डा बी आर अम्बेडकर राष्ट्रीय प्रौद्योगिकी संस्थान, जालन्धर—144027

Dr B R AMBEDKAR NATIONAL INSTITUTE OF TECHNOLOGY, JALANDHAR - 144027

Admission to PhD (Full-Time and Part-Time) Programme in Engineering, Sciences, Humanities and Management for the Academic Year 2023-2024 (Session June-July, 2023)

Applications are invited for admission to PhD (Full-Time and Part-Time) Programme in Engineering, Sciences, Humanities and Management for the Academic Year 2023-2024 (Session June-July, 2023). The Broad areas of Research, Eligibility Criteria, Selection Procedure, Reservation, Teaching Assistantship-cum-Scholarship, etc. are given in this advertisement.

How to apply: The link to fill the online application form can be accessed through Institute website www.nitj.ac.in. Please submit separate application forms, if applying for more than one programme. An application fee of Rs.1000/- (Rs.500/- for SC/ST/PWD candidates) is required to be paid online. The candidates are required to apply online and there is no requirement to send the Hard Copy of the application form to the Institute. Application fee shall not be refunded in any case.

Last date for submission of online application form is 17/04/2023.

For more details, the candidates are advised to visit the Institute website www.nitj.ac.in for updates.

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Dr B R AMBEDKAR NATIONAL INSTITUTE OF TECHNOLOGY, JALANDHAR – 144027

Admission to PhD (Full-Time and Part-Time) Programme for the Academic Year 2023-2024
(Session June-July, 2023)

A) **PhD (Full-Time, Admission under financial support from NIT Jalandhar and Part-Time without financial support):**

Sr. No.	Department Email address of HOD	(Broad Areas of Research)
01	Biotechnology obt@nitj.ac.in	Bioprocess and Bioreactor Design, Biofuels, Biohydrogen, Bioprocess Optimization, Bioremediation, Industrial Biotechnology, Microbial and Environmental Biotechnology, Metabolites and Biorefinery, Bioplastics, Enzyme and Protein Engineering Nanobiotechnology, Biopolymers, Aerogels/hydrogels, Waste management, Environmental Engineering, Biomaterials, Tissue Engineering, Waste Valorization, Computational Biology, Drug Delivery System, Environmental Biotechnology, Enzyme Technology, Bioinformatics, Proteomics, Environmental Remediation Environmental Microbiology, Applied Microbiology, Biofilms, Wastewater treatment, Bioreactor Design, Bioprocess Engineering, Phosphorous recovery from Waste Streams, Nitrogen and Phosphorous Removal, Emerging Pollutant Removal, Membrane Technology
02	Chemical Engineering och@nitj.ac.in	Fire Retardant Materials, Nanotechnology, Building materials, Photocatalysis, Renewable Energy, Reaction Engineering, Wastewater treatment, Microfluidic fuel cells, Microscale devices for hydrogen production, Microfluidic device for degradation of organic pollutants in water, Advanced Oxidation Processes, Anti dust coatings, Antifouling coatings, Antimicrobial Coatings, Artificial Intelligence/Machine Learning Techniques, Biofuel, Biomass conversion, Bioremediation, Capture and storage of Carbon dioxide, Catalysis, CFD, CO_2 sequestration, Composite catalyst, Corrosion, Corrosion resistant coatings, Development of photocatalytic materials, Edible films and coatings, Energy and environment, Environment Engineering, Environmental Technology, Fire Retardant Coatings, Graphene, Green Hydrogen, Heterogeneous Catalysis, Hydrogels for waste water treatment, Hydrogen Production and synthesis, Hydrogen production through photocatalysis, Hydrogen synthesis and transport, Leather industry solid waste management, Magnetic field driven flows, Membrane separation, Mineral carbonation, Mixing in microfluidic channels, Modeling & Simulation, Multiphase Flow, Multiphase reactions, Nanocatalysis, Nanofluids, Nanomaterials, Nanotechnology, New and Renewable energy, Photocatalysis, Photo-nano-catalysis, Polymer Nanocomposites, Polymeric films, Polymers, Process Control, Process Safety, Reaction Engineering, Renewable Energy, Renewable hydrogen production, Rheology of complex fluids, Smart materials, Solid Waste Management, Thin film polymeric Coatings, Thin Film preparation & Coatings, Treatment of paper industry, Sugar industry and textile industry waste water, Trickle bed reactors, Waste to Energy, Waste utilization and management, Waste Water Treatment , Wastewater quality management.
03	Civil Engineering oce@nitj.ac.in	Structural Engineering, Geotechnical and Geoenvironmental Engineering, Transportation Engineering, Environmental Engineering and Water Resources Engineering
04	Computer Science & Engineering ocs@nitj.ac.in	Probabilistic Data Structures, Data analytics, Machine learning and Algorithms, Mobile Adhoc and Opportunistic Networks, AI, Data Science, Forecasting, Mobile edge networks, Vehicular networks, Wireless networks and edge computing, Cloud Computing Software Engineering, Computer Vision, Digital Image Processing, Information security, Wireless networks, Natural Language Processing, Real-time Scheduling Theory, Safety-critical System Design, Mixed-criticality Systems, Cyber Warfare, Computer Vision, Biometric Security, Computer networks, Real time system, Multimedia communication, Flying adhoc network, Network security, Wireless Sensor Network, Internet of Things
05	Electrical Engineering oic@nitj.ac.in	Control System, Nonlinear Control, Observer Design, Power System, Economics, Artificial Intelligence application in power system, Energy Forecasting, Energy Storage, Electricity Markets

