	Textile Technology	DN001022	Fibre Science, Yarn & Fabric Formation, Textile Chemical Processing, Technical Textiles, Textile Composites, Non Wovens, Advanced Finishing Technology, Oil Sorption, Acoustic & Filtration Textiles, Sustainability in Textiles, Home Textiles, Coated and Laminated Textiles, Medical Textiles, High Performance Textiles, Industrial Textiles, Thermal Insulative Materials.	ME / M.Tech in Textile Technology, Textile Engineering, Fibre Science and Technology, Textile Chemistry, Apparel Engineering, Fashion Technology, Technical Textiles, Textile Chemical Processing, Apparel Technology, M.S. (By Research) in relevant branch of Engineering & Technology
948	QIP0101	PSG College of Technology	M.E	Civil Engineering	DN001023	Structural Engineering	BE/BTech in Civil Engineering
949	QIP0101	PSG College of Technology	M.E	Instrumentation & Control Engineering	DN001024	Control Systems	BE/BTech in I&CE, EEE, ECE, EIE, Electronics
950	QIP0101	PSG College of Technology	M.E	Metallurgical Engineering	DN001025	Industrial Metallurgy	BE/BTech in Metallurgical Engineering, Mechanical, Production and other related fields
951	QIP0101	PSG College of Technology	M.Tech	Biotechnology	DN001026	Biotechnology	BE/BTech in Biotechnology
952	QIP0101	PSG College of Technology	M.Tech	Information Technology	DN001027	Information Technology	BE/BTech in IT/CSE/ECE and other allied programmes
953	QIP0101	PSG College of Technology	M.E	Automobile Engineering	DN001028	Automobile Engineering	BE./BTech in Automobile Engineering, Mechanical, Production and other allied programmes
954	QIP0102	Indian Institute of Technology (IIT), Ropar	Ph.D Science	Mathematics	DN000970	Number Theory, Numerical Analysis, Algebra, Mathematical Modeling, Functional Analysis, Differential Equation and Water Wave Theory, Partial Differential Equations, Dynamical Systems, Topology, and all other branches	Master's Degree in Mathematics/Statistics/Theoretical Computer Science or equivalent Master's Degree with First Class (60% marks or 6.5 grade point out of 10), 55% marks or 6.0 grades point out of 10 for SC/ST.

						of pure and applied Mathematics.	
955	QIP0102	Indian Institute of Technology (IIT), Ropar	Ph.D Engineering	Chemical Engineering	DN000971	1. Catalysis and Reaction Engineering 2. Energy and Environment 3. Multiscale Modelling 4. Soft Matter Engineering and Complex Fluids 5. Mechanics of Granular Materials and Living Matter 6. Polymers, Nanomaterials, and Water Treatment 7. Process Control & Optimization, Machine Learning for Process Systems 8. Cyber-Physical systems and IoT in Chemical Engineering	Masters degree in Chemical Engineering or in any Allied Branch of Chemical Engineering with CGPA 6.5 (or 60%). For SC and ST candidates, CGPA criteria at Bachelors degree is relaxed to 6.0 (or 55%). OR Master of Science with any specialization with CGPA 8.0 and above. For SC and ST candidates, CGPA criteria at Masters level is relaxed to 7.5 (or 70%).
956	QIP0102	Indian Institute of Technology (IIT), Ropar	Ph.D Science	Chemistry	DN000972	1. Physical and Inorganic Chemistry (Batteries, Fuel Cells, Electrochemistry, Electrochemical Sensors, Heterogeneous Catalysis and Materials Synthesis, Metal-Organic Frameworks, Inorganic and Organometallic Chemistry, Inorganic Synthesis and Catalysis, Sensors and Supramolecular Synthesis) 2. Theoretic Chemistry (Theoretical and Computational Chemistry, Nuclear Magnetic Resonance: Theory and Experiments, Machine Learning) 3. Organic Chemistry and	Masters or equivalent degree in Chemistry/Biochemistry/Materials Science and Technology/Pharmaceutical Sciences/Biotechnology/Physics or relevant areas with 6.5 grades point out of 10 or 60% marks (55% marks for SC/ST candidates).

						Biochemistry (Biomaterials, Boron Chemistry in Peptides, Drug Delivery, Organic Synthesis, Peptide for Bacterial Infection Imaging Agents and Interaction with Model Membranes)	
957	QIP0102	Indian Institute of Technology (IIT), Ropar	Ph.D Engineering	Metallurgical & Materials Engineering	DN000973	Metallurgical & Materials Engineering.	Master's degree in relevant Engineering/Technology or a Master's degree by Research in relevant Engineering/Technology. Candidates must have obtained at least 60% marks (or 6.5 Grade Point out of 10) in their Master's.
958	QIP0102	Indian Institute of Technology (IIT), Ropar	Ph.D Engineering	Mechanical Engineering	DN000974	Additive Manufacturing, Biomechanical Engineering, Energy Efficiency and Sustainability, Intelligent Mechanical Systems, and Micro/Nano Engineered Systems.	Master's degree in Mechanical Engineering/Technology or any other Engineering discipline or a Master's degree by Research in Mechanical Engineering/Technology or any other Engineering discipline. Candidates must have obtained at least 60% marks or 6.5 CGPA out of 10 in their Master's.
959	QIP0102	Indian Institute of Technology (IIT), Ropar	Ph.D Engineering	Computer Science & Engineering	DN000975	1. Image processing and computer vision. 2. Theory 3. Data Science. 4. Wireless and IoT. 5. Parallel and Distributed Computing. 6. Hardware. 7. AI/ML.	M.Tech./M.E./M.S. (or an equivalent qualification) in computer science and engineering (or related areas) with 60% marks (or 6.5 grade points out of 10) (55% marks for SC/ST).

						8. Multimedia systems. 9. Security.	
960	QIP0102	Indian Institute of Technology (IIT), Ropar	Ph.D Engineering	Biomedical Engineering	DN000976	1. Molecular Biology of Diseases 2. Image Processing/Biophysics/Biophotonics 3. Biomaterials and Biosensors 4. Biomechanics	A master's degree in engineering (ME / MTech) or medicine (MD) or Veterinary science (MVSc) or dental surgery (MDS), with a minimum of 60 percent marks (6.5 grade points on a scale of 10). A master's degree in sciences (MSc / MS) or equivalent, with a minimum of 60 percent marks (6.5 grade points on a scale of 10).
961	QIP0102	Indian Institute of Technology (IIT), Ropar	Ph.D Engineering	Civil Engineering	DN000977	1. Structural Engineering 2. Geotechnical Engineering 3. Hydraulics and Water resources Engineering 4. Environmental Engineering 5. Geomatics and 6. Transportation Engineering	Bachelor’s degree in Civil Engineering followed by a Master’s degree in an appropriate area as per QIP guidelines with consistently good academic background.
962	QIP0102	Indian Institute of Technology (IIT), Ropar	Ph.D Engineering	Electrical Engineering	DN000978	1. Microelectronics and VLSI Design 2. Signal Processing and Communications 3. Power Engineering	M.Tech/M.E./M.S. in Electrical / Power system Power electronics / Electric drives/ Electric vehicle technologies / Electronics/ Communications/ Computer Science/ Instrumentation / Control Engineering or equivalent or Microelectronics/Solid-state Technology/MEMS/Nano Science/Nano Technology/Material Science/Engineering Physics or equivalent, relevant to the area of research with minimum 60% of marks (OR 6.5 grade point out of 10) (55% marks OR 6.0 grade point for SC/ST).

963	QIP0102	Indian Institute of Technology (IIT), Ropar	Ph.D Humanities	Humanities and Social Science	DN000979	1.Economics (Urban Economics, Agglomeration Economics,Industrial Economics, Open Economy, Macroeconomics, Financial economics) 2. English (Psychoanalysis and Culture; Historiographic Metafiction**) 3.Management (Production Management, Operations Research, Business Analytics, Supply Chain Management, Consumer Behaviour) 4.Psychology (Applied Psychology: Emotion Regulation) 5. Linguistics 6. Philosophy	Master's or equivalent degree in relevant discipline(Economics/English/ Linguistis/ Philosophy/ Psychology/Management/ with 55% marks or 6.0 grade point out of 10 (relaxation for SC/ST candidates as per GOI rules)

964	QIP0102	Indian Institute of Technology (IIT), Ropar	Ph.D Science	Physics	DN000980	Solar blind photodetector, Thin film solar cells, Quantum field theory, Black holes, Lasers, Optics & Photonics, Controlled space-time dynamics in multimode fibers(Project), Experimental condensed matter physics, Quantum information and quantum optics, Device physics, spintronics, magnetism, condensed matter physics Quantum materials and devices (experimental) Quantum-and nano-photonics (experimental and theory/computational) Singular limits of string theory AdS/CFT correspondence Laser Spectroscopy	Master's or equivalent degree in Physics or relevant subject
965	QIP0102	Indian Institute of Technology (IIT), Ropar	M.Tech	Mechanical Engineering	DN000981	1. Computational Mechanics (CM) 2. Mechanics & Design (MD) 3. Manufacturing Engineering (MF) 4. Thermal & Fluids Engineering (TF)	B.Tech or BE in Mechanical, Aerospace, Production, Automobile Engineering (For those applying to Computational Mechanics) B.Tech./B.E in Mechanical Engineering or relevant area (For other specializations)

966	QIP0102	Indian Institute of Technology (IIT), Ropar	M.Tech	Electrical Engineering	DN000982	i) Communication & Signal Processing ii) Microelectronics & VLSI Design iii) Power Engineering	Candidates with B. Tech./B.E in the appropriate area.
967	QIP0102	Indian Institute of Technology (IIT), Ropar	M.Tech	Civil Engineering	DN000983	i. Water Resources and Environment ii. Structural Engineering and Geomechanics	B Tech/B.E in Civil, Environmental, Water resources, Agricultural Engineering and related areas
968	QIP0102	Indian Institute of Technology (IIT), Ropar	M.Tech	Computer Science & Engineering	DN000984	1) Computer Science and Engineering 2) Artificial Intelligence	B.Tech. in Computer Science/Information Technology/Information Science or MSc in Computer Science; or MCA.
969	QIP0102	Indian Institute of Technology (IIT), Ropar	M.Tech	Biomedical Engineering	DN000985	Biomedical Engineering	BE/BTech with a minimum of 60 percent marks (6.5 grade points on a scale of 10); MSc/MS, or equivalent, with a minimum of 60 percent marks (6.5 grade points on a scale of 10); Bachelor's degree in medicine/surgery (MBBS), Veterinary science (BVSc), or dental surgery (BDS), with a minimum of 60 percent marks (6.5 grade points on a scale of 10).
970	QIP0102	Indian Institute of Technology (IIT), Ropar	M.Tech	Chemical Engineering	DN000986	Chemical Engineering	B Tech/B.E/M Sc in the relevant discipline
971	QIP0104	Rajasthan Technical University ,Kota	Ph.D Engineering	Electrical Engineering	DN001044	Power Systems: Power system dynamics, Power System Optimization Techniques, Development of stabilizing controls for power systems, Smart Grids, Power System Protection, High-performance computing applications in power systems. Demand side management. Power Electronics and Electric Drives: Power electronics applications in power systems, Renewable Power Technologies, Wind-Solar integration,	i). Master's degree or a professional degree declared equivalent to the Master's degree by the corresponding statutory regulatory body, in the appropriate discipline from any recognized University/Institute, with a minimum of 55% marks in aggregate (of all the years/semesters) where marks are awarded or minimum equivalent Cumulative Grade Point Average (CGPA) as defined by AICTE/UGC or any other competent body as the the case may be. ii). A relaxation of 5% or equivalent grade point in the minimum eligibility shall apply to the applicant belonging to the categories of "SC/ST/OBC (Non-Creamy Layer)/MBC

						Distributed Generation, Micro-grids, Power quality, Reactive power control, Electric vehicles, Switch mode power supplies, High frequency isolated inverters, soft-switched converters, Digital control of power converters.	(Non-Creamy Layer) and Differently abled persons" or those who had obtained their Master's Degree before 19th September 1991.
972	QIP0104	Rajasthan Technical University ,Kota	Ph.D Engineering	Civil Engineering	DN001046	Geotechnical Engineering, Structural Engineering, Environmental Engineering	i). Master's degree or a professional degree declared equivalent to the Master's degree by the corresponding statutory regulatory body, in the appropriate discipline from any recognized University/Institute, with a minimum of 55% marks in aggregate (of all the years/semesters) where marks are awarded or minimum equivalent Cumulative Grade Point Average (CGPA) as defined by AICTE/UGC or any other competent body as the case may be. ii). A relaxation of 5% or equivalent grade point in the minimum eligibility shall apply to the applicant belonging to the categories of "SC/ST/OBC (Non- Creamy Layer)/MBC (Non-Creamy Layer) and Differently abled persons" or those who had obtained their Master's Degree before 19th September 1991.

973	QIP0104	Rajasthan Technical University ,Kota	Ph.D Engineering	Computer Science & Engineering	DN001048	High-Performance Computing Systems: Nature Inspired Algorithms, Machine Learning, Data Analytics, Cloud Computing, Information Security, Computer Networks, Soft-Computing, Approximation Algorithms, Artificial Intelligence, Image Processing, Computer Vision	i). Master's degree or a professional degree declared equivalent to the Master's degree by the corresponding statutory regulatory body, in the appropriate discipline from any recognized University/Institute, with a minimum of 55% marks in aggregate (of all the years/semesters) where marks are awarded or minimum equivalent Cumulative Grade Point Average (CGPA) as defined by AICTE/UGC or any other competent body as the case may be. ii). A relaxation of 5% or equivalent grade point in the minimum eligibility shall apply to the applicant belonging to the categories of "SC/ST/OBC (Non- Creamy Layer)/MBC (Non-Creamy Layer) and Differently abled persons" or those who had obtained their Master's Degree before 19th September 1991.
974	QIP0104	Rajasthan Technical University ,Kota	Ph.D Engineering	Electronics & Communication Engineering	DN001050	Communication Engineering , RF & Microwave, VLSI, Design, Wireless Communication, Optical Communication, Control Systems, Instrumentation Engineering, Image &Audio Signal Processing, Antenna	i). Master's degree or a professional degree declared equivalent to the Master's degree by the corresponding statutory regulatory body, in the appropriate discipline from any recognized University/Institute, with a minimum of 55% marks in aggregate (of all the years/semesters) where marks are awarded or minimum equivalent Cumulative Grade Point Average (CGPA) as defined by AICTE/UGC or any other competent body as the case may be. ii). A relaxation of 5% or equivalent grade point in the minimum eligibility shall apply to the applicant belonging to the categories of "SC/ST/OBC (Non- Creamy Layer)/MBC (Non-Creamy Layer) and Differently abled persons" or those who had obtained their Master's Degree before 19th September 1991.

975	QIP0104	Rajasthan Technical University ,Kota	Ph.D Engineering	Mechanical Engineering	DN001057	Design Engineering: Composite materials, FEM, nonlinear vibrations, Fatigue, Fracture and Condition Monitoring Design, Functionally Graded Piezoelectric Materials. Thermal Engineering: IC engines, Renewable Energy Technologies, Thermodynamics, Fluid Mechanics, Compressible Flow, Heat Transfer, Refrigeration & air conditioning, Solar refrigeration, Thermal Comfort, Energy efficiency in buildings, Passive cooling system, HVAC, Turbulent Flow, Thermal Packaging, Bio-mimetics, Nanofluid Technology, Energy Management, Nanomaterials, CFD, Solar thermal engineering, Design of thermal systems, Propulsion. Production & Industrial Engineering: Operations Research & Management, Scheduling, ERP, Industrial Engineering, Quality control, Supply chain management, CIMS, Virtual Machining, Quality Management, Stochastic Modeling, FMS, Conventional & Nonconventional machining processes, micro machining, Precision manufacturing, CAD/CAM, Welding Technology, Conventional &	i). Master's degree or a professional degree declared equivalent to the Master's degree by the corresponding statutory regulatory body, in the appropriate discipline from any recognized University/Institute, with a minimum of 55% marks in aggregate (of all the years/semesters) where marks are awarded or minimum equivalent Cumulative Grade Point Average (CGPA) as defined by AICTE/UGC or any other competent body as the case may be. ii). A relaxation of 5% or equivalent grade point in the minimum eligibility shall apply to the applicant belonging to the categories of "SC/ST/OBC (Non- Creamy Layer)/MBC (Non-Creamy Layer) and Differently abled persons" or those who had obtained their Master's Degree before 19th September 1991.

