Annexure-II

The minimum essential qualifications with relevant fields and desirable areas of specialization in the departments which have vacancies for the post of Professor (Level-14A)

Ref: Advt No. Estt. /2026/ Prof/1600 dtd. October 16, 2026

Sr. No.	Name of Department	Minimum Essential Qualifications	Desirable areas of Specializations
1.	Computer Science & Engineering	**B.E./B.Tech**. or equivalent in Computer Science & Engineering / Computer Engineering/Information Technology/Computer Technology/ Information and Communications Technology/ Artificial Intelligence/ Data Science or any relevant discipline **M.E./M. Tech./MS** in Computer Science & Engineering/ Computer Engineering/Information Technology/Computer Technology/Information and Communications Technology/ Artificial Intelligence/ Data Science or any relevant discipline. **Ph.D.**in any of the areas of specialization or any relevant specialization	**1. Computer Systems, Architecture & High-Performance Computing:** Computer Architecture, Digital Logic, OS, Compiler Design, Algorithms & Complexity, HPC, Parallel/Concurrent Computing, Embedded Systems, Quantum Computing, Theoretical Computer Science **2. Computer Networks, Cloud & Distributed Systems:** Computer Networks, Distributed Systems, Cloud Computing, DevOps, Edge/Fog Computing, IoT, Cyber-Physical Systems, Drones and related systems, Blockchain and Distributed Ledger Technology **3. Cybersecurity, Software Security & Digital Forensics:** System Security, Software Security, ML for Security, Hardware Security, Digital Forensics, IoT Security, Vulnerability Management & Mitigation **4. Software Engineering, Formal Methods & Program Analysis:** Software Engineering, Formal Methods, Software Verification, Software Testing, Program Analysis **5. Artificial Intelligence, Machine Learning & Data Science:** AI, Applied ML, Data Science, Deep Learning, Intelligent Systems, Robotics, Agentic AI, Generative AI, Explainable AI, Big Data
2	Artificial Intelligence (AI)		

			Analytics, Game Theory, Edge AI, AI for Sustainable Development **6. Computer Vision, Image Processing & Natural Language Processing:** Computer Vision, Image Processing, NLP, Multimodal AI, Language Intelligence **7. Human–Computer Interaction & Game Design:** HCI, Game Design, Interactive Computing, Cognitive Computing, UI/UX Design, Extended Reality, Smart Systems
3	Electrical Engineering	**B.E./B. Tech. or equivalent** in Electrical Engineering /Electrical and Electronics Engineering/ Instrumentation and Control Engineering / Power Systems Engineering /Electrical Power Engineering/ Electrical and Instrumentation Engineering/Power Electronics/Electrical Engineering and Industrial Control/Power Electronics and Instrumentation Engineering/ Applied Electronics and Instrumentation **M.E./M. Tech. or equivalent** in Electrical Engineering/ Power System/Power Electronics and Drives/ Control Systems/ Electric Drives and Control/ Instrumentation and Control/ Electrical- Control and Automation/ Machines and Electrical Drives/ Energy Systems/ Signal Processing and Control/Microprocessor System Applications/Computer Controlled Industrial Power/Systems Engineering or relevant discipline **Ph.D.** in relevant discipline	• Power Systems • Instrumentation and Control Renewable Energy/Energy Systems Engineering • High Voltage Engineering • Power Electronics • Electrical Control and Automation

4	Electronics Engineering	**B.E./B.Tech**. or equivalent in Electronics Engineering, Electronics & Communication Engineering **M.E./M.Tech.** or equivalent in Electronics Engineering/ Electronics & Communication/VLSI & Embedded System **Ph.D.**in relevant discipline	• RF and VLSI Design • Analog and Digital Mixed-Signal Design • Neuromorphic Computing • Biomedical Image Processing • Embedded Systems and Processor Architecture • Quantum Sensing and Quantum Communication • Unmanned Aerial Systems and Robotics
5	Chemical Engineering	**B.E. / B.Tech. in Chemical Engineering / Chemical Technology** **M.E. / M.Tech. in Chemical Engineering/ Allied Branches** **Ph. D. in relevant discipline.**	• Biochemical Engineering • Chemical System Modelling • Colloids and Interface Science • Computational Modelling • Electrochemical Engineering • Energy Storage • Environmental Engineering • Fluid and Granular Mechanics • Machine Learning and Artificial Intelligence in Chemical Engineering • Nanotechnology • Pharmaceutical Technology • Reaction Engineering • Separation Techniques • Sustainability
6	Civil Engineering	**B.E./B.Tech./B.S./B.Plan. /B. Arch.** or equivalent in Civil Engineering **M.E./M.Tech./M.Plan./M.S.** or equivalent in Master of Town and Regional Planning (MTRP) / Planning / Urban Planning / Urban & Rural Planning / Town & Country Planning / Urban and Regional Planning / Regional Planning / Town Planning / City Planning / Construction & Project Management / Construction Technology and Management / Construction Engineering and Management / Infrastructure Engineering and Management	• Sustainable Planning • Smart City Planning • Sustainable Infrastructure Planning • Housing • Livable City Planning • Walkable City Planning • Heritage Conservation and Planning • Application of AI – ML in Planning • Application of Geo-informatics in Planning • Climate Resilience Planning • Water Sensitive Planning • Nature-based Planning • Tourism Planning