06	Electronics & Communication Engineering oec@nitj.ac.in	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, DSP in VLSI Circuits, VLSI Circuit Design, Nanoscale semiconductor devices, Nanoelectronics, Analog and Digital Design, Low Power VLSI Design, Machine learning, Intelligent Networks, Antenna Engineering- EBG based antenna, Beamforming Antenna, Aperture Antenna, Conformal Antenna, RF and Microwave components and systems- Filters, couplers, circulator, Communication Network, Wireless Communication systems, VaNETs, Sensor Network, IoT, Neuro developmental Disorder diagnosis, Applied Machine Learning, Signal Processing applications for 5G/Communication, Acoustics and Audio Signal Analysis and Processing Adaptive Filters & Statistical Signal Processing, Hearing Aid Systems, Speech and Image Processing, Music Signal Processing, Active and Passive RF Circuits, Multi-band Circuits, Circuits Design for 5G and SDR, Pulse Generator and Pulse Shaping networks, Machine to Machine Communications, Layer protocols for IoT, MAC Protocols, AI and Machine Learning, ECG/EEG Denoising, Source localization and brain connectivity, Heart and Brain Diseases, Optimization Techniques.
07	Information Technology ocs@nitj.ac.in	Metaheuristic, Medical Imaging, Soft Computing, Bioinformatics, Edge/Fog computing, IoT, Artificial Intelligence, Blockchain, Federated Learning, Cloud computing, E-health, Telemedicine, Wireless Body Area Networks, Machine Learning, Data privacy in Data Mining, Big Data and analytics, Ad hoc and Sensor Networks
08	Instrumentation & Control Engineering oic@nitj.ac.in	Biomedical Instrumentation and Signal Processing, Machine vision and ML, Digital Image processing and ML applications, WSN-IoT and its applications, Smart sensor system, Intelligent virtual instrumentation system (measurement and/or control applications) Power System Operation and Control, Micro grids, Renewable Energy, Applications of Soft Computing, Biomedical Engineering, Brain computer interface, rehabilitation engineering, Machine Vision, Machine/Deep Learning, Soft Computing & Optimization Techniques, Control and Optimization, Adaptive and Robust Control, Process Design ,Control and optimization, Robotics, Control, AI, Instrumentation, Automation, Computer Vision, Machine/Deep/Quantum Learning, Unmanned System Technology, Applied Soft Computing & Optimization Techniques, Process Design, Integration, Control and Optimization, Green Energy-Biofuel, Biomedical instrumentation and Machine Learning, Computational and experimental approaches for rehabilitation, Ayurveda and biomedical engineering, Control System, Renewable Energy, AI based Control Techniques, Biomedical Instrumentation and Control, Assistive and Rehabilitation devices, AI based control, Process Control & Instrumentation, Application of Soft Computing Techniques, Model Predictive Control, Physiological modeling; Cardiovascular disease detection; Applications of machine learning in clinical predictions, Measurement and Instrumentation, Sensor Designing, Machine learning and theoretical modelling to predict properties of materials for space applications, Bio instrumentation, Biosensor, Optoacoustic sensors, Photoacoustic imaging, Laser generated focused ultrasound sensor, Theranostic technology, Bio signal processing, AI based medical diagnostic tool for early stage disease diagnosis, Robust and Resilient Control System Design, AI, Cyber Physical System & Control, Micro Grid, Modern Power System Operation, Stability & Control.
09	Industrial & Production Engineering oie@nitj.ac.in	Operations And Supply Chain Management, Ergonomics & Human Factors Engineering, Occupational Health And Safety, Non-Conventional, Energy (Solar) And Sustainability, Additive Manufacturing, Surface engineering, Thermal Spray Coatings Laser surface texturing, Superhydrophobic surfaces, Thermo-metallurgical-mechanical modeling of Additive manufacturing process and its validation, Magnetic abrasive finishing, Advance machining processes, Material modelling, Finite element analysis
10	Mechanical Engineering ome@nitj.ac.in	Mechatronics, Robotics, System Dynamics & Control Modeling and Simulation of Physical Systems, Biomechanics, Bond graph, Solar Thermal Polygeneration and Solar Tracking, Alternative Fuels for Combustion Engines, IC engine Emission Control Engine, Combustion Investigations, Biodiesel Development, Fuel Efficient Engine, Finite element methods, Modall Analysis Microwave Processing of materials Vibration engineering, Composite materials, Thermal Engineering, Tribology, Solar Thermal Engineering, Thermal Fluid Flow and Heat Transfer, Composite Materials, Mechanical Behavior of Metal Matrix, Impact Analysis Metal Forming, Plasticity, Fracture Mechanics, Advanced Manufacturing Processor, Surface