						Nonconventional machining processes.	
976	QIP0105	Indian Institute of Management Bodh Gaya (IIM Bodh Gaya)	Ph.D Management	Economics	DN000875	Energy Economics Managerial Economics Basic Econometrics Macroeconomics Microeconomics Machine Learning Applications in Economics Economic Growth and Development Growth Theory	MBA/MA in Economics

977	QIP0105	Indian Institute of Management Bodh Gaya (IIM Bodh Gaya)	Ph.D Management	Marketing	DN000876	Impulse buying Consumer Buying Behaviour Celebrity Endorsement Spiritual Marketing Neural Marketing Digital and Mobile APP Marketing Branding	Candidates must possess one of the following qualifications to apply for IIM Bodh Gaya's doctoral programme: Master's degree in any discipline, with at least 60 percent marks or equivalent grade point average, or Professional qualifications like CA, ICWA, CS with at least 60 percent marks or equivalent grade point average, or Five-year Integrated Master's degree programme in any discipline, with at least 60 percent marks, obtained after completing higher secondary schooling (10+2) or equivalent., or Four Year/Eight Semester Bachelor's Degree in Engineering (B.E./B.Tech./ B. Arch.) with at least 65 percent or equivalent.
978	QIP0105	Indian Institute of Management Bodh Gaya (IIM Bodh Gaya)	Ph.D Management	Finance and Accounting	DN000879	Corporate Governance; Earnings Management & Sustainability; Behavioral Finance; Public Policy; Economics of Natural disasters and Climate change; International Financial Reporting Standards; Intellectual reporting/Green Accounting/Integrated Reporting; Corporate Governance/Accounting; Fraud/Bankruptcy Prediction/Earnings Management/Forensic accounting; Accounting for Government; Corporate finance; Banking; Financial Economics; Asset Pricing; Value & Growth Investing; Asset Management; Risk & Regulatory Management and Market Microstructure & Infrastructure	Master's degree in any discipline, with at least 60 percent marks or equivalent grade point average, or Professional qualifications like CA, ICWA, CS with at least 60 percent marks or equivalent grade point average, or Five-year Integrated Master's degree programme in any discipline, with at least 60 percent marks, obtained after completing higher secondary schooling (10+2) or equivalent., or Four Year/Eight Semester Bachelor's Degree in Engineering (B.E./B.Tech./ B. Arch.) with at least 65 percent or equivalent.

979	QIP0105	Indian Institute of Management Bodh Gaya (IIM Bodh Gaya)	Ph.D Management	Information Technology Systems and Analytics	DN000880	Machine Learning; Natural Language Processing; Predictive Analytics; Digital Business; Data Mining; Sentiment Analysis. Artificial Intelligence for Business; Machine Learning; Image & Video Analytics; Text Analytics; Social Media Analysis; Aspect Extraction; Domain Lexicon Development; Network Security and Algorithm & Graph Theory	Master's degree in any discipline, with at least 60 percent marks or equivalent grade point average, or Professional qualifications like CA, ICWA, CS with at least 60 percent marks or equivalent grade point average, or Five-year Integrated Master's degree programme in any discipline, with at least 60 percent marks, obtained after completing higher secondary schooling (10+2) or equivalent., or Four Year/Eight Semester Bachelor's Degree in Engineering (B.E./B.Tech./ B. Arch.) with at least 65 percent or equivalent.
980	QIP0105	Indian Institute of Management Bodh Gaya (IIM Bodh Gaya)	Ph.D Management	Strategy and Entrepreneurship	DN000881	Entrepreneurial decision-making; Ethical decision-making; Social Capital in Entrepreneurship; Succession Planning in Family Business; Evolution of Business Models; Entrepreneurship Environment; Designing & Implementing Competitive Strategy; Inter-organisational Governance; Strategic Innovation Management; Policy Design and implementation (current focus on PPP and health sector) and Leadership in MSMEs	Master's degree in any discipline, with at least 60 percent marks or equivalent grade point average, or Professional qualifications like CA, ICWA, CS with at least 60 percent marks or equivalent grade point average, or Five-year Integrated Master's degree programme in any discipline, with at least 60 percent marks, obtained after completing higher secondary schooling (10+2) or equivalent., or Four Year/Eight Semester Bachelor's Degree in Engineering (B.E./B.Tech./ B. Arch.) with at least 65 percent or equivalent.
981	QIP0105	Indian Institute of Management Bodh Gaya (IIM Bodh Gaya)	Ph.D Management	Humanities and Liberal Arts (Business Communication)	DN000914	Communication & Linguistics Interface; Communication Theories; Humour Studies; Discourse Analysis; Visual Communication; English Literature & Critical Theory and Oriental Philosophy	Master's degree in any discipline, with at least 60 percent marks or equivalent grade point average, or Professional qualifications like CA, ICWA, CS with at least 60 percent marks or equivalent grade point average, or Five-year Integrated Master's degree programme in any discipline, with at least 60 percent marks, obtained after completing higher secondary schooling (10+2) or equivalent., or Four Year/Eight Semester Bachelor's Degree in Engineering (B.E./B.Tech./ B. Arch.) with at least 65 percent or equivalent.

982	QIP0105	Indian Institute of Management Bodh Gaya (IIM Bodh Gaya)	Ph.D Management	Organizational Behaviour and Human Resource Management	DN000915	Workplace Respect; Work Engagement & Building Great Places to Work; Virtual Climate; Diversity Management & Creativity; Team-based dynamics; Optimism & Mindfulness; Subjective Wellbeing; Agentic Traits; Workplace Sustainability; Green Creativity; Employee productivity; Work-Life Balance; Hybrid work Models; Workplace Forgiveness; Coping; Positive Organizational Psychology; Workplace Spirituality; Psychological Empowerment; Psychological Capital; Approaches to Health & Well-being at Workplace; Work Motivation; Positive Leadership; Organizational Development; Organizational Culture; Mental health; Occupational Health Psychology; Women & career; Women empowerment and Artificial Intelligence in Management	Master's degree in any discipline, with at least 60 percent marks or equivalent grade point average, or Professional qualifications like CA, ICWA, CS with at least 60 percent marks or equivalent grade point average, or Five-year Integrated Master's degree programme in any discipline, with at least 60 percent marks, obtained after completing higher secondary schooling (10+2) or equivalent., or Four Year/Eight Semester Bachelor's Degree in Engineering (B.E./B.Tech./ B. Arch.) with at least 65 percent or equivalent
983	QIP0105	Indian Institute of Management Bodh Gaya (IIM Bodh Gaya)	Ph.D Management	Operations Management and Quantitative Techniques	DN000916	Trust in Business Relationships; Supply Chain Management; FMCG Packaging Optimization; Sustainable Manufacturing Operations; Transportation planning models; Sustainable product development; Circular economy; Industry 4.0; Additive Manufacturing; Data Envelopment Analysis and Preference Matching.	Master's degree in any discipline, with at least 60 percent marks or equivalent grade point average, or Professional qualifications like CA, ICWA, CS with at least 60 percent marks or equivalent grade point average, or Five-year Integrated Master's degree programme in any discipline, with at least 60 percent marks, obtained after completing higher secondary schooling (10+2) or equivalent., or Four Year/Eight Semester Bachelor's Degree in Engineering (B.E./B.Tech./ B. Arch.) with at least 65 percent or equivalent.

984	QIP0107	M.B.M. ENGINEERING COLLEGE, JAI NARAIN VYAS UNIVERSITY, JODHPUR	M.E	Electrical Engineering	DN001128	M.E. in CONTROL SYSTEMS M.E. in POWER SYSTEMS	M.E. (Control Systems) - B.E. / B.TECH. (Electrical / Electronics & Communication / Electrical & Electronics / Electronics & Computer / Instrumentation & Control) Engineering M.E. (Power Systems) - B.E. / B.TECH. (Electrical / Electrical & Electronics) Engineering
985	QIP0107	M.B.M. ENGINEERING COLLEGE, JAI NARAIN VYAS UNIVERSITY, JODHPUR	Ph.D Engineering	Electrical Engineering	DN001130	ELECTRICAL ENGINEERING	(i) Master's degree in the respective subject/appropriate discipline of any recognized University/Institute or equivalent, with a minimum of 55% marks in aggregate (of all the years/semesters) where marks are awarded or minimum equivalent Cumulative Grade Point Average (CGPA) as defined by AICTE/UGC or any other competent body as the case may be. (ii) A relaxation of 5% or equivalent grade point in the minimum eligibility shall be applicable to the applicant belonging to the categories of SC/ST/OBC (Non-Creamy Layer) and Differently abled persons or categories decided by UGC or those who had obtained their Master's Degree prior to September 19th, 1991. The eligibility marks of 55% (or an equivalent grade in a point scale wherever grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace marks procedure.

986	QIP0108	NIT Rourkela	Ph.D Engineering	Biotechnology and Medical Engineering	DN000832	All areas of Biotechnology and Medical Engineering, including but not limited to: • Cell & Molecular Engg, • Tissue Engineering & Biomaterials, • Bioprocess Engineering, • Environmental & Plant Biotechnology, • Biomechanics & Biotransport Engineering, • Medical Electronics & Instrumentation	The minimum qualification required for admission to PhD programs is one of the following [1(a)-1(d)]: (a) ME/MTech/MScEngg/MArch/MPlan/MDes in relevant discipline with at least 6.5 CGPA or 60% marks or 1st class in both BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent, and ME/MTech/MScEngg/MArch/MPlan/MDes from a recognized Technical Institute or University. (b) BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent in relevant discipline with CGPA of 7.0 or 65% marks. (c) MSc in Basic Sciences with CGPA 7.0 or 65% marks in relevant disciplines. For applicants with valid GATE/NET/GPAT or equivalent score, requirement may be relaxed by maximum 0.5 CGPA or 5% marks. In addition to the above eligibility criteria (based on BTech, BArch, MSc, MBA, MA, MCom, MTech, MArch, MPlan and MDes, etc. examinations), the following additional criteria will also be applicable: (a) A candidate should score minimum 6.5 CGPA or 60% marks or 1st class throughout career to be eligible for admission to PhD programme. The Departmental Research Committee (DRC), however, may make exception (marks < 60% or CGPA < 6.5) at its discretion in only one among the results of 10th, +2, BA, BSc, BCom, Diploma etc. (except qualifying degree) if the candidate has qualified in GATE/NET/GPAT or other national level fellowship tests like DST-INSPIRE, etc. or joined as JRF/SRF in any research project. (b) A candidate should have passed Mathematics in +2 Science or Diploma. (c) Science students admitted to PhD programme in Engineering/Physics/ Mathematics must have passed Mathematics at +3 level. Students without Mathematics at +3 level may be admitted under the condition that they will have to register for 14 credits of 1000 and 2000 level Mathematics and 1000 level Computer Science courses (Theory and Practical) in addition to their normal course requirement, and secure at least C grade in each course. (d) Students without having qualifying degree in the primary discipline (A Master's degree in Engineering (any branch) OR

							a bachelor's degree in Engineering (any branch) with valid GATE / NET / BET / GPAT score OR a MSc degree in Biotechnology / Life Sciences / Physics / Chemistry / Allied Sciences with 1st class in UG and PG degree with a valid GATE / NET / BET / GPAT score or any National level eligibility test) will be required to take up additional course work of 6 credits to gain adequate knowledge on the subject so as to be considered to qualify along with students with specialization in a primary discipline, unless explicitly exempted by the Senate.

987	QIP0108	NIT Rourkela	Ph.D Engineering	Civil Engineering	DN000833	Geotechnical Engineering, Structural Engineering, Transportation Engineering, Water Resources Engineering, Environmental Engineering	The minimum qualification required for admission to PhD programs is one of the following [1(a)-1(c)]: (a) ME/MTech/MScEngg/MArch/MPlan/MDes in relevant discipline with at least 6.5 CGPA or 60% marks or 1st class in both BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent, and ME/MTech/MScEngg/MArch/MPlan/MDes from a recognized Technical Institute or University. (b) BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent in relevant discipline with CGPA of 7.0 or 65% marks. (c) MSc in Basic Sciences with CGPA 7.0 or 65% marks in relevant disciplines. For applicants with valid GATE/NET/GPAT or equivalent score, requirement may be relaxed by maximum 0.5 CGPA or 5% marks. In addition to the above eligibility criteria (based on BTech, BArch, MSc, MBA, MA, MCom, MTech, MArch, MPlan, MDes etc. examinations), the following additional criteria will also be applicable: (a) A candidate should score minimum 6.5 CGPA or 60% marks or 1st class throughout career to be eligible for admission to PhD programme. The Departmental Research Committee (DRC), however, may make exception (marks < 60% or CGPA < 6.5) at its discretion in only one among the results of 10th, +2, BA, BSc, BCom, Diploma etc. (except qualifying degree) if the candidate has qualified in GATE/NET/GPAT or other national level fellowship tests like DST-INSPIRE, etc. or joined as JRF/SRF in any research project. (b) A candidate should have passed Mathematics in +2 Science or Diploma. (c) Science students admitted to PhD programme in Engineering/Physics/ Mathematics must have passed Mathematics at +3 level. Students without Mathematics at +3 level may be admitted under the condition that they will have to register for 14 credits of 1000 and 2000 level Mathematics and 1000 level Computer Science courses (Theory and Practical) in addition to their normal course requirement, and secure at least C grade in each course.

							(d) Students without having qualifying degree in the primary discipline [B. Tech in Civil Engineering (with GATE Qualified) or B. Tech in Civil Engineering with M. Tech in relevant specialization] will be required to take up additional course work of 6 credits to gain adequate knowledge on the subject so as to be considered to qualify along with students with specialization in a primary discipline, unless explicitly exempted by the Senate.

988	QIP0108	NIT Rourkela	Ph.D Engineering	Chemical Engineering	DN000834	Environmental Engg., Energy Engineering, Biochemical Engineering, Nanotechnology, Simulation and Modeling, Mass Transfer, Chemical Reaction Engineering, Process Dynamic Control, Materials	The minimum qualification required for admission to PhD programs is one of the following [1(a)-1(c)]: (a) ME/MTech/MScEngg/MArch/MPlan/MDes in relevant discipline with at least 6.5 CGPA or 60% marks or 1st class in both BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent, and ME/MTech/MScEngg/MArch/MPlan/MDes from a recognized Technical Institute or University. (b) BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent in relevant discipline with CGPA of 7.0 or 65% marks. (c) MSc in Basic Sciences with CGPA 7.0 or 65% marks in relevant disciplines. For applicants with valid GATE/NET/GPAT or equivalent score, requirement may be relaxed by maximum 0.5 CGPA or 5% marks. In addition to the above eligibility criteria (based on BTech, BArch, MSc, MBA, MA, MCom, MTech, MArch, MPlan, MDes etc. examinations), the following additional criteria will also be applicable: (a) A candidate should score minimum 6.5 CGPA or 60% marks or 1st class throughout career to be eligible for admission to PhD programme. The Departmental Research Committee (DRC), however, may make exception (marks < 60% or CGPA < 6.5) at its discretion in only one among the results of 10th, +2, BA, BSc, BCom, Diploma etc. (except qualifying degree) if the candidate has qualified in GATE/NET/GPAT or other national level fellowship tests like DST-INSPIRE, etc. or joined as JRF/SRF in any research project. (b) A candidate should have passed Mathematics in +2 Science or Diploma. (c) Science students admitted to PhD programme in Engineering/Physics/ Mathematics must have passed Mathematics at +3 level. Students without Mathematics at +3 level may be admitted under the condition that they will have to register for 14 credits of 1000 and 2000 level Mathematics and 1000 level Computer Science courses (Theory and Practical) in addition to their normal course requirement, and

							secure at least C grade in each course. (d) Students without having qualifying degree in the primary discipline (B Tech or equivalent/M Tech or equivalent in Chemical Engineering/ Chemical Technology/Biotechnology/ Petrochemical Engineering/ Petroleum Technology/ Process Control and Instrumentation/ Polymer Technology/Biochemical Engineering/ Energy Engineering /Nanotechnology/ Environmental Engineering and allied branches OR M.Sc in Chemistry/ Physics/Maths/Environment/Polymer/ Nanoscience and allied discipline with Mathematics in +2 level) will be required to take up additional course work of 6 credits to gain adequate knowledge on the subject so as to be considered to qualify along with students with specialization in a primary discipline, unless explicitly exempted by the Senate.