		Engineering, Hybrid Processor
11	Textile Technology otx@nitj.ac.in	Yarn Manufacturing, Technical Textiles, Apparel Quality Characterization, Process Control in spinning, Medical Textiles, Liquid Filtration, Environmental Pollution Textile reinforced composites, Garment Comfort, Textile wet processing of fibre, Yarn, textiles and technical textiles, Bioprocessing of textiles, Specialty finishes such as antibacterial, UV protective, Electro conductive, etc; Composite Textile and Polymer, Protective Textile, High performance fibres, Fibers and polymer Processing, Porous polymers, Textile waste recycling
12	Humanities & Management ohm@nitj.ac.in	**Areas for Institute Scholarship and External Fellowships** **Management:** General Management, Marketing Management, Human Resource Management, Entrepreneurship development and Management. Financial Management, Behavioural Finance, Financial Economics, stock market and Portfolio Management, Fintech, and Corporate Governance, Green Marketing, Sustainable purchase behaviour, Brand Management, Marketing Management, Services Marketing, Rural Marketing and Retail Marketing, Green Finance, Climate Finance, Capital Markets, Financial Analytics, Intersection of economics, trade, and/ or finance; Financial Distress Prediction, Insolvency Prediction, Bankruptcy Prediction, Dividend Decision, Stock market, Capital Structure, Other Corporate Finance Areas, Emerging Finance Areas, Organizational Behavior, Psychological Detachment, Emotional Maturity, Job Crafting, Industrial Psychology **English Language and Literature:** ELT, Professional Communication, Linguistics, Gender and Culture Studies, Feminismm, Gender Studies, Cultural Studies, Schizoanalysis of Literature/ Deleuze and Guattarian Studies, Psychoanalysis/Posthumanism and Popular Culture, Health Humanities, Literary and Critical Theory, American Literature, Comic Studies. **Areas for External Fellowships only**: Diaspora, Postcolonial Theory, Comparative Literature and Soft Skills
13	Physics oph@nitj.ac.in	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 Thermodynamics, Nanomaterials and Nanotechnology
14	Chemistry ocy@nitj.ac.in	Smart materials and nanotechnology, Nano- and environment friendly functional smart materials, Materials chemistry/Surface Chemistry, Smart Polymers, Organic Synthesis, Synthetic organic chemistry, advance materials for sensing, and hydrogen production; Synthesis, Crystallogarphic and computational studies of some coordination complexes and advanced materials and their applications in sensing and catalysis; Green nanomaterials fabrication, Wastewater treatment by advanced nanomaterials, Multifunctional Porous Materials (Metal Organic Frameworks and Covalent Organic Frameworks) for Energy, Environment and Catalysis applications Nanomaterials for Chemo- and Biosensing and Catalysis, Inorganic Chemistry (Catalytic applications of metal complexes), Supramolecular chemistry (Optical Chemo-sensing Applications), Supramolecular Chemistry, Hybrid nanomaterials for sensing and catalytic applications, Heterocycles, Fluoroorganic Chemistry
15	Mathematics oma@nitj.ac.in	Sampling Techniques and Data Analysis (Statistics), Optimization, Fuzzy Optimization, Partial Differential Equations, Numerical Analysis & PDE Matrix Analysis, Fluid Dynamics- Heat Transfer, Mathematical Modelling, Numerical methods for differential Equation.
16	Centre for Energy and Environment ocee@nitj.ac.in	Reaction Engineering, Advanced Oxidation Processes, Heterogeneous Catalysis/phocatalysis, Renewable Energy, Waste to Energy, Biomass, Fuel cell, Green hydrogen production, Capture and storage of Carbon dioxide.
17	Sports and Healthcare Research Centre	Artificial intelligence applications in Healthcare, physiology, Electromagnetic application for biomedical applications. medical textiles, filtration textiles, signal processing, modelling and simulation, environmental health, sports training methods, scientific computing

B) Eligibility Criteria

1) PhD Full-Time (under Institute Fellowship)

- **Engineering Departments (Sr. No. 1 to 11): Engineering Departments: General (For all Departments):** Master's Degree in Engineering/Technology in the relevant area of research along with Bachelor's Degree in appropriate branch of Engineering/Technology with a first class or minimum 60% marks (or CGPA of 6.5 on 10 point scale) in the qualifying examination.

- For all Engineering Departments (Sr. No. 1 to 11), direct Ph.D. admission is also available in case of candidate with B Tech/B.E./BS (4 year) with a CGPA of 8.5 and above on a 10-point scale or 80% aggregate from a Centrally Funded Technical Institute (CFTI). All such candidates must be GATE qualified. Number of credit courses to be cleared will be 24 credits before comprehensive examination.

  Engineering Department Specific Qualifications:

  (i) **Department of Biotechnology:**
  - (a) The Candidate should be B.E./B.Tech and/or M.E./M.Tech in the relevant branches of Engineering/Technology out of which either B.E./B.Tech. or M.E./M.Tech should be in Biotechnology/ Environmental Biotechnology/ Biochemical engineering/ Bioengineering/ Bioinformatics/ Environmental engineering/ Chemical Engineering/ Biomedical engineering/ Biological science and Bioengineering/ Computational biology.
  - (b) Apart from above qualification, the Candidate with M.Sc./MS/M.Pharma in Biotechnology/Industrial Biotechnology/Environment Biotechnology/Biochemical Engineering/ Biochemical Technology/ Environmental Engineering/ Biomedical Technology/Biochemistry/Microbiology/Bioinformatics/ Pharmacy and in allied areas of Biotechnology with GATE/NET/GPAT in Biotechnology/Life sciences/Pharmacy are also eligible.
  - (c) The candidates with GATE/CSIR-UGC NET/GPAT do not require to clear Institute written examination for shortlisting towards "presentation and interaction" session. The admission to the PhD programme shall be solely based upon performance of the individual candidates during "presentation and interaction" and availability of the Supervisor in the proposed area of research.
  - (d) The M.E./M.Tech/M.Pharma candidates without GATE/NET/GPAT need to clear Institute written examination for shortlisting towards "presentation and interaction" session. Once selected based on the "presentation and interaction" session, they can join in PhD (full time) programme with stipend.
  - (e) The M.Sc/ MS/M.Pharma candidates without GATE/CSIR-UGC NET/GPAT need to clear Institute written examination for shortlisting towards "presentation and interaction" session. Once selected based on the "presentation and interaction" session, they can join in PhD (part time) programme.

(ii) **Department of Chemical Engineering:** The qualification for admission to PhD programme in the Department is Master Degree in Chemical Engineering or its allied branches. Master degree in Science (Chemistry or its equivalent) must have qualified in GATE/NET for scholarship. However, the candidate with Master degree in Science without GATE/NET can join in PhD (Part-Time) Programme.