989	QIP0108	NIT Rourkela	Ph.D Engineering	Ceramic Engineering	DN000835	Electroceramics, Ceramics for energy and environment related application, Nano ceramics, Bio-Ceramics, Structural Ceramics, Advance Ceramics, Refractory, Glass, Whiteware	The minimum qualification required for admission to PhD programs is one of the following [1(a)-1(c)]: (a) ME/MTech/MScEngg/MArch/MPlan/MDes in relevant discipline with at least 6.5 CGPA or 60% marks or 1st class in both BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent, and ME/MTech/MScEngg/MArch/MPlan/MDes from a recognized Technical Institute or University. (b) BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent in relevant discipline with CGPA of 7.0 or 65% marks. (c) MSc in Basic Sciences with CGPA 7.0 or 65% marks in relevant disciplines. For applicants with valid GATE/NET/GPAT or equivalent score, requirement may be relaxed by maximum 0.5 CGPA or 5% marks. In addition to the above eligibility criteria (based on BTech, BArch, MSc, MBA, MA, MCom, MTech, MArch, MPlan, MDes etc. examinations), the following additional criteria will also be applicable: (a) A candidate should score minimum 6.5 CGPA or 60% marks or 1st class throughout career to be eligible for admission to PhD programme. The Departmental Research Committee (DRC), however, may make exception (marks < 60% or CGPA < 6.5) at its discretion in only one among the results of 10th, +2, BA, BSc, BCom, Diploma etc. (except qualifying degree) if the candidate has qualified in GATE/NET/GPAT or other national level fellowship tests like DST-INSPIRE, etc. or joined as JRF/SRF in any research project. (b) A candidate should have passed Mathematics in +2 Science or Diploma. (c) Science students admitted to PhD programme in Engineering/Physics/ Mathematics must have passed Mathematics at +3 level. Students without Mathematics at +3 level may be admitted under the condition that they will have to register for 14 credits of 1000 and 2000 level Mathematics and 1000 level Computer Science courses (Theory and Practical) in addition to their normal course requirement, and secure at least C grade in each course. (d) Students without having qualifying degree in the primary

							discipline (BTech (with GATE) / MTech in Ceramic / Metallurgical and Materials /Chemical / Mechanical Engg. / Biomedical Engg / Nanotechnology /Biotechnology OR MSc (with GATE) in Physics / Chemistry / Materials Science / Nano Science) will be required to take up additional course work of 6 credits to gain adequate knowledge on the subject so as to be considered to qualify along with students with specialization in a primary discipline, unless explicitly exempted by the Senate.

990	QIP0108	NIT Rourkela	Ph.D Engineering	Computer Science & Engineering	DN000836	Artificial Intelligence, Machine Learning, Data Science, Computer Networks, Wireless Sensor Networks, Vehicular Ad hoc Networks, Wireless Body Area Networks, Intelligent Transportation Systems, Unmanned Arial Vehicles, Software Engineering, Real-Time Systems, Computer Graphics, Bioinformatics, Biometrics, Video Surveillance, Computer Vision, Biomedical Signal and Image processing, Image Processing & Pattern Recognition, Distributed Systems, Cloud Computing, Edge Computing, Fog Computing, Datacenter Networking, Cloud Security, Software Defined Networking, Cryptography & Network Security, Information Security, Block Chain Technology. Cyber Security, Cryptographic hardware, Low Power VLSI, Embedded Systems, Theoretical Computer science, Natural Language Processing, Internet of Things, Cyber-Physical System, Robotics.	The minimum qualification required for admission to PhD programs is one of the following [1(a)-1(c)]: (a) ME/MTech/MScEngg/MArch/MPlan/MDes in relevant discipline with at least 6.5 CGPA or 60% marks or 1st class in both BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent, and ME/MTech/MScEngg/MArch/MPlan/MDes from a recognized Technical Institute or University. (b) BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent in relevant discipline with CGPA of 7.0 or 65% marks. (c) MSc in Basic Sciences with CGPA 7.0 or 65% marks in relevant disciplines. For applicants with valid GATE/NET/GPAT or equivalent score, requirement may be relaxed by maximum 0.5 CGPA or 5% marks. In addition to the above eligibility criteria (based on BTech, BArch, MSc, MBA, MA, MCom, MTech, MArch, MPlan, MDes etc. examinations), the following additional criteria will also be applicable: (a) A candidate should score minimum 6.5 CGPA or 60% marks or 1st class throughout career to be eligible for admission to PhD programme. The Departmental Research Committee (DRC), however, may make exception (marks < 60% or CGPA < 6.5) at its discretion in only one among the results of 10th, +2, BA, BSc, BCom, Diploma etc. (except qualifying degree) if the candidate has qualified in GATE/NET/GPAT or other national level fellowship tests like DST-INSPIRE, etc. or joined as JRF/SRF in any research project. (b) A candidate should have passed Mathematics in +2 Science or Diploma. (c) Science students admitted to PhD programme in Engineering/Physics/ Mathematics must have passed Mathematics at +3 level. Students without Mathematics at +3 level may be admitted under the condition that they will have to register for 14 credits of 1000 and 2000 level Mathematics and 1000 level Computer Science courses (Theory and Practical) in addition to their normal course requirement, and secure at least C grade in each course. (d) Students without having qualifying degree in the primary

							discipline [BTech (with GATE/Any National Level fellowship) / MTech in Computer Science and Engineering / Information Technology OR MCA OR MSc (with GATE/ Any National Level fellowship) in Computer Science / Information Technology] will be required to take up additional course work of 6 credits to gain adequate knowledge on the subject so as to be considered to qualify along with students with specialization in a primary discipline, unless explicitly exempted by the Senate.

991	QIP0108	NIT Rourkela	Ph.D Science	Chemistry	DN000837	Fluorescent Materials, Computational Chemistry, Physical-Organic Chemistry, Polymer Chemistry, (Bio)Organic Chemistry, Soft Materials	The minimum qualification required for admission to PhD programs is one of the following [1(a)-1(c)]: (a) ME/MTech/MScEngg/MArch/MPlan/MDes in relevant discipline with at least 6.5 CGPA or 60% marks or 1st class in both BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent, and ME/MTech/MScEngg/MArch/MPlan/MDes from a recognized Technical Institute or University. (b) BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent in relevant discipline with CGPA of 7.0 or 65% marks. (c) MSc in Basic Sciences with CGPA 7.0 or 65% marks in relevant disciplines. For applicants with valid GATE/NET/GPAT or equivalent score, requirement may be relaxed by maximum 0.5 CGPA or 5% marks. In addition to the above eligibility criteria (based on BTech, BArch, MSc, MBA, MA, MCom, MTech, MArch, MPlan, MDes etc. examinations), the following additional criteria will also be applicable: (a) A candidate should score minimum 6.5 CGPA or 60% marks or 1st class throughout career to be eligible for admission to PhD programme. The Departmental Research Committee (DRC), however, may make exception (marks < 60% or CGPA < 6.5) at its discretion in only one among the results of 10th, +2, BA, BSc, BCom, Diploma etc. (except qualifying degree) if the candidate has qualified in GATE/NET/GPAT or other national level fellowship tests like DST-INSPIRE, etc. or joined as JRF/SRF in any research project. (b) A candidate should have passed Mathematics in +2 Science or Diploma. (c) Science students admitted to PhD programme in Engineering/Physics/ Mathematics must have passed Mathematics at +3 level. Students without Mathematics at +3 level may be admitted under the condition that they will have to register for 14 credits of 1000 and 2000 level Mathematics and 1000 level Computer Science courses (Theory and Practical) in addition to their normal course requirement, and

							secure at least C grade in each course. (d) Students without having qualifying degree in the primary discipline (MSc in Chemistry / Physics / Biochemistry / Biotechnology / Nanoscience and Nanotechnology / Bioinformatics / Industrial Chemistry / Applied Chemistry / Environmental Chemistry / Food Science and Technology / Nutrition OR BTech / MTech in Chemical / Ceramic / Metallurgical and Materials Engineering / Biotechnology) will be required to take up additional course work of 6 credits to gain adequate knowledge on the subject so as to be considered to qualify along with students with specialization in a primary discipline, unless explicitly exempted by the Senate.

992	QIP0108	NIT Rourkela	Ph.D Engineering	Electronics & Communication Engineering	DN000838	Communication and Network, VLSI and Embedded systems, Signal and Image Processing, Electronics and instrumentation, Microwave and Radar Engineering	The minimum qualification required for admission to PhD programs is one of the following [1(a)-1(c)]: (a) ME/MTech/MScEngg/MArch/MPlan/MDes in relevant discipline with at least 6.5 CGPA or 60% marks or 1st class in both BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent, and ME/MTech/MScEngg/MArch/MPlan/MDes from a recognized Technical Institute or University. (b) BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent in relevant discipline with CGPA of 7.0 or 65% marks. (c) MSc in Basic Sciences with CGPA 7.0 or 65% marks in relevant disciplines. For applicants with valid GATE/NET/GPAT or equivalent score, requirement may be relaxed by maximum 0.5 CGPA or 5% marks. In addition to the above eligibility criteria (based on BTech, BArch, MSc, MBA, MA, MCom, MTech, MArch, MPlan, MDes etc. examinations), the following additional criteria will also be applicable: (a) A candidate should score minimum 6.5 CGPA or 60% marks or 1st class throughout career to be eligible for admission to PhD programme. The Departmental Research Committee (DRC), however, may make exception (marks < 60% or CGPA < 6.5) at its discretion in only one among the results of 10th, +2, BA, BSc, BCom, Diploma etc. (except qualifying degree) if the candidate has qualified in GATE/NET/GPAT or other national level fellowship tests like DST-INSPIRE, etc. or joined as JRF/SRF in any research project. (b) A candidate should have passed Mathematics in +2 Science or Diploma. (c) Science students admitted to PhD programme in Engineering/Physics/ Mathematics must have passed Mathematics at +3 level. Students without Mathematics at +3 level may be admitted under the condition that they will have to register for 14 credits of 1000 and 2000 level Mathematics and 1000 level Computer Science courses (Theory and Practical) in addition to their normal course requirement, and secure at least C grade in each course. (d) Students without having qualifying degree in the primary

							discipline [BTech (with GATE) / MTech in Electronics / Electrical / Electronics and Communication / Electronics and Telecommunication / Electronics and Instrumentation / Applied Electronics and Instrumentation / Electrical and Electronics Engineering] will be required to take up additional course work of 6 credits to gain adequate knowledge on the subject so as to be considered to qualify along with students with specialization in a primary discipline, unless explicitly exempted by the Senate.

993	QIP0108	NIT Rourkela	Ph.D Engineering	Electrical Engineering	DN000839	Power Electronics and Drives, Electronic Systems and Communication, Control and Automation, Control and Automation, Signal Processing	The minimum qualification required for admission to PhD programs is one of the following [1(a)-1(c)]: (a) ME/MTech/MScEngg/MArch/MPlan/MDes in relevant discipline with at least 6.5 CGPA or 60% marks or 1st class in both BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent, and ME/MTech/MScEngg/MArch/MPlan/MDes from a recognized Technical Institute or University. (b) BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent in relevant discipline with CGPA of 7.0 or 65% marks. (c) MSc in Basic Sciences with CGPA 7.0 or 65% marks in relevant disciplines. For applicants with valid GATE/NET/GPAT or equivalent score, requirement may be relaxed by maximum 0.5 CGPA or 5% marks. In addition to the above eligibility criteria (based on BTech, BArch, MSc, MBA, MA, MCom, MTech, MArch, MPlan, MDes etc. examinations), the following additional criteria will also be applicable: (a) A candidate should score minimum 6.5 CGPA or 60% marks or 1st class throughout career to be eligible for admission to PhD programme. The Departmental Research Committee (DRC), however, may make exception (marks < 60% or CGPA < 6.5) at its discretion in only one among the results of 10th, +2, BA, BSc, BCom, Diploma etc. (except qualifying degree) if the candidate has qualified in GATE/NET/GPAT or other national level fellowship tests like DST-INSPIRE, etc. or joined as JRF/SRF in any research project. (b) A candidate should have passed Mathematics in +2 Science or Diploma. (c) Science students admitted to PhD programme in Engineering/Physics/ Mathematics must have passed Mathematics at +3 level. Students without Mathematics at +3 level may be admitted under the condition that they will have to register for 14 credits of 1000 and 2000 level Mathematics and 1000 level Computer Science courses (Theory and Practical) in addition to their normal course requirement, and secure at least C grade in each course. (d) Students without having qualifying degree in the primary

							discipline [MTech/ME/M.S. in Electrical/ Electronics/ Communications/ Computer Science/ Instrumentation / Control Engineering or equivalent or Microelectronics/Solid-state Technology/MEMS/Nano Science/Nano Technology/Material Science/Engineering Physics or equivalent, relevant to the area of research OR BTech/BE in Electrical/Electronics/Communications/ Computer Science/ Instrumentation / Control Engineering or equivalent or Microelectronics/Solid-state Technology/MEMS/Nano Science/Nano Technology/Material Science/Engineering Physics or equivalent, and having a CGPA/CPI score of 8.00 (out of 10.0) and above with valid GATE score] will be required to take up additional course work of 6 credits to gain adequate knowledge on the subject so as to be considered to qualify along with students with specialization in a primary discipline, unless explicitly exempted by the Senate.

994	QIP0108	NIT Rourkela	Ph.D Engineering	Earth and Atmospheric Sciences	DN000840	Geology, Geophysics, Atmospheric Science, Ocean Science, Planetary Science	The minimum qualification required for admission to PhD programs is one of the following [1(a)-1(c)]: (a) ME/MTech/MScEngg/MArch/MPlan/MDes in relevant discipline with at least 6.5 CGPA or 60% marks or 1st class in both BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent, and ME/MTech/MScEngg/MArch/MPlan/MDes from a recognized Technical Institute or University. (b) BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent in relevant discipline with CGPA of 7.0 or 65% marks. (c) MSc in Basic Sciences with CGPA 7.0 or 65% marks in relevant disciplines. For applicants with valid GATE/NET/GPAT or equivalent score, requirement may be relaxed by maximum 0.5 CGPA or 5% marks. In addition to the above eligibility criteria (based on BTech, BArch, MSc, MBA, MA, MCom, MTech, MArch, MPlan, MDes and etc. examinations), the following additional criteria will also be applicable: (a) A candidate should score minimum 6.5 CGPA or 60% marks or 1st class throughout career to be eligible for admission to PhD programme. The Departmental Research Committee (DRC), however, may make exception (marks < 60% or CGPA < 6.5) at its discretion in only one among the results of 10th, +2, BA, BSc, BCom, Diploma etc. (except qualifying degree) if the candidate has qualified in GATE/NET/GPAT or other national level fellowship tests like DST-INSPIRE, etc. or joined as JRF/SRF in any research project. (b) A candidate should have passed Mathematics in +2 Science or Diploma. (c) Science students admitted to PhD programme in Engineering/Physics/ Mathematics must have passed Mathematics at +3 level. Students without Mathematics at +3 level may be admitted under the condition that they will have to register for 14 credits of 1000 and 2000 level Mathematics and 1000 level Computer Science courses (Theory and Practical) in addition to their normal course requirement, and

							secure at least C grade in each course. (d) Students without having qualifying degree in the primary discipline (MSc / MTech in Geology / Applied Geology / Geophysics / Environmental Science / Remote Sensing / Chemistry / Physics / Atmospheric Science / Meteorology / Oceanography / Mathematics OR related disciplines in Science OR BTech / MTech in Civil / Mining / Electronics and Computer Science Engineering) will be required to take up additional course work of 6 credits to gain adequate knowledge on the subject so as to be considered to qualify along with students with specialization in a primary discipline, unless explicitly exempted by the Senate.

995	QIP0108	NIT Rourkela	Ph.D Engineering	Food Process Engineering	DN000841	Transport Process and Kinetics, Food Quality & Safety, Post-Harvest Operations, Food Packaging and Storage Engineering, Product Development and Ingredients Innovation	The minimum qualification required for admission to PhD programs is one of the following [1(a)-1(c)]: (a) ME/MTech/MScEngg/MArch/MPlan/MDes in relevant discipline with at least 6.5 CGPA or 60% marks or 1st class in both BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent, and ME/MTech/MScEngg/MArch/MPlan/MDes from a recognized Technical Institute or University. (b) BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent in relevant discipline with CGPA of 7.0 or 65% marks. (c) MSc in Basic Sciences with CGPA 7.0 or 65% marks in relevant disciplines. For applicants with valid GATE/NET/GPAT or equivalent score, requirement may be relaxed by maximum 0.5 CGPA or 5% marks. In addition to the above eligibility criteria (based on BTech, BArch, MSc, MBA, MA, MCom, MTech, MArch, MPlan, MDes etc. examinations), the following additional criteria will also be applicable: (a) A candidate should score minimum 6.5 CGPA or 60% marks or 1st class throughout career to be eligible for admission to PhD programme. The Departmental Research Committee (DRC), however, may make exception (marks < 60% or CGPA < 6.5) at its discretion in only one among the results of 10th, +2, BA, BSc, BCom, Diploma etc. (except qualifying degree) if the candidate has qualified in GATE/NET/GPAT or other national level fellowship tests like DST-INSPIRE, etc. or joined as JRF/SRF in any research project. (b) A candidate should have passed Mathematics in +2 Science or Diploma. (c) Science students admitted to PhD programme in Engineering/Physics/ Mathematics must have passed Mathematics at +3 level. Students without Mathematics at +3 level may be admitted under the condition that they will have to register for 14 credits of 1000 and 2000 level Mathematics and 1000 level Computer Science courses (Theory and Practical) in addition to their normal course requirement, and secure at least C grade in each course.