(iii) **Department of Instrumentation and Control Engineering:** The candidate should have Master's degree in Science in related fields but more preference will be given to Master's Degree in Science with Engineering (Ex. M.ScEngg.). Interdisciplinary department candidates will also be allowed (Ex. CSE, Mechanical Engg./Chemical Engg. Etc.).

(iv) **Department of Textile Technology:** The qualification for admission to PhD programmeis M. Tech. in any

discipline whereas B.Tech should be in Textile Technology/Engineering.

(v) **Centre for Energy and Environment:** Centre for Energy and Environment: M.Tech. in Renewable Energy, Chemical Engineering, Electrical Engineering (and allied areas), Instrumentation & Control, Material Science, Agriculture Engineering, Mechanical Engineering, Thermal Engineering, Packaging Technology etc. along with B. Tech. or Master Degree in Environmental Science/Technology or M.Sc. in Physics, Chemistry with a first class of minimum 60% marks (or CGPA of 6.5 on 10 point scale in the qualifying examination).

(vi) **Department of Industrial and Production Engineering:** Candidates with M.Tech. in any discipline and MBA in Operations, Supply Chain Management, Information Technology and Business Analytics will be considered eligible for admission in PhD Programme in the department, provided they are willing to undertake research in relevant areas of expertise available in the Department.

(vii) **Department of Information Technology:** Candidates with Master degree in Engineering /Technology in the relevant (CSE/IT) branch along with Bachelor degree in appropriate (CSE/IT/ECE) branch of Engineering /Technology with a first class or minimum 60 % marks (Or CGPA of 6.5 on 10 point scale) in the qualifying examination.

- **Science Departments:** Master's Degree in appropriate branch of Science with a first class or minimum 60% Marks (or CGPA of 6.5 on 10 point scale) in the qualifying examination.

- **Humanities & Management:**

- **Humanities:**

  - **PhD (English Literature):** Master's degree in English or English Language Teaching with at least 55% marks or a CGPA of 6.0 on 10 pointscale.

  - **PhD (Linguistics):** Master's degree in Linguistics or English or English Language Teaching with at least 55% marks or a CGPA of 6.0 on 10 pointscale.

- **Management:**

  - **PhD (Management):** Master's degree in Management or Commerce with at least 60% marks or a CGPA of 6.5 on 10 point scale.

  The candidates in Humanities and Management must be NET/GATE qualified for the award of stipend-cum-teaching assistantship as per Ministry of HRD norms and Institute norms.

- **Sports and Healthcare Research Centre:**

  - Master degree in Engineering/MD degree in Physiology / 4-year degree course in Medicine/ Master degree in sport Sciences/ 3-year Master degree in Medical Physiology/ Master degree in exercise physiology.

  - Desirable: Experience in signal processing/ experience in exercise physiology/ exercise prescription/sports/ computational modelling

  Note 1: Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet will be considered while verifying eligibility. Conversion from CGPA to percentage or vice versa given by individual Institute/University will not be allowed

  Note 2: For the SC / ST / PwD applicants, the eligibility requirement of marks be relaxed by 5%, or by a CGPA of 0.5 (on a 10 point scale) at both the Bachelor's and Master's level

1.1 For all Engineering Departments, GATE is not mandatory for scholarship of the candidates with Master's degree in Engineering. Candidate with Master's degree in science must have qualified in GATE/NET for scholarship. However, the candidates with Master's degree in Science without GATE/NET can join in PhD (Part-Time) programme.

1.2   For all Engineering Departments, it is also possible for Direct Ph.D. admission in case of candidate with B Tech/B.E/BS (4 year) with a CGPA of 8.5 and above on a 10 point scale or 80% aggregate from a Centrally Funded Technical Institute (CFTI). All such candidates must be GATE qualified. Number of credit courses to be cleared will be 24 credits before comprehensive examination.

1.3   Candidates with GATE/NET (JRF/LS)/ UGC (JRF/LS) /GPAT/ Inspire Fellow / Sponsored by some outside agency as a full-time candidate need not clear Institute written examination. For all other candidate(s), Institute written examination is to be cleared. However, GATE/NET (JRF/LS)/ UGC (JRF/LS) /GPAT/ Inspire Fellow/ Sponsorship from outside agency or Institute Examinations are only for shortlisting of the applicants. Mere shortlisting of an applicant does not confirm admission to Ph.D. Programme. The admission shall be solely based upon the performance of individuals during "presentation and interaction" and availability of the Supervisor in the proposed area of research.

2) PhD programmes (Part-Time):

Faculty/Technical/Scientific staff of NITJ, External candidates sponsored by Industry/Institute having R & D facility recognized by NITJ having minimum two years' experience and possessing the same academic qualifications as that for PhD regular candidates, are eligible to apply for PhD Programme as a part-time candidate. The Part-Time candidate(s) shall be required to submit a No Objection Certificate from their Employers stating that the concerned candidate(s) is an employee of that organization and is allowed to pursue his/her research work at NIT, Jalandhar, and his/her routine work permit him/her to devote sufficient time for research work.

For a foreign national candidate who applies through Ministry of Human Resource Development, Govt. of India, or Indian Council of Cultural Relations, Govt. of India, are eligible to apply provided that they possess the same minimum qualifications as required for PhD admission in case of Regular candidates.

3) PhD (Full-Time) with external fellowships like JRF/DST INSPIRE etc.

Candidate who has already secured funding/fellowship from reputed external agencies like JRF/DST INSPIRE etc. can also apply for admission to PhD (Full-Time) programme. These candidates, if selected, will not be provided any fellowship/contingency grant by the Institute.

4) PhD (Full-Time) for candidates/staff working under the Research Projects sponsored by MHRD/DST/UGC or some other government agency at NIT, Jalandhar

The candidate/staff working under the projects at NIT, Jalandhar sponsored by MHRD/DST/UGC/some other government agency/industrial organization and coordinated by the institute faculty as certified by the concerned Principal Investigator/Coordinator, those having appropriate provisions for salaries and contingency grant for the required shall also be eligible for admission to PhD Full-Time programme, only if, they have at least two years of remaining Project period at NIT Jalandhar.

The academic qualifications for the programmes mentioned at Sr. No. 2, 3, & 4 will be same as that for PhD (Full-Time) as mentioned at Sr. No. B.

C) Seat Matrix:

The number of seats depends upon the number of available research guides in the Institute, vacancies available with the guide and research infrastructure in the concerned Department. The admission of candidates to PhD programme depends on the expertise available in a department and the willingness of the candidate to work in the corresponding research areas. The following table shows the tentative number of seats available in various Departments for admission during June-July 2023 session, however, it is not obligatory for the Institute or

concerned Department to fill all the seats mentioned in this matrix. The number of seats may increase/decrease as per the vacancies available at the time of admission.

S. No.	Name of Department	PhD (Full-Time) tentative number of Seats Institute Fellowship						Tentative no. of seats under JRF/DST/ Inspire Fellowship etc.	Tentative no. of seats under Part-Time (Institute)	Tentative no. of seats under Part-Time (Under Project)
		TOTAL	UR	OBC	SC	ST	EWS			
1.	Biotechnology	07	3	2	1	0	1	10	03	00
2.	Civil Engineering	13	5	4	2	1	1	01	09	00
3.	Chemical Engineering	17	7	4	2	2	2	09	21	06
4.	Computer Science & Engineering	15	6	4	2	2	1	08	16	00
5.	Electronics & Communication Engineering	16	6	4	2	2	2	07	20	01
6.	Instrumentation & Control Engineering	12	5	3	2	1	1	01	09	00
7.	Industrial & Production Engg	04	2	1	1	0	0	00	02	01
8.	Mechanical Engg	11	4	3	2	1	1	02	06	02
9.	Textile Technology	07	3	2	1	1	0	00	05	00
10.	Physics	07	3	2	1	0	1	11	03	01
11.	Chemistry	06	3	1	1	0	1	10	06	00
12.	Mathematics	08	3	2	1	1	1	12	01	00
13.	Humanities & Management	06	2	2	1	0	1	12	00	00
14.	Centre for Energy & Environment	04	2	1	1	0	0	03	10	00
15.	Information Technology	06	2	2	1	0	1	06	06	00
16.	Electrical Engineering	02	1	1	0	0	0	00	00	00
17.	Sports and Healthcare Research Centre	00	0	0	0	0	0	00	02	00
	TOTAL	141	57	38	21	11	14	92	119	11

Reservation of the PhD (Full-Time) Institute Fellowship Seats shall be as per Government of India norms and number of seats available in the respective Department.