							(d) Students without having qualifying degree in the primary discipline (B. Tech with MTech in Food Processing Engineering / Food Technology / Agricultural Process Engineering / Post Harvest Engineering / Agricultural Engineering or any other relevant branch of Engineering/Technology.) will be required to take up additional course work of 6 credits to gain adequate knowledge on the subject so as to be considered to qualify along with students with specialization in a primary discipline, unless explicitly exempted by the Senate.
996	QIP0108	NIT Rourkela	Ph.D Humanities	Humanities and Social Science	DN000843	* Economics (Stream): Energy and Environment, Development Economics, Health Economics, Industrial economics, Public Economics, International Trade and Finance * Psychology (Stream): Developmental and Educational Psychology, Cognitive Psychology. * English (Stream): ELT, Social Linguistic and Cultural Studies, Indian English Wring * Sociology (Stream): Development-induced Displacement & Resettlement, Urban Sociology, Rural & Tribal Studies	1.The minimum qualification required for admission to PhD programs is one of the following [1(a)-1(d)]: (a) ME/MTech/MScEngg/MArch/MPlan/MDes in relevant discipline with at least 6.5 CGPA or 60% marks or 1st class in both BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent, and ME/MTech/MScEngg/MArch/MPlan/MDes from a recognized Technical Institute or University. (b) BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent in relevant discipline with CGPA of 7.0 or 65% marks. (c) MSc in Basic Sciences with CGPA 7.0 or 65% marks in relevant disciplines. For applicants with valid GATE/NET/GPAT or equivalent score, requirement may be relaxed by maximum 0.5 CGPA or 5% marks. (d) MA/MCom/MBA/MSc in Humanities and Social Sciences or Management or BTech with 6.5 CGPA or 60% marks or 1st class In addition to the above eligibility criteria (based on BTech, BArch, MSc, MBA, MA, MCom, MTech, MArch, MPlan, MDes etc. examinations), the following additional criteria will also be applicable: (a) A candidate should score minimum 6.5 CGPA or 60% marks or 1st class throughout career to be eligible for admission to PhD programme. The Departmental Research Committee (DRC), however, may make exception (marks <

							60% or CGPA < 6.5) at its discretion in only one among the results of 10th, +2, BA, BSc, BCom, Diploma etc. (except qualifying degree) if the candidate has qualified in GATE/NET/GPAT or other national level fellowship tests like DST-INSPIRE, etc. or joined as JRF/SRF in any research project. (b) Students without having qualifying degree in the primary discipline (MSc / MA in relevant subjects OR BTech / MTech in any branch of Engineering OR MBA) will be required to take up additional course work of 6 credits to gain adequate knowledge on the subject so as to be considered to qualify along with students with specialization in a primary discipline, unless explicitly exempted by the Senate.
997	QIP0108	NIT Rourkela	Ph.D Engineering	Industrial Design	DN000844	Ergonomics, Human Factors, Industrial Design Robotics, Vibration, Acoustics, Noise Control	The minimum qualification required for admission to PhD programs is one of the following [1(a)-1(c)]: (a) ME/MTech/MScEngg/MArch/MPlan/MDes in relevant discipline with at least 6.5 CGPA or 60% marks or 1st class in both BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent, and ME/MTech/MScEngg/MArch/MPlan/MDes from a recognized Technical Institute or University. (b) BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent in relevant discipline with CGPA of 7.0 or 65% marks. (c) MSc in Basic Sciences with CGPA 7.0 or 65% marks in relevant disciplines. For applicants with valid GATE/NET/GPAT or equivalent score, requirement may be relaxed by maximum 0.5 CGPA or 5% marks. In addition to the above eligibility criteria (based on BTech, BArch, MSc, MBA, MA, MCom, MTech, MArch, MPlan, MDes examinations), the following additional criteria will also be applicable: (a) A candidate should score minimum 6.5 CGPA or 60% marks or 1st class throughout career to be eligible for admission to PhD programme. The Departmental Research Committee (DRC), however, may make exception (marks < 60% or CGPA < 6.5) at its discretion in only one among the results of 10th, +2, BA, BSc, BCom, Diploma etc. (except

							qualifying degree) if the candidate has qualified in GATE/NET/GPAT or other national level fellowship tests like DST-INSPIRE, etc. or joined as JRF/SRF in any research project. (b) A candidate should have passed Mathematics in +2 Science or Diploma. (c) Science students admitted to PhD programme in Engineering/Physics/ Mathematics must have passed Mathematics at +3 level. Students without Mathematics at +3 level may be admitted under the condition that they will have to register for 14 credits of 1000 and 2000 level Mathematics and 1000 level Computer Science courses (Theory and Practical) in addition to their normal course requirement, and secure at least C grade in each course. (d) Students without having qualifying degree in the primary discipline (BDes/BE/BTech with M.Des/ME/MTech in any discipline) will be required to take up additional course work of 6 credits to gain adequate knowledge on the subject so as to be considered to qualify along with students with specialization in a primary discipline, unless explicitly exempted by the Senate.
998	QIP0108	NIT Rourkela	Ph.D Science	Life Science	DN000845	* Microbial bioremediation and biological wastewater treatment * NanoSciences/Biomaterials in biological sciences	The minimum qualification required for admission to PhD programs is one of the following [1(a)-1(d)]: (a) ME/MTech/MScEngg/MArch/MPlan/MDes in relevant discipline with at least 6.5 CGPA or 60% marks or 1st class in both BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent, and ME/MTech/MScEngg/MArch/MPlan/MDes from a recognized Technical Institute or University. (b) BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent in relevant discipline with CGPA of 7.0 or 65% marks. (c) MSc in Basic Sciences with CGPA 7.0 or 65% marks in relevant disciplines. For applicants with valid GATE/NET/GPAT or equivalent score, requirement may be relaxed by maximum 0.5 CGPA or 5% marks. (d) MBBS/BVSc with CGPA 6.5 or 60% marks or 1st class. In addition to the above eligibility criteria (based on BTech, BArch, MSc, MBA, MA, MCom, MTech, MArch, MPlan, MDes examinations), the following additional criteria will also be applicable:

							(a) A candidate should score minimum 6.5 CGPA or 60% marks or 1st class throughout career to be eligible for admission to PhD programme. The Departmental Research Committee (DRC), however, may make exception (marks < 60% or CGPA < 6.5) at its discretion in only one among the results of 10th, +2, BA, BSc, BCom, Diploma etc. (except qualifying degree) if the candidate has qualified in GATE/NET/GPAT or other national level fellowship tests like DST-INSPIRE, etc. or joined as JRF/SRF in any research project. (b) A student should have passed Life Science or Biological Science either at +2 or +3 level for admission to PhD in Life Science department. (c) Science students admitted to PhD programme in Engineering/Physics/ Mathematics must have passed Mathematics at +3 level. Students without Mathematics at +3 level may be admitted under the condition that they will have to register for 14 credits of 1000 and 2000 level Mathematics and 1000 level Computer Science courses (Theory and Practical) in addition to their normal course requirement, and secure at least C grade in each course. (d) Students without having qualifying degree in the primary discipline (MSc in Life Sciences / Botany / Zoology / Microbiology / Biotechnology / Biochemistry / Bioinformatics / MBBS / BVSc./ Bio-Physics / Food Science and Technology, BTech / Integrated MTech / MTech in Biotechnology or any branch of biological sciences, MS in any branch of biological sciences) will be required to take up additional course work of 6 credits to gain adequate knowledge on the subject so as to be considered to qualify along with students with specialization in a primary discipline, unless explicitly exempted by the Senate.

999	QIP0108	NIT Rourkela	Ph.D Science	Mathematics	DN000846	Analysis, Algebra, Linear Algebra, Numerical Analysis, Differential Equations, Fluid Dynamics, Probability and Statistics, Discrete Mathematics, Soft computing	The minimum qualification required for admission to PhD programs is one of the following [1(a)-1(c)]: (a) ME/MTech/MScEngg/MArch/MPlan/MDes in relevant discipline with at least 6.5 CGPA or 60% marks or 1st class in both BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent, and ME/MTech/MScEngg/MArch/MPlan/MDes from a recognized Technical Institute or University. (b) BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent in relevant discipline with CGPA of 7.0 or 65% marks. (c) MSc in Basic Sciences with CGPA 7.0 or 65% marks in relevant disciplines. For applicants with valid GATE/NET/GPAT or equivalent score, requirement may be relaxed by maximum 0.5 CGPA or 5% marks. In addition to the above eligibility criteria (based on BTech, BArch, MSc, MBA, MA, MCom, MTech, MArch, MPlan, MDes examinations), the following additional criteria will also be applicable: (a) A candidate should score minimum 6.5 CGPA or 60% marks or 1st class throughout career to be eligible for admission to PhD programme. The Departmental Research Committee (DRC), however, may make exception (marks < 60% or CGPA < 6.5) at its discretion in only one among the results of 10th, +2, BA, BSc, BCom, Diploma etc. (except qualifying degree) if the candidate has qualified in GATE/NET/GPAT or other national level fellowship tests like DST-INSPIRE, etc. or joined as JRF/SRF in any research project. (b) A candidate should have passed Mathematics in +2 Science or Diploma. (c) Science students admitted to PhD programme in Engineering/Physics/ Mathematics must have passed Mathematics at +3 level. Students without Mathematics at +3 level may be admitted under the condition that they will have to register for 14 credits of 1000 and 2000 level Mathematics and 1000 level Computer Science courses (Theory and Practical) in addition to their normal course requirement, and secure at least C grade in each course. (d) Students without having qualifying degree in the primary

							discipline (MSc in Mathematics / Statistics / Computer Science / Information Technology / MCA and First class Honours or equivalent in B.Sc. with Mathematics / Statistics as Honours subject. OR BTech / MTech in any branch of Engineering or equivalent) will be required to take up additional course work of 6 credits to gain adequate knowledge on the subject so as to be considered to qualify along with students with specialization in a primary discipline, unless explicitly exempted by the Senate.
1000	QIP0108	NIT Rourkela	Ph.D Engineering	Mechanical Engineering	DN000847	Machine Design, Production Engineering, Thermal Engineering	The minimum qualification required for admission to PhD programs is one of the following [1(a)-1(c)]: (a) ME/MTech/MScEngg/MArch/MPlan/MDes in relevant discipline with at least 6.5 CGPA or 60% marks or 1st class in both BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent, and ME/MTech/MScEngg/MArch/MPlan/MDes from a recognized Technical Institute or University. (b) BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent in relevant discipline with CGPA of 7.0 or 65% marks. (c) MSc in Basic Sciences with CGPA 7.0 or 65% marks in relevant disciplines. For applicants with valid GATE/NET/GPAT or equivalent score, requirement may be relaxed by maximum 0.5 CGPA or 5% marks. In addition to the above eligibility criteria (based on BTech, BArch, MSc, MBA, MA, MCom, MTech, MArch, MPlan, MDes examinations), the following additional criteria will also be applicable: (a) A candidate should score minimum 6.5 CGPA or 60% marks or 1st class throughout career to be eligible for admission to PhD programme. The Departmental Research Committee (DRC), however, may make exception (marks < 60% or CGPA < 6.5) at its discretion in only one among the results of 10th, +2, BA, BSc, BCom, Diploma etc. (except qualifying degree) if the candidate has qualified in GATE/NET/GPAT or other national level fellowship tests like

							DST-INSPIRE, etc. or joined as JRF/SRF in any research project. (b) A candidate should have passed Mathematics in +2 Science or Diploma. (c) Science students admitted to PhD programme in Engineering/Physics/ Mathematics must have passed Mathematics at +3 level. Students without Mathematics at +3 level may be admitted under the condition that they will have to register for 14 credits of 1000 and 2000 level Mathematics and 1000 level Computer Science courses (Theory and Practical) in addition to their normal course requirement, and secure at least C grade in each course. (d) Students without having qualifying degree in the primary discipline [BTech (with GATE)/MTech in Mechanical / Machine Design / Thermal / Cryogenic / Mechatronics / Robotics / Mechanical Vibrations / Automobile / Production / Manufacturing / Industrial Engineering / Industrial System Engineering/ Aerospace/ Aeronautical/ Composites / Tribology / Fluid Flow and Heat Transfer/Energy Technology/ Energy Engineering] will be required to take up additional course work of 6 credits to gain adequate knowledge on the subject so as to be considered to qualify along with students with specialization in a primary discipline, unless explicitly exempted by the Senate.
1001	QIP0108	NIT Rourkela	Ph.D Engineering	Metallurgical & Materials Engineering	DN000848	Metallurgical and Materials Engineering	The minimum qualification required for admission to PhD programs is one of the following [1(a)-1(c)]: (a) ME/MTech/MScEngg/MArch/MPlan/MDes in relevant discipline with at least 6.5 CGPA or 60% marks or 1st class in both BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent, and ME/MTech/MScEngg/MArch/MPlan/MDes from a recognized Technical Institute or University. (b) BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent in relevant discipline with CGPA of 7.0 or 65% marks. (c) MSc in Basic Sciences with CGPA 7.0 or 65% marks in relevant disciplines. For applicants with valid GATE/NET/GPAT or equivalent score, requirement may be relaxed by maximum 0.5 CGPA or 5% marks. In addition to the above eligibility criteria (based on BTech,

							BArch, MSc, MBA, MA, MCom, MTech, MArch, MPlan, MDes etc. examinations), the following additional criteria will also be applicable: (a) A candidate should score minimum 6.5 CGPA or 60% marks or 1st class throughout career to be eligible for admission to PhD programme. The Departmental Research Committee (DRC), however, may make exception (marks < 60% or CGPA < 6.5) at its discretion in only one among the results of 10th, +2, BA, BSc, BCom, Diploma etc. (except qualifying degree) if the candidate has qualified in GATE/NET/GPAT or other national level fellowship tests like DST-INSPIRE, etc. or joined as JRF/SRF in any research project. (b) A candidate should have passed Mathematics in +2 Science or Diploma. (c) Science students admitted to PhD programme in Engineering/Physics/ Mathematics must have passed Mathematics at +3 level. Students without Mathematics at +3 level may be admitted under the condition that they will have to register for 14 credits of 1000 and 2000 level Mathematics and 1000 level Computer Science courses (Theory and Practical) in addition to their normal course requirement, and secure at least C grade in each course. (d) Students without having qualifying degree in the primary discipline (BTech/MTech in Metallurgy / Metallurgical and Materials Engineering / Ceramic / Chemical / Mechanical / Production / Manufacturing Engineering OR MSc in Physics/ Chemistry /Materials Science) will be required to take up additional course work of 6 credits to gain adequate knowledge on the subject so as to be considered to qualify along with students with specialization in a primary discipline, unless explicitly exempted by the Senate.

10 02	QIP0108	NIT Rourkela	Ph.D Engineering	Mining Engineering	DN000849	GIS and Remote Sensing for Mine Monitoring and Management, Geomechanics, Mine Automation, Mine Environmental Engineering, Mine Safety Engineering, Mine Ventilation, Mine Fire and spontaneous Heating	The minimum qualification required for admission to PhD programs is one of the following [1(a)-1(c)]: (a) ME/MTech/MScEngg/MArch/MPlan/MDes in relevant discipline with at least 6.5 CGPA or 60% marks or 1st class in both BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent, and ME/MTech/MScEngg/MArch/MPlan/MDes from a recognized Technical Institute or University. (b) BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent in relevant discipline with CGPA of 7.0 or 65% marks. (c) MSc in Basic Sciences with CGPA 7.0 or 65% marks in relevant disciplines. For applicants with valid GATE/NET/GPAT or equivalent score, requirement may be relaxed by maximum 0.5 CGPA or 5% marks. In addition to the above eligibility criteria (based on BTech, BArch, MSc, MBA, MA, MCom, MTech, MArch, MPlan, MDes examinations), the following additional criteria will also be applicable: (a) A candidate should score minimum 6.5 CGPA or 60% marks or 1st class throughout career to be eligible for admission to PhD programme. The Departmental Research Committee (DRC), however, may make exception (marks < 60% or CGPA < 6.5) at its discretion in only one among the results of 10th, +2, BA, BSc, BCom, Diploma etc. (except qualifying degree) if the candidate has qualified in GATE/NET/GPAT or other national level fellowship tests like DST-INSPIRE, etc. or joined as JRF/SRF in any research project. (b) A candidate should have passed Mathematics in +2 Science or Diploma. (c) Science students admitted to PhD programme in Engineering/Physics/ Mathematics must have passed Mathematics at +3 level. Students without Mathematics at +3 level may be admitted under the condition that they will have to register for 14 credits of 1000 and 2000 level Mathematics and 1000 level Computer Science courses (Theory and Practical) in addition to their normal course requirement, and secure at least C grade in each course.

							(d) Students without having qualifying degree in the primary discipline (BTech/MTech in Mining / Civil / Environmental / Chemical / Electronics / Electrical / Instrumentation / Computer Science / IT / Mechanical / Metallurgical and Materials Engineering OR MSc in Geology / Geo-Physics / Environmental Science / Remote Sensing / Mathematics / Statistics / Chemistry / Physics) will be required to take up additional course work of 6 credits to gain adequate knowledge on the subject so as to be considered to qualify along with students with specialization in a primary discipline, unless explicitly exempted by the Senate.
1003	QIP0108	NIT Rourkela	Ph.D Engineering	Planning and Architecture	DN000850	Vernacular architecture, Climate responsive building design, Green infrastructure, Environmental planning, Landscape design, Landscape planning, Construction management, Urban planning, Urban design, Housing, Neighbourhood planning, Community planning, Age friendly neighborhoods/ cities, Urban amenities, Leisure amenities, Urban governance, Transportation planning, Infrastructure planning, Land use planning, Global cities, City-network, Contemporary urbanization, Network analysis, Vulnerability assessment, Environmental psychology	The minimum qualification required for admission to PhD programs is one of the following [1(a)-1(c)]: (a) ME/MTech/MScEngg/MArch/MPlan/MDes in relevant discipline with at least 6.5 CGPA or 60% marks or 1st class in both BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent, and ME/MTech/MScEngg/MArch/MPlan/MDes from a recognized Technical Institute or University. (b) BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent in relevant discipline with CGPA of 7.0 or 65% marks. (c) MSc in Basic Sciences with CGPA 7.0 or 65% marks in relevant disciplines. For applicants with valid GATE/NET/GPAT or equivalent score, requirement may be relaxed by maximum 0.5 CGPA or 5% marks. In addition to the above eligibility criteria (based on BTech, BArch, MSc, MBA, MA, MCom, MTech, MArch, MPlan, MDes and etc. examinations), the following additional criteria will also be applicable: (a) A candidate should score minimum 6.5 CGPA or 60% marks or 1st class throughout career to be eligible for admission to PhD programme. The Departmental Research Committee (DRC), however, may make exception (marks < 60% or CGPA < 6.5) at its discretion in only one among the results of 10th, +2, BA, BSc, BCom, Diploma etc. (except qualifying degree) if the candidate has qualified in GATE/NET/GPAT or other national level fellowship tests like

							DST-INSPIRE, etc. or joined as JRF/SRF in any research project. (b) A candidate should have passed Mathematics in +2 Science or Diploma. (c) Science students admitted to PhD programme in Engineering/Physics/ Mathematics must have passed Mathematics at +3 level. Students without Mathematics at +3 level may be admitted under the condition that they will have to register for 14 credits of 1000 and 2000 level Mathematics and 1000 level Computer Science courses (Theory and Practical) in addition to their normal course requirement, and secure at least C grade in each course. (d) Students without having qualifying degree in the primary discipline [BArch with MArch/ MPlan / MCP / MURP / MUP / MTRP / MTech or equivalent (with GATE)] will be required to take up additional course work of 6 credits to gain adequate knowledge on the subject so as to be considered to qualify along with students with specialization in a primary discipline, unless explicitly exempted by the Senate.
1004	QIP0108	NIT Rourkela	Ph.D Science	Physics and Astronomy	DN000851	* Astrophysics * Condensed Matter Physics	1.The minimum qualification required for admission to PhD programs is one of the following [1(a)-1(c)]: (a) ME/MTech/MScEngg/MArch/MPlan/MDes in relevant discipline with at least 6.5 CGPA or 60% marks or 1st class in both BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent, and ME/MTech/MScEngg/MArch/MPlan/MDes from a recognized Technical Institute or University. (b) BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent in relevant discipline with CGPA of 7.0 or 65% marks. (c) MSc in Basic Sciences with CGPA 7.0 or 65% marks in relevant disciplines. For applicants with valid GATE/NET/GPAT or equivalent score, requirement may be relaxed by maximum 0.5 CGPA or 5% marks. In addition to the above eligibility criteria (based on BTech, BArch, MSc, MBA, MA, MCom, MTech, MArch, MPlan, MDes and etc. examinations), the following additional criteria will also be applicable:

							(a) A candidate should score minimum 6.5 CGPA or 60% marks or 1st class throughout career to be eligible for admission to PhD programme. The Departmental Research Committee (DRC), however, may make exception (marks < 60% or CGPA < 6.5) at its discretion in only one among the results of 10th, +2, BA, BSc, BCom, Diploma etc. (except qualifying degree) if the candidate has qualified in GATE/NET/GPAT or other national level fellowship tests like DST-INSPIRE, etc. or joined as JRF/SRF in any research project. (b) A candidate should have passed Mathematics in +2 Science or Diploma. (c) Science students admitted to PhD programme in Engineering/Physics/ Mathematics must have passed Mathematics at +3 level. Students without Mathematics at +3 level may be admitted under the condition that they will have to register for 14 credits of 1000 and 2000 level Mathematics and 1000 level Computer Science courses (Theory and Practical) in addition to their normal course requirement, and secure at least C grade in each course. (d) Students without having qualifying degree in the primary discipline (MSc in any branch of Science with Mathematics and Physics at B.Sc. level OR BTech in any branch of Engineering) will be required to take up additional course work of 6 credits to gain adequate knowledge on the subject so as to be considered to qualify along with students with specialization in a primary discipline, unless explicitly exempted by the Senate.
1005	QIP0108	NIT Rourkela	Ph.D Management	School of Management	DN000852	Human Resource Management, HR Audit and HRIS, Managing Employee Relations, Managing Employee Talent, Corporate Social Responsibility, Human Resource Accounting, Corporate Finance, Financial Management, Marketing Management, Operations Management, Financial Accounting, Information System	1.The minimum qualification required for admission to PhD programs is one of the following [1(a)-1(d)]: (a) ME/MTech/MScEngg/MArch/MPlan/MDes in relevant discipline with at least 6.5 CGPA or 60% marks or 1st class in both BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent, and ME/MTech/MScEngg/MArch/MPlan/MDes from a recognized Technical Institute or University. (b) BE/BTech/BScEngg/MSc/MCA/BArch/BDes or equivalent in relevant discipline with CGPA of 7.0 or 65% marks. (c) MSc in Basic Sciences with CGPA 7.0 or 65% marks in relevant disciplines. For applicants with valid GATE/NET/GPAT

							or equivalent score, requirement may be relaxed by maximum 0.5 CGPA or 5% marks. (d) MA/MCom/MBA/MSc in Humanities and Social Sciences or Management or BTech with 6.5 CGPA or 60% marks or 1st class. In addition to the above eligibility criteria (based on BTech, BArch, MSc, MBA, MA, MCom, MTech, MArch, MPlan, MDes etc. examinations) the following additional criteria will also be applicable: (a) A candidate should score minimum 6.5 CGPA or 60% marks or 1st class throughout career to be eligible for admission to PhD programme. The Departmental Research Committee (DRC), however, may make exception (marks < 60% or CGPA < 6.5) at its discretion in only one among the results of 10th, +2, BA, BSc, BCom, Diploma etc. (except qualifying degree) if the candidate has qualified in GATE/NET/GPAT or other national level fellowship tests like DST-INSPIRE, etc. or joined as JRF/SRF in any research project. (b) Students without having qualifying degree in the primary discipline [Master degree in Technology, Business Administration, Arts, Science, Commerce OR Bachelor degree in Technology in any discipline OR CA(FINAL) from ICAI OR LLM(LAW)] will be required to take up additional course work of 6 credits to gain adequate knowledge on the subject so as to be considered to qualify along with students with specialization in a primary discipline, unless explicitly exempted by the Senate.

1006	QIP0108	NIT Rourkela	M.Tech	Biotechnology and Medical Engineering	DN000864	1. Biotechnology, 2. Biomedical Engineering	Minimum qualification with % marks required for admission to M. Tech Programme: 1. B. Tech/ M. Sc. / MCA results declared with 60% marks/6.5 CGPA obtained for graduated students. SC/ST/PWD students must have 55% marks or 6.0 CGPA. 2. B. tech/ M .Sc. / MCA results declared with NO backlog papers and 60% marks/6.5 CGPA (SC/ST/PWD students must have 55% marks or 6.0 CGPA). 3. Mathematics at 10+2 level is mandatory for all courses; to be especially to be noted by students with B-Tech in Bio-Technology and Mining Engineering who may not have mathematics at 10+2 level and hence are not eligible for any course at NIT Rourkela. 3. Candidates with Science background should have Mathematics at both +2 and +3 Examination. 4. Branch/specialization wise Qualifying Degree Eligibility is mentioned below Qualifying degree eligibility for all the branches: B.E./B.Tech. in: Any of the disciplines, Bachelor of Veterinary Science (BVSc), Bachelor of Veterinary Sciences and Animal Husbandry (BVScAH), MBBS
1007	QIP0108	NIT Rourkela	M.Tech	Civil Engineering	DN000865	1. Geotechnical Engineering, 2. Structural Engineering, 3. Transportation Engineering, 4. Water Resources Engineering	Minimum qualification with % marks required for admission to M. Tech Programme: 1. B. Tech/ M. Sc. / MCA results declared with 60% marks/6.5 CGPA obtained for graduated students. SC/ST/PWD students must have 55% marks or 6.0 CGPA. 2. B. tech/ M .Sc. / MCA results declared with NO backlog papers and 60% marks/6.5 CGPA (SC/ST/PWD students must have 55% marks or 6.0 CGPA). 3. Mathematics at 10+2 level is mandatory for all courses; to be especially to be noted by students with B-Tech in Bio-Technology and Mining Engineering who may not have mathematics at 10+2 level and hence are not eligible for any course at NIT Rourkela. 3. Candidates with Science background should have Mathematics at both +2 and +3 Examination. 4. Branch/specialization wise Qualifying Degree Eligibility is

							mentioned below A: Qualifying degree eligibility for the branch of Geo-Technical Engineering: B.E./B. Tech. in: Civil Engineering, Civil Engineering and Planning, Civil Technology B: Qualifying degree eligibility for the branch of Structural Engineering: B.E./B. Tech. in: Civil Engineering, Construction Engineering, Construction Technology, Structural Engineering, Applied Mechanics, Civil Engineering and Planning, Civil Technology C: Qualifying degree eligibility for the branch of Transportation Engineering: B.E./B. Tech. in: Civil Engineering, Highway Engineering, Transportation Engineering, Civil Engineering and Planning, Civil Technology, Civil and Transportation Engineering, Civil and Transportation Technology D: Qualifying degree eligibility for the branch of Water Resources Engineering: B.E./B. Tech. in: Agriculture Engineering, Chemical Engineering, Civil Engineering, Civil Environmental Engineering, Irrigation Engineering, Mechanical Engineering, Water Management, Applied Mechanics, Civil Technology, Agriculture Engineering, Chemical Engineering.

1008	QIP0108	NIT Rourkela	M.Tech	Chemical Engineering	DN000866	1. Chemical Engineering, 2. Energy and Environmental Engineering	Minimum qualification with % marks required for admission to M. Tech Programme: 1. B. Tech/ M. Sc. / MCA results declared with 60% marks/6.5 CGPA obtained for graduated students. SC/ST/PWD students must have 55% marks or 6.0 CGPA. 2. B. tech/ M .Sc. / MCA results declared with NO backlog papers and 60% marks/6.5 CGPA (SC/ST/PWD students must have 55% marks or 6.0 CGPA). 3. Mathematics at 10+2 level is mandatory for all courses; to be especially to be noted by students with B-Tech in Bio-Technology and Mining Engineering who may not have mathematics at 10+2 level and hence are not eligible for any course at NIT Rourkela. 3. Candidates with Science background should have Mathematics at both +2 and +3 Examination. 4. Branch/specialization wise Qualifying Degree Eligibility is mentioned below A: Qualifying degree eligibility for the branch of Chemical Engineering: B.E./B. Tech. in: Chemical Engg./Tech, Chemical & Polymer Engg., Chemical Engg(Plastic & Polymer), Petrochem & Petroleum Ref Engg., Petrochem Engg./Tech, Pretroleum Engg./Tech, Biotechnology, Environmental Science and Engineering. B: Qualifying degree eligibility for the branch of Energy and Environmental Engineering: B.E./B.Tech. in: Chemical Engineering, Mechanical Engineering, Metallurgical Engineering, Ceramic Engineering, Civil Engineering, Mining Engineering, Nanotechnology, Textile Engineering, Polymer Engineering, Materials Engineering, Petrochemical Engineering, Biotechnology, Environmental Science and Engineering.

1009	QIP0108	NIT Rourkela	M.Tech	Ceramic Engineering	DN000867	Industrial Ceramics	Minimum qualification with % marks required for admission to M. Tech Programme: 1. B. Tech/ M. Sc. / MCA results declared with 60% marks/6.5 CGPA obtained for graduated students. SC/ST/PWD students must have 55% marks or 6.0 CGPA. 2. B. tech/ M .Sc. / MCA results declared with NO backlog papers and 60% marks/6.5 CGPA (SC/ST/PWD students must have 55% marks or 6.0 CGPA). 3. Mathematics at 10+2 level is mandatory for all courses; to be especially to be noted by students with B-Tech in Bio-Technology and Mining Engineering who may not have mathematics at 10+2 level and hence are not eligible for any course at NIT Rourkela. 3. Candidates with Science background should have Mathematics at both +2 and +3 Examination. 4. Branch/specialization wise Qualifying Degree Eligibility is mentioned below Qualifying degree eligibility: B.E./B. Tech. in: Cement and Ceramic Technology/ Ceramic Engineering/ Chemical Engineering/ Industrial Metallurgy/ Mechanical Engineering/ Metallurgical and Materials Engineering/ Metallurgical Engineering/ Nanotechnology/ Ceramic Technology/ Ceramic and Glass Technology, M.Sc. in Materials Science/ Physics/ Applied Physics/ Engineering Physics/ Chemistry/Applied Chemistry.

10 10	QIP0108	NIT Rourkela	M.Tech	Computer Science & Engineering	DN000868	1. Computer Science, 2. Information Security, 3. Software Engineering	Minimum qualification with % marks required for admission to M. Tech Programme: 1. B. Tech/ M. Sc. / MCA results declared with 60% marks/6.5 CGPA obtained for graduated students. SC/ST/PWD students must have 55% marks or 6.0 CGPA. 2. B. tech/ M .Sc. / MCA results declared with NO backlog papers and 60% marks/6.5 CGPA (SC/ST/PWD students must have 55% marks or 6.0 CGPA). 3. Mathematics at 10+2 level is mandatory for all courses; to be especially to be noted by students with B-Tech in Bio-Technology and Mining Engineering who may not have mathematics at 10+2 level and hence are not eligible for any course at NIT Rourkela. 3. Candidates with Science background should have Mathematics at both +2 and +3 Examination. 4. Branch/specialization wise Qualifying Degree Eligibility is mentioned below Qualifying degree eligibility for all the branches MCA, M.Sc. in Computer Applications, Computer Science, Information Technology, Software Engineering, Information Sciences, Data Science, Artificial Intelligence and Machine Learning, B.E./B. Tech. in: Computer Engineering, Computer Science, Computer Science and Engineering, Computer Science and Information Technology, Computer Technology, Information Technology, Computer and Communication Engineering, Computer Engineering and Application, Computer Networking, Computer Science and Systems Engineering, Computer Science and Technology, Electronics and Computer Engineering, Information and Communication Technology, Information Engineering, Information Science, Information Science and Engineering, Software Engineering, Electrical and Computer Engineering, Information Science and Technology, Information Technology and Engineering, Information Technology and Mathematical Innovations, Artificial Intelligence (AI) and Data Science, Artificial Intelligence and Machine Learning, Computer Science and Applied Mathematics, Computer Science and Biosciences, Computer Science and Design, Computer Science and

							Business Systems, Computer Science and Engineering (Cyber Security), Computer Science and Engineering (Artificial Intelligence), Computer Science and Engineering (Artificial Intelligence and Machine Learning), Computer Science and Engineering (Data Science), Computer Science and Engineering (Internet of Things and Cyber Security Including Block Chain Technology), Computer Science and Engineering (IoT), Computer Science and Engineering (Networks), Computer Science and Engineering and Business Systems, Computer Science and Medical Engineering, Computer Science and Social Sciences, Cyber Physical Systems, Electronics and Computer Science, Robotics and Artificial Intelligence, Computer Engineering (Software Engineering)
10 11	QIP0108	NIT Rourkela	M.Tech	Electrical Engineering	DN000869	1. Electronic Systems and Communication, 2. Control and Automation, 3. Power Electronics and Drives, 4. Control and Automation	Minimum qualification with % marks required for admission to M. Tech Programme: 1. B. Tech/ M. Sc. / MCA results declared with 60% marks/6.5 CGPA obtained for graduated students. SC/ST/PWD students must have 55% marks or 6.0 CGPA. 2. B. tech/ M .Sc. / MCA results declared with NO backlog papers and 60% marks/6.5 CGPA (SC/ST/PWD students must have 55% marks or 6.0 CGPA). 3. Mathematics at 10+2 level is mandatory for all courses; to be especially to be noted by students with B-Tech in Bio-Technology and Mining Engineering who may not have mathematics at 10+2 level and hence are not eligible for any course at NIT Rourkela. 3. Candidates with Science background should have Mathematics at both +2 and +3 Examination. 4. Branch/specialization wise Qualifying Degree Eligibility is mentioned below Qualifying degree eligibility for all the branches: B. Tech. / B. E. / B. Sc. Engineering in: Electrical Engineering, Electrical and Electronics Engineering, Electronics and Communication Engineering, Electronics and Telecommunications Engineering, Control Engineering or any combination of it, Energy Engineering, Instrumentation