Horizontal Reservation of 5% to PwD candidates in each category (UR, EWS, SC, ST, OBC) shall be applicable

Candidates are advised to apply accordingly. No request for admission to a reserved category seat which is 'NIL' as per this advertisement shall be considered.

D) Admission Procedure

i. Candidates with GATE/NET (JRF/LS)/ UGC (JRF/LS) /GPAT/ Inspire Fellow / Sponsored by some outside agency as a full-time candidate need not clear Institute written examination. For all other candidate Institute written examination is to be cleared. However, GATE/NET (JRF/LS)/ UGC (JRF/LS) /GPAT/ Inspire Fellow/ Sponsorship from outside agency or Institute Examinations are only for shortlisting of the applicants. Mere shortlisting of an applicant does not confirm admission to Ph.D. Programme. The admission shall be solely based upon the performance of individuals during "presentation and interaction" and availability of the Supervisor in the proposed area of research.

ii. The admission to PhD programme (Full-Time/Part-Time) in all disciplines mentioned in this advertisement shall be made purely on the basis of a "presentation" to be made by the shortlisted applicants in their

proposed area of research followed by "interaction" to be conducted by the respective Department Admission Committee. Mere shortlisting of an applicant does not confirm admission to Ph.D. Programme.

iii. Shortlisting of candidates (other than GATE/NET (JRF/LS)/ UGC (JRF/LS)/GPAT/ Inspire Fellow / Sponsored by some outside agency as a full-time candidate) shall be done by Departmental Admission Committee for the process of "presentation and interaction" for the applicants. For this purpose, a screening test shall be conducted by the respective Departments. Only those applicants who score marks above the cutoff of 40%, i.e. 24 marks out of 60 for UR category candidates, and 35% i.e. 21 out of 60 for SC/ST/OBC/EWS/PWD candidates in the screening test shall be eligible for presentation and interaction process. Marks obtained in the screening test shall not be counted for preparation of final merit list of the successful candidates.

iv. The Pattern of Examination shall be as of GATE and NET examination. The Screening Test will be of MCQ Mode.

v. The Department Admission Committee for each Department shall recommend the suitable candidates for admission based on its assessment of presentation and interaction. Marks obtained in the screening test shall not be counted for preparation of final merit list of the successful candidates.

vi. Merely shortlisting of an applicant does not confirm admission to Ph.D. programme. The admission shall be solely based upon performance of individuals during "presentation and interaction" and availability of the Supervisor in the proposed area of research. The Department Admission Committee/Institute reserves the right not to recommend any candidate for admission to PhD in the respective Department if the performance of the shortlisted candidates is not found satisfactory during "presentation and interaction". The decision of Department Admission Committee (approved by the competent authority of the Institute) shall be final.

vii. The merit list of the selected candidates (based on presentation & interaction) shall be prepared on marks basis. A candidate who scores less than 40 marks (out of 100) for "presentation & interaction" shall not be considered "qualified" for admission to PhD programme and his/her name shall not be recommended for admission by Departmental Admission Committee.

viii. The list of recommended candidates for admission to PhD (Full-Time) programme shall be made in order of merit.

ix. All the admitted candidates shall be governed by the PhD regulations of the Institute and other instructions issued by the Institute time to time.

E)   Other Issues

i. An applicant is required to apply on different application forms in case he/she wants his/her candidature to be considered in more than one Department.

ii. Category (UR/EWS/OBC/SC/ST/PWD) once chosen by the applicant in his/her application form shall not be changed at a later stage. Candidate(s) claiming any reservation category (EWS/OBC/SC/ST/PWD) and also UR category should apply on separate application forms for the purpose.

iii. OBC-NCL/EWS Certificate must have been issued on or after **1st April 2022** so that the candidates from creamy layer are identified. No certificate issued before this date shall be acceptable.

iv. All the candidates should ensure that they possess the required educational qualification by the last date of submission of the application under this Advertisement.

v. **Certificate Checking:** The certificates (in original) of all the candidates recommended for admission shall be checked by the individual Department before deposition of fee by the candidates.

vi. The candidate (in service) applying for full-time PhD programmes need to apply through proper channel. Any application without "No Objection Certificate" from the employer shall not be considered for shortlisting.

vii. The application without proof of application fee as applicable/self-attested copies of documents/certificates/testimonials shall be rejected and shall not be considered for shortlisting.