							Engineering or any combination of it, Power Engineering or any combination of it.
10 12	QIP0108	NIT Rourkela	M.Tech	Industrial Design	DN000870	Industrial Design	Minimum qualification with % marks required for admission to M. Tech Programme: 1. B. Tech/ M. Sc. / MCA results declared with 60% marks/6.5 CGPA obtained for graduated students. SC/ST/PWD students must have 55% marks or 6.0 CGPA. 2. B. tech/ M .Sc. / MCA results declared with NO backlog papers and 60% marks/6.5 CGPA (SC/ST/PWD students must have 55% marks or 6.0 CGPA). 3. Mathematics at 10+2 level is mandatory for all courses; to be especially to be noted by students with B-Tech in Bio-Technology and Mining Engineering who may not have mathematics at 10+2 level and hence are not eligible for any course at NIT Rourkela. 3. Candidates with Science background should have Mathematics at both +2 and +3 Examination. 4. Branch/specialization wise Qualifying Degree Eligibility is mentioned below Qualifying degree eligibility: B.E./B.Tech. in : Automobile Engineering, Electronics and Instrumentation Engineering, Electronics Engineering, Industrial Manufacturing Engineering, Industrial and Production Engineering, Industrial Engineering, Industrial Engineering and Management, Instrumentation and Control Engineering, Instrumentation Engineering, Instrumentation Technology, Manufacturing Engineering, Mechanical Engineering, Mechatronics, Production and Industrial Engineering, Production Engineering, Production Engineering and Management, Advanced Manufacturing and Mechanical Systems Design, Automation and Robotics, Automotive Engineering, Control and Instrumentation, Electronics and Electrical Communication Engineering, Electronics Instrument and Control, Engineering Design, Industrial and Management Engineering, Industrial Electronics, Industrial Management,

							Instrument Technology, Instrumentation and Process Control, Machine Engineering, Machine Tools Engineering, Manufacturing Process, Manufacturing Science and Engineering, Mechanical and Automation Engineering, Mechanical Engineering Automobile, Precision Manufacturing, Robotics and Automation, Shipbuilding Engineering, Tool Engineering, Manufacturing Engineering and Automation, Manufacturing Process and Automation Engineering, Manufacturing Technology, Mechanical Engineering (Repair and Maintenance),
1013	QIP0108	NIT Rourkela	M.Tech	Mechanical Engineering	DN000871	1. Machine Design and Analysis, 2. Production Engineering, 3. Thermal Engineering	Minimum qualification with % marks required for admission to M. Tech Programme: 1. B. Tech/ M. Sc. / MCA results declared with 60% marks/6.5 CGPA obtained for graduated students. SC/ST/PWD students must have 55% marks or 6.0 CGPA. 2. B. tech/ M .Sc. / MCA results declared with NO backlog papers and 60% marks/6.5 CGPA (SC/ST/PWD students must have 55% marks or 6.0 CGPA). 3. Mathematics at 10+2 level is mandatory for all courses; to be especially to be noted by students with B-Tech in Bio-Technology and Mining Engineering who may not have mathematics at 10+2 level and hence are not eligible for any course at NIT Rourkela. 3. Candidates with Science background should have Mathematics at both +2 and +3 Examination. 4. Branch/specialization wise Qualifying Degree Eligibility is mentioned below A: Qualifying degree eligibility for the branch of Machine Design & Analysis: B.E./B.Tech. in : Aeronautical Engineering, Aerospace Engineering, Mechanical Engineering, Mechatronics, Mechanical with specialization in Automotive Engineering, Architectural Engineering, Architecture, Automobile Engineering, Advanced Manufacturing and Mechanical Systems Design, Automation and Robotics, Nanotechnology and Robotics, Naval

							Architecture, Robotics and Automation, Shipbuilding Engineering, Mechanical Engineering (Design and Manufacturing), Industrial Design, Naval Architecture and Ship Building Engineering, Robotics and Artificial Intelligence, Mechanical Engineering Design. B: Qualifying degree eligibility for the branch of Production Engineering: B.E./B.Tech. in : Aeronautical Engineering, Aerospace Engineering, Metallurgy and Materials Engineering, Industrial Manufacturing Engineering, Industrial and Production Engineering, Industrial Engineering, Industrial Engineering and Management, Industrial Metallurgy, Manufacturing Engineering, Material Science and Engineering, Mechanical Engineering, Mechatronics, Metallurgical and Materials Engineering, Metallurgical and Materials Technology, Metallurgical Engineering, Metallurgical Engineering and Material Science, Metallurgy, Production and Industrial Engineering, Production Engineering, Production Engineering and Management, Automation and Robotics, Machine Engineering, Machine Tools Engineering, Manufacturing Process, Manufacturing Science and Engineering, Material Science and Metallurgical Engineering, Materials and Metallurgical Engineering , Mechanical and Automation Engineering, Mechanical Engineering Automobile, Robotics and Automation, Tool Engineering, Manufacturing Engineering and Automation, Manufacturing Process and Automation Engineering, Manufacturing Technology, Material Science and Technology, Mechanical Engineering (Design and Manufacturing), Mechanical Engineering (Repair and Maintenance), Metallurgy and Material Technology, Industrial Production, Mechanical Engineering (Manufacturing Engineering), Metallurgy and Materials, Mechanical Engineering (Welding Technology), Production and Management, Industrial Design, Mechanical Engineering (Smart Manufacturing), Mechanical Stream – Production Engineering, Additive Manufacturing, Advanced Mechatronics and industrial Automation, Mechanical and Mechatronics Engineering (Additive

							Manufacturing), Mechanical Engineering (Industry Integrated), Manufacturing Engineering and Technology, Mechanical and Smart Manufacturing, Mechanical Engineering (Production), Mechanical Engineering Design. C: Qualifying degree eligibility for the branch of Thermal Engineering: B.E./B.Tech. in : Aeronautical Engineering, Aerospace Engineering, Automobile Engineering, Chemical Engineering, Energy Engineering, Mechanical Engineering, Nuclear Engineering, Petrochemical Engineering, Renewable Energy, Chemical Technology , Energy Science and Engineering, Nuclear Science and Technology, Mechanical with specialization in Automotive Engineering, Chemical and Biochemical Engineering.
1014	QIP0108	NIT Rourkela	M.Tech	Metallurgical & Materials Engineering	DN000872	Metallurgical and Materials Engineering	Minimum qualification with % marks required for admission to M. Tech Programme: 1. B. Tech/ M. Sc. / MCA results declared with 60% marks/6.5 CGPA obtained for graduated students. SC/ST/PWD students must have 55% marks or 6.0 CGPA. 2. B. tech/ M .Sc. / MCA results declared with NO backlog papers and 60% marks/6.5 CGPA (SC/ST/PWD students must have 55% marks or 6.0 CGPA). 3. Mathematics at 10+2 level is mandatory for all courses; to be especially to be noted by students with B-Tech in Bio-Technology and Mining Engineering who may not have mathematics at 10+2 level and hence are not eligible for any course at NIT Rourkela. 3. Candidates with Science background should have Mathematics at both +2 and +3 Examination. 4. Branch/specialization wise Qualifying Degree Eligibility is mentioned below Qualifying degree eligibility: B.E./B.Tech in: Metallurgical and Materials Engineering/ Metallurgy/ Material Science Technology/ Metallurgy and Material Technology/ Industrial Metallurgy/ Material Science and Metallurgical Engineering/ Ceramic Engineering/ Ceramic Engineering and

							Technology/ Mechanical Engineering/ Manufacturing Engineering/ Industrial and Production Engineering/ Production and Industrial Engineering/ Chemical Engineering/ Chemical Engineering (Plastic and Polymer)/ Fuel Technology/ Chemical and Polymer Engineering/ Nanotechnology. OR M. Sc. in: Physics/ Engineering Physics/ Applied Physics/ Materials Science (Solid State Physics)/ Materials Science.

10 15	QIP0108	NIT Rourkela	M.Tech	Mining Engineering	DN000873	Mining Engineering	Minimum qualification with % marks required for admission to M. Tech Programme: 1. B. Tech/ M. Sc. / MCA results declared with 60% marks/6.5 CGPA obtained for graduated students. SC/ST/PWD students must have 55% marks or 6.0 CGPA. 2. B. tech/ M .Sc. / MCA results declared with NO backlog papers and 60% marks/6.5 CGPA (SC/ST/PWD students must have 55% marks or 6.0 CGPA). 3. Mathematics at 10+2 level is mandatory for all courses; to be especially to be noted by students with B-Tech in Bio-Technology and Mining Engineering who may not have mathematics at 10+2 level and hence are not eligible for any course at NIT Rourkela. 3. Candidates with Science background should have Mathematics at both +2 and +3 Examination. 4. Branch/specialization wise Qualifying Degree Eligibility is mentioned below Qualifying degree eligibility: B.E./B.Tech in: Mining Engineering/Mineral Processing/Mining Machinery/Environmental Science and Engineering/ Geomatics/Geo-Informatics/Information Science/Civil Engineering/ Mechanical Engineering/Electrical Engineering/ Electronics and Communication Engineering/ Production Engineering/Industrial Engineering/ Chemical Engineering. OR M.Sc. in: Geology/Geophysics/Earth Science/Environmental Science/Chemistry.

10 16	QIP0108	NIT Rourkela	M.Tech	Earth and Atmospheric Sciences	DN000874	Atmosphere and Ocean Science	Minimum qualification with % marks required for admission to M. Tech Programme: 1. B. Tech/ M. Sc. / MCA results declared with 60% marks/6.5 CGPA obtained for graduated students. SC/ST/PWD students must have 55% marks or 6.0 CGPA. 2. B. tech/ M .Sc. / MCA results declared with NO backlog papers and 60% marks/6.5 CGPA (SC/ST/PWD students must have 55% marks or 6.0 CGPA). 3. Mathematics at 10+2 level is mandatory for all courses; to be especially to be noted by students with B-Tech in Bio-Technology and Mining Engineering who may not have mathematics at 10+2 level and hence are not eligible for any course at NIT Rourkela. 3. Candidates with Science background should have Mathematics at both +2 and +3 Examination. 4. Branch/specialization wise Qualifying Degree Eligibility is mentioned below Qualifying degree eligibility: M.Sc. in: Environmental Science, Geology, Mathematics, Physics, Atmospheric Science, Geoinformatics, Geophysics, Meteorology, Marine Science, Oceanography, Physical Oceanography, Remote Sensing, OR B.Tech in: Aeronautical Engineering, Aerospace Engineering, Agricultural Engineering, Civil Engineering, Computer Science & Engineering, Mechanical Engineering.

10 17	QIP0108	NIT Rourkela	M.Tech	Electronics & Communication Engineering	DN000919	1. Communication and Network, 2. Electronics and instrumentation, 3. Signal and Image Processing, 4. VLSI and Embedded systems, 5. Microwave and Radar Engineering	Minimum qualification with % marks required for admission to M. Tech Programme: 1. B. Tech/ M. Sc. / MCA results declared with 60% marks/6.5 CGPA obtained for graduated students. SC/ST/PWD students must have 55% marks or 6.0 CGPA. 2. B. tech/ M .Sc. / MCA results declared with NO backlog papers and 60% marks/6.5 CGPA (SC/ST/PWD students must have 55% marks or 6.0 CGPA). 3. Mathematics at 10+2 level is mandatory for all courses; to be especially to be noted by students with B-Tech in Bio-Technology and Mining Engineering who may not have mathematics at 10+2 level and hence are not eligible for any course at NIT Rourkela. 3. Candidates with Science background should have Mathematics at both +2 and +3 Examination. 4. Branch/specialization wise Qualifying Degree Eligibility is mentioned below A: Qualifying degree eligibility for the branch of Communication and Networks, Electronics and Instrumentation Engg., Signal & Image Processing, VLSI Design & Embedded System Electronics and Communication Engg., Electronics and Instrumentation Engg., Electronics and Telecommunication Engg., Electronics and Telematics Engg., Electronics Communication and Instrumentation Engg., Electronics Technology, Electronics and Communication Engg. with specialization in Design and Manufacturing, Electrical, Electronics and Power Engg., Electronics System Engg., Electronics Engg. (Specialization in System Engg.), Electronics Engg. with minor in System Engg. (i) Other Qualifying degree eligibility for the branch of Communication and Networks: B.E./B.Tech. in: Electronics Engg., Telecommunication Engg., Applied Electronics and Telecommunication Engg., Computer and Communication Engg., Electronics and Avionics, Electronics and Computer Engg., Electronics and Electrical

							Communication Engg., Electronics Design Technology, Information and Communication Technology, Advanced Communication and Information System, Instrumentation and Electronics Engg. (ii) Other Qualifying degree eligibility for the branch of Electronics and Instrumentation Engg.: B.E./B.Tech. in: Applied Electronics and Instrumentation Engg., Electrical and Electronics Engg., Electrical and Instrumentation Engg., Electronics Engg., Instrumentation and Control Engg., Instrumentation Engg., Instrumentation Technology, Mechatronics, Biomedical Instrumentation, Control and Instrumentation, Electrical Engg. and Industrial Control, Electrical Instrumentation and Control Engg., Electronic Instrumentation and Control Engg., Electronics and Avionics, Electronics and Control Systems, Electronics and Electrical Communication Engg., Electronics and Electrical Engg., Electronics and Information Systems, Electronics Instrument and Control, Industrial Electronics, Instrument Technology, Instrumentation and Process Control, Medical Electronics Engg., Medical Instrumentation, Medical Electronics. (iii) Other Qualifying degree eligibility for the branch of Signal & Image Processing: B.E./B.Tech. in: Electronics Engg., Telecommunication Engg., Applied Electronics and Telecommunication Engg., Electronics and Computer Engg., Electronics and Electrical Engg., Electronics and Information Systems. (iv) Other Qualifying degree eligibility for the branch of VLSI Design & Embedded System: B.E./B.Tech. in: Electrical and Electronics Engg., Applied Electronics and Telecommunication Engg., Electrical Engg., Electronics Engg., Engg. Physics, Telecommunication Engg., Electronics and Avionics, Electronics and Computer Engg., Electronics and Control Systems, Electronics and Electrical Communication

							Engg., Electronics and Electrical Engg., Electronics and Information Systems, Electronics Design Technology, VLSI System Design, Digital Techniques for Design and Planning, Electronics Engg. (Design and Manufacturing), Electrical Engg., Electronics Engg., Engg. Physics, Telecommunication Engg., Electronics and Avionics, Electronics and Computer Engg., Electronics and Control Systems B. Qualifying degree eligibility for the branch of Microwave and Radar Engg.: B.E./B.Tech. in: Electrical and Electronics Engg., Electrical and Electronics and Electrical Communication Engg., Electronics and Electrical Engg., Electronics and Telematics Engg., Electronics and Communication Engg. with specialization in Design and Manufacturing, Electronics System Engg., Electronics Engg. (Specialization in System Engg.), Electronics Engg. with minor in System Engg., Telecommunication Engg., Electronics Communication and Instrumentation Engg.

1018	QIP0109	Indian Institute of Management, Sirmaur	Ph.D Management	Marketing	DN000926	International Marketing, Retail Marketing, Services Marketing, Consumer Research	Candidates require a valid test score of CAT or GMAT or GATE or GRE or UGC-JRF AND must have obtained one of the following qualifications after higher secondary school (10+2) or equivalent: · A Masters Degree in any discipline with 55 percent marks or a two-year post- graduate diploma with at least 55 percent marks along with a Bachelor's degree with at least 50 per cent marks · A 5-year Integrated Master's Degree with at least 55 percent marks (obtained after completing higher secondary schooling in 10+2 pattern) in any discipline · A professional qualification like CA, ICWA, CS (with at least 50 per cent marks) along with Bachelor's degree (with at least 55 per cent marks) · A 4 year/ 8 semester's Bachelor's degree (10+2+4 pattern) with at least 6 CGPA.
1019	QIP0109	Indian Institute of Management, Sirmaur	Ph.D Management	Decision Science and Information Systems	DN000927	Data Analytics, Management Information Systems,	Candidates require a valid test score of CAT or GMAT or GATE or GRE or UGC-JRF AND must have obtained one of the following qualifications after higher secondary school (10+2) or equivalent: · A Masters Degree in any discipline with 55 percent marks or a two-year post- graduate diploma with at least 55 percent marks along with a Bachelor's degree with at least 50 per cent marks · A 5-year Integrated Master's Degree with at least 55 percent marks (obtained after completing higher secondary schooling in 10+2 pattern) in any discipline · A professional qualification like CA, ICWA, CS (with at least 50 per cent marks) along with Bachelor's degree (with at least 55 per cent marks) · A 4 year/ 8 semester's Bachelors degree (10+2+4 pattern) with at least 6 CGPA.

1020	QIP0109	Indian Institute of Management, Sirmaur	Ph.D Management	Economics	DN000928	Microeconomics, Macroeconomics, Indian Economy and policy	Candidates require a valid test score of CAT or GMAT or GATE or GRE or UGC-JRF AND must have obtained one of the following qualifications after higher secondary school (10+2) or equivalent: · A Masters Degree in any discipline with 55 percent marks or a two-year post- graduate diploma with at least 55 percent marks along with a Bachelor's degree with at least 50 per cent marks · A 5-year Integrated Master's Degree with at least 55 percent marks (obtained after completing higher secondary schooling in 10+2 pattern) in any discipline · A professional qualification like CA, ICWA, CS (with at least 50 per cent marks) along with Bachelor's degree (with at least 55 per cent marks) · A 4 year/ 8 semester's Bachelors degree (10+2+4 pattern) with at least 6 CGPA.
1021	QIP0109	Indian Institute of Management, Sirmaur	Ph.D Management	Finance and Accounting	DN000929	Finance, Securities, Accounting, Valuations	Candidates require a valid test score of CAT or GMAT or GATE or GRE or UGC-JRF AND must have obtained one of the following qualifications after higher secondary school (10+2) or equivalent: · A Masters Degree in any discipline with 55 percent marks or a two-year post- graduate diploma with at least 55 percent marks along with a Bachelor's degree with at least 50 per cent marks · A 5-year Integrated Master's Degree with at least 55 percent marks (obtained after completing higher secondary schooling in 10+2 pattern) in any discipline · A professional qualification like CA, ICWA, CS (with at least 50 per cent marks) along with Bachelor's degree (with at least 55 per cent marks) · A 4 year/ 8 semester's Bachelors degree (10+2+4 pattern) with at least 6 CGPA.

1022	QIP0109	Indian Institute of Management, Sirmaur	Ph.D Management	Information Technology Systems and Analytics	DN000930	Management Information Systems, Agile Technologies, AI and security	Candidates require a valid test score of CAT or GMAT or GATE or GRE or UGC-JRF AND must have obtained one of the following qualifications after higher secondary school (10+2) or equivalent: · A Masters Degree in any discipline with 55 percent marks or a two-year post- graduate diploma with at least 55 percent marks along with a Bachelor's degree with at least 50 per cent marks · A 5-year Integrated Master's Degree with at least 55 percent marks (obtained after completing higher secondary schooling in 10+2 pattern) in any discipline · A professional qualification like CA, ICWA, CS (with at least 50 per cent marks) along with Bachelor's degree (with at least 55 per cent marks) · A 4 year/ 8 semester's Bachelors degree (10+2+4 pattern) with at least 6 CGPA.
1023	QIP0109	Indian Institute of Management, Sirmaur	Ph.D Management	Operations Management and Quantitative Techniques	DN000931	Supply chain management, Logistics, Project Planning	Candidates require a valid test score of CAT or GMAT or GATE or GRE or UGC-JRF AND must have obtained one of the following qualifications after higher secondary school (10+2) or equivalent: · A Masters Degree in any discipline with 55 percent marks or a two-year post- graduate diploma with at least 55 percent marks along with a Bachelor's degree with at least 50 per cent marks · A 5-year Integrated Master's Degree with at least 55 percent marks (obtained after completing higher secondary schooling in 10+2 pattern) in any discipline · A professional qualification like CA, ICWA, CS (with at least 50 per cent marks) along with Bachelor's degree (with at least 55 per cent marks) · A 4 year/ 8 semester's Bachelors degree (10+2+4 pattern) with at least 6 CGPA.

1024	QIP0109	Indian Institute of Management, Sirmaur	Ph.D Management	Strategy and Entrepreneurship	DN000932	Strategic Management, Sustainable Businesses, Business Ecosystems, Business Groups	Candidates require a valid test score of CAT or GMAT or GATE or GRE or UGC-JRF AND must have obtained one of the following qualifications after higher secondary school (10+2) or equivalent: · A Masters Degree in any discipline with 55 percent marks or a two-year post- graduate diploma with at least 55 percent marks along with a Bachelor's degree with at least 50 per cent marks · A 5-year Integrated Master's Degree with at least 55 percent marks (obtained after completing higher secondary schooling in 10+2 pattern) in any discipline · A professional qualification like CA, ICWA, CS (with at least 50 per cent marks) along with Bachelor's degree (with at least 55 per cent marks) · A 4 year/ 8 semester's Bachelors degree (10+2+4 pattern) with at least 6 CGPA.
1025	QIP0109	Indian Institute of Management, Sirmaur	Ph.D Management	Organizational Behaviour and Human Resource Management	DN000933	Organizational Behaviour, Human Resource Management, Work Culture in Organizations	Candidates require a valid test score of CAT or GMAT or GATE or GRE or UGC-JRF AND must have obtained one of the following qualifications after higher secondary school (10+2) or equivalent: · A Masters Degree in any discipline with 55 percent marks or a two-year post- graduate diploma with at least 55 percent marks along with a Bachelor's degree with at least 50 per cent marks · A 5-year Integrated Master's Degree with at least 55 percent marks (obtained after completing higher secondary schooling in 10+2 pattern) in any discipline · A professional qualification like CA, ICWA, CS (with at least 50 per cent marks) along with Bachelor's degree (with at least 55 per cent marks) · A 4 year/ 8 semester's Bachelors degree (10+2+4 pattern) with at least 6 CGPA.

1026	QIP0110	Netaji Subhas University of Technology University in Delhi	Ph.D Engineering	Biotechnology	DN000826	Computational Biology & Bio-informatics, Molecular Microbiology & Drug Discovery, Cell and Molecular Biology, Biochemical Engineering, Nanobiotechnology & Nanomedicine, Cell Culture and Toxicoproteomics, Infection and Immunity, Production of Bioactive compounds.	Master Degree in Engineering/ Technology in the relevant discipline (as per the AICTE Gazette notification dated April 28, 2017) or equivalent with a minimum 60% of marks or equivalent Cumulative Grade Point Average (CGPA) and Bachelor's Degree with a 60% of marks or equivalent CGPA. A relaxation of 5% marks, from 60% to 55%, may be allowed for those belonging to SC/ST/OBC (NCL)/ differently-abled and other categories or candidates in accordance with the policies of the Govt. of NCT of Delhi or as per the decision of the University Grants Commission from time to time. For details, the candidate may refer Ph.D. ordinance of Netaji Subhas University of Technology.
1027	QIP0110	Netaji Subhas University of Technology University in Delhi	Ph.D Engineering	Electronics & Communication Engineering	DN000827	Analog Signal Processing, and VLSI, Wireless and Optical Communications, Signal and Image Processing, RF and Microwave Engineering, Computer Networks, AI and Machine learning in computer vision, Nanoelectronics.	Master Degree in Engineering/ Technology in the relevant discipline (as per the AICTE Gazette notification dated April 28, 2017) or equivalent with a minimum 60% of marks or equivalent Cumulative Grade Point Average (CGPA) and Bachelor's Degree with a 60% of marks or equivalent CGPA. A relaxation of 5% marks, from 60% to 55%, may be allowed for those belonging to SC/ST/OBC (NCL)/ differently-abled and other categories or candidates in accordance with the policies of the Govt. of NCT of Delhi or as per the decision of the University Grants Commission from time to time. For details, the candidate may refer Ph.D. ordinance of Netaji Subhas University of Technology.
1028	QIP0110	Netaji Subhas University of Technology University in Delhi	Ph.D Engineering	Instrumentation & Control Engineering	DN000828	Control System, Process Control, Robotics, Renewable Energy System, Electrical drives, Power Electronics, Hybrid Energy System, Transducer & Measurement, Biomedical Instrumentation, Biometric, Image and Signal Processing, Artificial Intelligence, Intelligent Control, Adaptive Control, Soft computing based Adaptive Control.	Master Degree in Engineering/ Technology in the relevant discipline (as per the AICTE Gazette notification dated April 28, 2017) or equivalent with a minimum 60% of marks or equivalent Cumulative Grade Point Average (CGPA) and Bachelor's Degree with a 60% of marks or equivalent CGPA. A relaxation of 5% marks, from 60% to 55%, may be allowed for those belonging to SC/ST/OBC (NCL)/ differently-abled and other categories or candidates in accordance with the policies of the Govt. of NCT of Delhi or as per the decision of the University Grants Commission from time to time. For details, the candidate may refer Ph.D. ordinance of Netaji Subhas University of Technology.

1029	QIP0110	Netaji Subhas University of Technology University in Delhi	Ph.D Engineering	Mechanical Engineering	DN000829	Advanced manufacturing processes, Micromachining, Hybrid machining and Additive manufacturing, Artificial Intelligence, Robotics, Industrial Engineering, Welding, Processing of Metals/Alloys, Composites, Processing of Polymer Composites, Mechanics of Smart materials, biomaterials, and sandwich structures, Nonlinear dynamics, Laser material Processing, Self-Healing Materials, Nanotechnology and Nanomaterials, Carbon Fiber Reinforced Polymer (CFRP) Composites, Composite materials, Tibobology, and Materials characterizations.	Master Degree in Engineering/ Technology in the relevant discipline (as per the AICTE Gazette notification dated April 28, 2017) or equivalent with a minimum 60% of marks or equivalent Cumulative Grade Point Average (CGPA) and Bachelor's Degree with a 60% of marks or equivalent CGPA. A relaxation of 5% marks, from 60% to 55%, may be allowed for those belonging to SC/ST/OBC (NCL)/ differently-abled and other categories or candidates in accordance with the policies of the Govt. of NCT of Delhi or as per the decision of the University Grants Commission from time to time. For details, the candidate may refer Ph.D. ordinance of Netaji Subhas University of Technology.
1030	QIP0110	Netaji Subhas University of Technology University in Delhi	Ph.D Engineering	Computer Science & Engineering	DN000830	Soft computing, Machine learning, Expert system, Recommender system, Natural language processing, Sentiment and emotion analysis, Pattern recognition, Computer vision, Cloud computing, mobile computing, Broadcasting, Wireless sensor networks, Semantic web, Social network analysis, Watermarking, Network security, Internet of things, Topic modelling, Image processing, Databases, Data mining, Data warehousing, Big data analytics, Bio-informatics, Computational pedagogy, E-learning, Instructional software, Modeling and simulation, Data visualization, Human-computer	Master Degree in Engineering/ Technology in the relevant discipline (as per the AICTE Gazette notification dated April 28, 2017) or equivalent with a minimum 60% of marks or equivalent Cumulative Grade Point Average (CGPA) and Bachelor's Degree with a 60% of marks or equivalent CGPA. A relaxation of 5% marks, from 60% to 55%, may be allowed for those belonging to SC/ST/OBC (NCL)/ differently-abled and other categories or candidates in accordance with the policies of the Govt. of NCT of Delhi or as per the decision of the University Grants Commission from time to time. For details, the candidate may refer Ph.D. ordinance of Netaji Subhas University of Technology.

						interaction, Software testing, Software quality, Software metrics.	
1031	QIP0111	Indian Institute Of Management –Nagpur (IIM–Nagpur)	Ph.D Management	Finance and Accounting	DN000897	Finance and Accounting	Any application must fulfill the criteria set by AICTE's QIP scheme for PhD in Management. The applicant must be a Full time regular/ permanent faculty members of AICTE approved Degree Level institutes having (a) Three year teaching experience at graduate level institutes. (b) A Master degree in the appropriate branch.
1032	QIP0111	Indian Institute Of Management –Nagpur (IIM–Nagpur)	Ph.D Management	Strategy and Entrepreneurship	DN000898	Strategy and Entrepreneurship	Any applicant must fulfill the criteria set by AICTE's QIP scheme for PhD in Management. The applicant must be a Full time regular/ permanent faculty members of AICTE approved Degree Level institutes having (a) Three year teaching experience at graduate level institutes. (b) A Master degree in the appropriate branch.
1033	QIP0111	Indian Institute Of Management –Nagpur (IIM–Nagpur)	Ph.D Management	Economics	DN000899	Economics	Any applicant must fulfill the criteria set by AICTE's QIP scheme for PhD in Management. The applicant must be a Full time regular/ permanent faculty members of AICTE approved Degree Level institutes having (a) Three year teaching experience at graduate level

							institutes. (b) A Master degree in the appropriate branch.
1034	QIP0111	Indian Institute Of Management –Nagpur (IIM–Nagpur)	Ph.D Management	Marketing	DN000900	Marketing	Any applicant must fulfill the criteria set by AICTE's QIP scheme for PhD in Management. The applicant must be a Full time regular/ permanent faculty members of AICTE approved Degree Level institutes having (a) Three year teaching experience at graduate level institutes. (b) A Master degree in the appropriate branch.
1035	QIP0111	Indian Institute Of Management –Nagpur (IIM–Nagpur)	Ph.D Management	Organizational Behaviour and Human Resource Management	DN000901	Organizational Behaviour And Human Resources Management	Any applicant must fulfill the criteria set by AICTE's QIP scheme for PhD in Management. The applicant must be a Full time regular/ permanent faculty members of AICTE approved Degree Level institutes having (a) Three year teaching experience at graduate level institutes. (b) A Master degree in the appropriate branch.
1036	QIP0111	Indian Institute Of Management –Nagpur (IIM–Nagpur)	Ph.D Management	Decision Science and Information Systems	DN000906	Decision Science and Information Systems	Any applicant must fulfill the criteria set by AICTE's QIP scheme for PhD in Management. The applicant must be a Full time regular/ permanent faculty members of AICTE approved Degree Level institutes having (a) Three year teaching experience at graduate level institutes. (b) A Master degree in the appropriate branch.
1037	QIP0111	Indian Institute Of Management –Nagpur (IIM–Nagpur)	Ph.D Management	Production and Operations Management	DN000907	Production and Operations Management	Any applicant must fulfill the criteria set by AICTE's QIP scheme for PhD in Management. The applicant must be a Full time regular/ permanent faculty members of AICTE approved Degree Level institutes having (a) Three year teaching experience at graduate level

							institutes. (b) A Master degree in the appropriate branch.
1038	QIP0111	Indian Institute Of Management –Nagpur (IIM–Nagpur)	Ph.D Management	Humanities, Arts, And Social Sciences	DN000920	Humanities, Arts, And Social Sciences	Any applicant must fulfill the criteria set by AICTE's QIP scheme for PhD in Management. The applicant must be a Full time regular/ permanent faculty members of AICTE approved Degree Level institutes having (a) Three year teaching experience at graduate level institutes. (b) A Master degree in the appropriate branch.
1039	QIP0112	IIT Palakkad	Ph.D Engineering	Mechanical Engineering	DN001106	Thermo-Fluids, Solid Mechanics and Design, Materials Science and Manufacturing Engineering	Master's degree in Engineering/Technology or a Master's degree by Research in Engineering/Technology in any allied specializations of Mechanical Engineering with a good academic record.
1040	QIP0112	IIT Palakkad	Ph.D Engineering	Biological Sciences and Engineering	DN001107	Immunology (Immunology, immunotherapy, host-pathogen interaction), Nanobiotechnology (Biosensors, drug delivery and theranostics), Chemical Biology (Drug design and discovery, Metabolomics and proteomics)	Master’s degree in Engineering/Technology/Sciences/Medical/Veterinary Sciences/ Allied Health Sciences with a specialization of Biochemistry/Biomedical Sciences/Biotechnology/ Life Sciences/ Microbiology/Physiology/Virology/zoology, with good academic record
1041	QIP0112	IIT Palakkad	Ph.D Science	Chemistry	DN001108	Supramolecular Materials Chemistry, Fluorescence Spectroscopy	M.Sc. in Chemistry or in a related field/M.Tech. in Material Science/Biotechnology or any related area.
1042	QIP0112	IIT Palakkad	Ph.D Engineering	Civil Engineering	DN001109	Structural engineering, Geotechnical Engineering, Transportation Engineering, Water Resources Engineering, Environmental Engineering, and Construction Engineering and Management	Master’s degree in the relevant areas