F) **Reservation**

The reservation rules will be followed as per Government of India guidelines prevailing at the time of admission.

G) **Teaching Assistantship-cum-Scholarships**

Eligible candidates for stipend cum teaching assistantship shall be paid as per instructions issued by Ministry of Human Resource Development (MHRD) from time to time.

(i) For all Engineering Departments, GATE is not mandatory for scholarship for the candidates with Master's degree in Engineering. Candidate with Master's degree in science must have qualified in GATE/NET for scholarship. For all other Programmes, GATE/NET shall be compulsory for Institute Scholarship. Candidates admitted under Full-Time (Institute Fellowship/JRF/any other external Fellowship) will be allotted certain teaching load as prescribed by the Institute time to time.

(ii) No Stipend cum Teaching Assistantship/Scholarship/Fellowship and Contingency grant shall be given to the candidates admitted as under Part-Time PhD programme. However, Stipend-cum-Teaching Assistantship/Scholarship/Fellowship and Contingency grant to the candidate working under the Sponsored Projects coordinated by the faculty of the institute shall be given as per the terms and conditions of the project.

(iii) In case, the provisional admission is done under some project grant/financial support from other funding agencies, the relevant rules of the funding agency shall be implemented for the disbursement of stipend/scholarship. No financial assistance shall be given by the Institute in such cases. All other criteria of admission to Ph.D. programmes shall remain same for such candidates.

(iv) Stipend-cum-teaching assistantship for Research Scholars admitted to the appropriate discipline under Institute support shall be started from the date of his/her joining in the Department (refer clause O).

H) **Important Dates**

Sr. No.	Activity	Date
1.	Last date for submission of Applications (Strictly through Online Mode)	**17.04.2023**
2.	Display of list of eligible candidates by the concerned HOD in the Institute website	**21.04.2023**
3.	Written Test (if required, in the respective Department. Reporting time 10.00 AM)	**26.04.2023**
4.	Display of list of candidates eligible for presentation & interaction	**26.04.2023 by 4:00 PM in the respective Departments**
5.	Presentation/interaction by all eligible candidates	**27.04.2023 to 28.04.2023**
6.	Display of list of selected candidates	**02.05.2023**
7.	Deposition of fee (Online)	**03.05.2023 to 10.05.2023**
8.	Physical Reporting in the Institute	**10.07.2023 to 14.07.2023**
9.	Commencement of classes	**17.07.2023**

All the dates mentioned above are tentative subject to change at any stage by the competent authority. All the candidates interested in seeking admission are requested to visit the Institute website regularly for updates.

I) **It is mandatory for all applicants to fill the preferences of prospective supervisors on the below mentioned link by 17.04.2023:**

https://docs.google.com/forms/d/1DjyQ02_S1xiWpTSTA9Kq1jx1y87bWIciBiPYYOkAa6s/viewform?edit_requested=true#settings

The research domain of the Faculties is available on the Institute Website www.nitj.ac.in and the candidates can view the same under the Faculty head on the Institute website.

J) All disputes pertaining to the admissions shall fall within the jurisdiction of Jalandhar only.

K) All admissions will be provisional till these are confirmed subject to medical fitness, payment of all the fees, fulfillment of eligibility conditions, and verifications of certificates by the Academic Section of the Institute.

L) After payment of fee, no fee refund request shall be entertained in any case.

M) Only applications submitted on the website of the institute (www.nitj.ac.in) with supporting documentation will be considered. Hardcopy applications or applications by email will not be considered.

N) The admission for the June-July 2023 session and the award of the PhD degree shall be strictly in accordance with the regulations approved by the Senate in its 40th meeting to be held on 23/03/2023. Existing PhD regulations as of now shall not be applicable for the June-July 2023 admitted students.

O) For all purposes, the date of commencement of classes will be treated as the Registration Date for all admitted students of this June-July 2023 Session.

P) The Institute reserves the right to modify or cancel this Advertisement/any part of this Advertisement at any stage.

-Sd/-
Dean Academic