1043	QIP0112	IIT Palakkad	Ph.D Science	Physics	DN001110	Experimental Biophysics: Mechanosensing; physics of cancer Experimental Condensed Matter Physics : Design and synthesis of correlated electron materials; structural, magnetic, transport and thermodynamic measurements in extreme conditions; electrical- and magneto-transport studies in 2D materials and perovskite. Soft Condensed Matter and Statistical Physics : Metastable and out-of-equilibrium systems; phase behaviour of metastable liquids; rheology of dense disordered solids; complex fluids; membranes, polymer physics	M.Sc/ M.Sc (Tech) in Physics, Applied Physics, Materials Science/ M.Tech (Solid State Technology) / M.Tech. (Materials Science) M.Tech (Functional Materials and Nano Technology)or equivalent.
1044	QIP0112	IIT Palakkad	M.Tech	Data science	DN001124	Data Science	BE/B.Tech degree in Computer Science and Engineering/Data Science/Information Technology/ Electrical Engineering or M.Sc. in Mathematics
1045	QIP0112	IIT Palakkad	Ph.D Engineering	Data science	DN001126	Machine Learning/Deep Learning, Computer Vision, Information Retrieval and Data Mining.	Machine Learning/Deep Learning, Computer Vision: ME/ M.Tech / MS in Computer Science and Engineering/Data Science/Information Technology/ Electrical Engineering or M.Sc. in Mathematics; Information Retrieval and Data Mining: ME/ M.Tech / MS in Computer Science/Data Science/Information Technology
1046	QIP0112	IIT Palakkad	Ph.D Engineering	Electrical Engineering	DN001127	Control and robotics: Data based control of dynamical systems using Reinforcement learning with implementation on robotic systems Modeling, stability and control design of robotics and nonlinear systems; Power and Energy Systems; RF Integrated Circuits including Antennas	Control and robotics: ME/MTech in Control specialization or allied areas, or MSc Mathematics; Power and Energy Systems: Master's degree in Electrical / Electrical and Electronics Engineering or a Master's degree by Research in Electrical / Electrical and Electronics Engineering with a good academic record; RF Integrated Circuits including Antennas: M.E./M.Tech. in Microwave/Communication Engineering

1047	QIP0112	IIT Palakkad	Ph.D Engineering	Environmental Sciences and Sustainable Engineering Centre	DN001129	Specialization1: Crop modeling, climate change impact assessment on agriculture, soil-atmosphere-plant model coupling, dedicated biomass feedstocks for renewable energy, GIS;____Specialization2:Catalysis, H2 production from biomass waste;____Specialization3:Climate Change Related Diseases, Environmental Pollutants Monitoring, Internet of Things, Autonomous Vehicles and AI for Precision Agriculture, Environmental Health Monitoring, Waste Management, Public Health Forecasting and Monitoring, and Forest Surveillance;_____Specialization4:Topics in renewable energy and power generation, Pumped storage, micro wind turbines, floating solar, Thermal designs etc.;____Specialization5:Sustainable construction materials, Sustainable infrastructure systems, Pavement maintenance & preservation treatments, Life cycle analysis;_____Specialization6:Environmental Engineering, water and wastewater treatment, bioelectrochemical treatment systems, resource recovery from waste, sanitation;____Specialization7:Climate Change Impact	Specialization1: Master degree (or equivalent) in Agricultural sciences/ Agricultural Engineering/ Civil Engineering/ Plant biology/botany/sciences;____Specialization2:Masters in Chemical Engineering, Reactor design;____Specialization3:Master Degree in Civil/Agriculture/Environmental Engineering/ Electrical/Electronics/ Computer Science Engineering;_____Specialization4:Master Degree in Electrical/Electronics/Mechanical / Computer Science Engineering;_____Specialization5: B.Tech/B.E. in Civil Engineering with M.Tech or M.S. in Transportation Engineering/Building materials/Construction technology;____Specialization6:M.Tech or M.S. or equivalent degree in Environmental Engineering/Biotechnology/Chemical Engineering;_____Specialization7:M.Tech or M.S. in Water Resources Engineering or equivalent degree in Civil Engineering/Agricultural Engineering/Remote Sensing;_____Specialization8:Master degree (or equivalent) in Water Resources Engineering/ Agricultural Engineering/ Civil Engineering/Remote Sensing

						Assessment on Water Resources, Water Security Assessment, Hydrological Modelling, Predictions in Ungauged Basins; Climate variability/change impact studies on Hydroclimatic variables; Specialization8:Analysis/prediction of extreme events (such as floods or droughts); Hydrologic Modelling; Application of AI/ML in Hydroclimatology.	
1048	QIP0113	Indian Institute of Technology Dharwad	Ph.D Science	Physics	DN001058	Physics	M.Sc. or equivalent degree in any area of Physics and/or any other related areas.
1049	QIP0113	Indian Institute of Technology Dharwad	Ph.D Science	Chemistry	DN001059	Chemistry	M.Sc. or equivalent degree in any area of Chemistry and/or any other related areas.

1050	QIP0113	Indian Institute of Technology Dharwad	Ph.D Engineering	Civil and Infrastructure Engineering	DN001060	Transportation Engineering; Geotechnical Engineering and Environmental Engineering, Structural Engineering	M.Tech. or equivalent degree in Civil Engineering.
1051	QIP0113	Indian Institute of Technology Dharwad	Ph.D Engineering	Electrical Engineering	DN001063	Electrical Engineering, Electronics and Communication Engineering, Electrical and Electronics Engineering, Instrumentation Engineering, Computer Science and Engineering, or any related stream.	M.Tech., MS, ME or equivalent degree in Electrical Engineering, Electronics and Communication Engineering, Electrical and Electronics Engineering, Instrumentation Engineering, Computer Science and Engineering, or any related stream.
1052	QIP0113	Indian Institute of Technology Dharwad	Ph.D Engineering	Mechanical, Materials and Aerospace Engineering	DN001065	Design, Manufacturing, Thermal or related streams	M.Tech./M.E./M.Sc.(Engg.) or equivalent degree in Mechanical Engineering or Materials and Metallurgical Engineering or Aerospace Engineering or equivalent stream
1053	QIP0113	Indian Institute of Technology Dharwad	Ph.D Engineering	Chemical Engineering	DN001068	Chemical Engineering	M.Tech./M.E./M.Sc.(Engg.) or equivalent degree in Chemical Engineering
1054	QIP0113	Indian Institute of Technology Dharwad	Ph.D Engineering	Computer Science & Engineering	DN001070	Computer Science and Engineering	M.Tech. or equivalent degree in Computer Science and Engineering or any related stream. a. Minimum of 60% marks (without round off) in aggregate, OR, b. Minimum Cumulative Grade Point Average (CGPA) or Cumulative Performance Index (CPI) of 6.0 on the scale of 0-10; with corresponding proportional requirements when the scales are other than on 0-10, (for example, 4.8 on a scale of 0-8).
1055	QIP0113	Indian Institute of Technology Dharwad	Ph.D Science	Biosciences & Bioengineering	DN001071	Life science or other allied biology subject	M.Tech/MSc. or equivalent in life science or other allied biology subject
1056	QIP0113	Indian Institute of	M.Tech	Mechanical, Materials and	DN001072	Mechanical Engineering or Related streams	B.Tech/BE in Mechanical Engineering or Related

		Technology Dharwad		Aerospace Engineering			
1057	QIP0113	Indian Institute of Technology Dharwad	Ph.D Science	Mathematics	DN001073	Mathematics	M.Sc. or equivalent degree in any area of Mathematics and/or any other related areas.
1058	QIP0113	Indian Institute of Technology Dharwad	Ph.D Humanities	Humanities and Social Science	DN001074	Arts/Economics/Science/Management or relevant area	M. Phil. or Master's degree in Arts/Economics/Science/Management and/or relevant area
1059	QIP0114	IIM Shillong	Ph.D Management	Operations and Quantitative Techniques	DN001099	Ph.D is a full-time, four-year residential program.	Eligibility Criteria Candidates should have • A Master's Degree followed after a Bachelor's Degree obtained in 10+2+3 pattern, or a 5-year Integrated Master's Degree (obtained after completing higher secondary schooling in 10+2 pattern) in any discipline, with at least 55% marks in the Bachelor's and 60% in the Master's degrees. or • A Master's Degree followed after a Bachelor's Degree (A 4 year/8 semesters Bachelor's degree (10+2+4 pattern) with at least 6.5 CGPA or equivalent marks. or • A professional qualification like CA, ICWA, CS with at least 55% marks in B.Com degree.

1060	QIP0114	IIM Shillong	Ph.D Management	Finance & Control	DN001100	Ph.D is a full-time, four-year residential program.	Eligibility Criteria Candidates should have • A Master's Degree followed after a Bachelor's Degree obtained in 10+2+3 pattern, or a 5-year Integrated Master's Degree (obtained after completing higher secondary schooling in 10+2 pattern) in any discipline, with at least 55% marks in the Bachelor's and 60% in the Master's degrees. or • A Master's Degree followed after a Bachelor's Degree (A 4 year/8 semesters Bachelor's degree (10+2+4 pattern) with at least 6.5 CGPA or equivalent marks. or • A professional qualification like CA, ICWA, CS with at least 55% marks in B.Com degree.
1061	QIP0114	IIM Shillong	Ph.D Management	Economics and Public Policy	DN001101	Ph.D is a full-time, four-year residential program.	Eligibility Criteria Candidates should have • A Master's Degree followed after a Bachelor's Degree obtained in 10+2+3 pattern, or a 5-year Integrated Master's Degree (obtained after completing higher secondary schooling in 10+2 pattern) in any discipline, with at least 55% marks in the Bachelor's and 60% in the Master's degrees. or • A Master's Degree followed after a Bachelor's Degree (A 4 year/8 semesters Bachelor's degree (10+2+4 pattern) with at least 6.5 CGPA or equivalent marks. or • A professional qualification like CA, ICWA, CS with at least 55% marks in B.Com degree

1062	QIP0114	IIM Shillong	Ph.D Management	Information Systems & Analytics	DN001102	Ph.D is a full-time, four-year residential program.	Eligibility Criteria Candidates should have • A Master's Degree followed after a Bachelor's Degree obtained in 10+2+3 pattern, or a 5-year Integrated Master's Degree (obtained after completing higher secondary schooling in 10+2 pattern) in any discipline, with at least 55% marks in the Bachelor's and 60% in the Master's degrees. or • A Master's Degree followed after a Bachelor's Degree (A 4 year/8 semesters Bachelor's degree (10+2+4 pattern) with at least 6.5 CGPA or equivalent marks. or • A professional qualification like CA, ICWA, CS with at least 55% marks in B.Com degree
1063	QIP0114	IIM Shillong	Ph.D Management	Marketing	DN001103	Ph.D is a full-time, four-year residential program.	Eligibility Criteria Candidates should have • A Master's Degree followed after a Bachelor's Degree obtained in 10+2+3 pattern, or a 5-year Integrated Master's Degree (obtained after completing higher secondary schooling in 10+2 pattern) in any discipline, with at least 55% marks in the Bachelor's and 60% in the Master's degrees. or • A Master's Degree followed after a Bachelor's Degree (A 4 year/8 semesters Bachelor's degree (10+2+4 pattern) with at least 6.5 CGPA or equivalent marks. or • A professional qualification like CA, ICWA, CS with at least 55% marks in B.Com degree.

1064	QIP0114	IIM Shillong	Ph.D Management	Organizational Behaviour and Human Resources	DN001104	Ph.D is a full-time, four-year residential program.	Eligibility Criteria Candidates should have • A Master's Degree followed after a Bachelor's Degree obtained in 10+2+3 pattern, or a 5-year Integrated Master's Degree (obtained after completing higher secondary schooling in 10+2 pattern) in any discipline, with at least 55% marks in the Bachelor's and 60% in the Master's degrees. or • A Master's Degree followed after a Bachelor's Degree (A 4 year/8 semesters Bachelor's degree (10+2+4 pattern) with at least 6.5 CGPA or equivalent marks. or • A professional qualification like CA, ICWA, CS with at least 55% marks in B.Com degree
1065	QIP0114	IIM Shillong	Ph.D Management	Strategy and Liberal Studies	DN001105	Ph.D is a full-time, four-year residential program.	Eligibility Criteria Candidates should have • A Master's Degree followed after a Bachelor's Degree obtained in 10+2+3 pattern, or a 5-year Integrated Master's Degree (obtained after completing higher secondary schooling in 10+2 pattern) in any discipline, with at least 55% marks in the Bachelor's and 60% in the Master's degrees. or • A Master's Degree followed after a Bachelor's Degree (A 4 year/8 semesters Bachelor's degree (10+2+4 pattern) with at least 6.5 CGPA or equivalent marks. or • A professional qualification like CA, ICWA, CS with at least 55% marks in B.Com degree.

1066	QIP0117	University of Visvesvaraya College of Engineering ,Bangalore	Ph.D Engineering	Civil Engineering	DN001089	1. Construction Technology 2. Geo-Technical Engineering 3. Structural Engineering 4. Highway Engineering 5. Pre-Stressed Concrete 6. Water Resource Engineering 7. Earthquake Engineering 8. Environment Engineering and Management	M.E / M.Tech in Civil Engineering and Allied Branches of Civil Engineering
1067	QIP0117	University of Visvesvaraya College of Engineering ,Bangalore	Ph.D Engineering	Mechanical Engineering	DN001090	1. Machine Design 2. Manufacturing Science and Engineering 3. Thermal Science and Engineering 4. Advanced Material Technology	M.E / M.Tech in Mechanical Engineering and Allied Branches of Mechanical Engineering.
1068	QIP0117	University of Visvesvaraya College of Engineering ,Bangalore	Ph.D Engineering	Electrical Engineering	DN001091	1. Power Engineering and Energy Systems 2. Power Electronics 3. Control and Instrumentation Engineering	M.E / M.Tech in Electrical Engineering and Allied Branches of Electrical Engineering.
1069	QIP0117	University of Visvesvaraya College of Engineering ,Bangalore	Ph.D Engineering	Electronics & Communication Engineering	DN001092	Electronics and Communication Engineering	M.E / M.Tech in Electronics and Communication Engineering and Allied Branches of Electronics and Communication Engineering.
1070	QIP0117	University of Visvesvaraya College of Engineering ,Bangalore	Ph.D Engineering	Computer Science & Engineering	DN001093	1. Computer Science and Engineering 2. Information Technology 3. Computer Networking 4. Web Technologies 5. Cyber Security 6. Internet of Things	M.E / M.Tech in Computer Science and Engineering and Allied Branches of Computer Science and Engineering.

1071	QIP0117	University of Visvesvaraya College of Engineering ,Bangalore	M.Tech	Computer Science & Engineering	DN001094	1. Computer Science and Engineering 2. Information Technology 3. Computer Networking 4. Web Technologies 5. Cyber Security 6. Internet of Things	B.E / B.Tech in Computer Science and Engineering or Allied Branches of Computer Science and Engineering.
1072	QIP0117	University of Visvesvaraya College of Engineering ,Bangalore	M.Tech	Electronics & Communication Engineering	DN001095	Electronics and Communication Engineering	B.E / B.Tech in Electronics and Communication Engineering and Allied Branches of Electronics and Communication Engineering.
1073	QIP0117	University of Visvesvaraya College of Engineering ,Bangalore	M.Tech	Electrical Engineering	DN001096	1. Power Engineering and Energy Systems 2. Power Electronics 3. Control and Instrumentation Engineering	B.E / B.Tech in Electrical Engineering and Allied Branches of Electrical and Engineering.
1074	QIP0117	University of Visvesvaraya College of Engineering ,Bangalore	M.Tech	Mechanical Engineering	DN001097	1. Machine Design 2. Manufacturing Science and Engineering 3. Thermal Science and Engineering 4. Advanced Material Technology	B.E / B.Tech in Mechanical Engineering and Allied Branches of Mechanical and Engineering.
1075	QIP0117	University of Visvesvaraya College of Engineering ,Bangalore	M.Tech	Civil Engineering	DN001098	1. Construction Technology 2. Geo-Technical Engineering 3. Structural Engineering 4. Highway Engineering 5. Pre-Stressed Concrete 6. Water Resource Engineering 7. Earthquake Engineering 8. Environmental Engineering and Management	B.E / B.Tech in Civil Engineering and Allied Branches of Civil Engineering.

NO OBJECTION CERTIFICATE – AICTE QIP Programme

This is to certify that Shri/Smt. /Miss. ……working as ……..(Designation) in the ……Department/Centre of the ……(complete name of university/institute) since……..…(Date/Month/Year). He /she intend to apply for Ph. D / M Tech /ME Programme (Pl tick whichever is applicable) for faculty members as per AICTE Quality Improvement Programme (QIP) guidelines. The university/ institute does not have any objection to his/her applying for the above programme. The application for leave of the above candidate would be considered for minimum residential requirements of 3 years for PhD and 2 years for M Tech/ME, as per rules & regulations of state government / university/institute if he/she is selected for the admission under QIP scheme.

Date:

Place:

(Signature of Head of the Institution)

Office Seal:

Name:

Designation:

Email id

Mobile Number/Phone Number:

Note: The above to be issued on the letter head of the institutions.