		Ph.D. in a relevant discipline of Urban Planning [A specialization in **Urban Planning** shall only be recognized where the candidate demonstrates **documented completion of coursework from recognized universities (earned credits) and peer-reviewed publication(s)** in the domain of Urban Planning], or in a relevant discipline of Construction & Project Management or Construction Technology and Management or Construction Engineering and Management or Infrastructure Engineering and Management [A specialization in **Construction Technology and Management** shall only be recognized where the candidate demonstrates **documented completion of coursework from recognized universities (earned credits) and peer-reviewed publication(s)** in the domain of Construction Management].	• Eco-sensitive Planning • Construction Technology & Management • Construction Project Management • Project Planning and Control • Construction Economics and Finance • Construction Automation • Construction Quality and Safety Management • Building Information Modelling • Digital Technology • Internet of Things • Robotics • 3D Printing • Equipment management • Resilient and sustainable infrastructure
7	Mechanical Engineering	**B.E./B.Tech.** or equivalent in Mechanical Engineering/ Production Engineering/ Mechanical & Production Engineering/ Design Engineering/ Industrial Engineering/ Thermal Engineering/ Production & Industrial Engineering/ / Manufacturing Processes and Automation Engineering/ Manufacturing Engineering / Automobile Engineering **M.E./M.Tech**. or equivalent in Mechanical Engineering /Design/Industrial/Production/ Thermal or any other relevant Specialization of Mechanical Engineering / CAD-CAM / Thermal System Design / Manufacturing Engineering / Turbomachines & Propulsion	**Robotics and Dynamical Systems** - Mechatronics - Soft Robotics - Design of Robotic Systems - Nonlinear Dynamics - Autonomous Systems - AI in Robotics **Solid Mechanics and Design** - Machine Design - Design and Dynamics - CAD/CAM - Vibrations - Fracture Mechanics - Constitutive Modeling of Materials - Contact Mechanics - Damage Mechanics - Advanced Materials and Composites **Micro/Nano Mechanics** - Micro/Nanoscale Mechanics and Materials

		Ph.D. in relevant discipline.	- Non-local Elastodynamics - Micro/Nano-Electromechanical Systems (MEMS/NEMS) - Microfluidics - Nano Tribology - Nanotechnology **Manufacturing and Industrial Engineering** - Advanced Manufacturing Methods - Micro-manufacturing - Additive Manufacturing - Digital Manufacturing / Industry 4.0 - Metal Forming - Laser Surface Engineering - Production Engineering - Manufacturing in Microgravity **Thermal and Fluid Engineering** - Computational Fluid Dynamics (CFD) - High-Speed Flow - Turbomachines and Jet Propulsion - Bio-heat Transfer - Biofluidics - Geo-physical Fluid Dynamics - Cryogenics - Non-intrusive Experimental Techniques **Energy and Combustion** - Energy Harvesting and Conversion - Combustion - Sustainable Energy Systems - Hydrogen Economy and Fuel Cells **Biomechanics and Bioengineering** - Biomechanics - Biomaterials and Tissue Engineering - Bio-inspired Design - Biologically Inspired Materials **AI and Optimization** - AI Applications in Mechanical Engineering - Machine Learning

			- Optimization - Operations Research **Emerging Areas** - Digital Twin Technology - Cyber-Physical Systems - Wearable Technology and Smart Fabrics - Advanced Aerodynamics and Flow Control - Tissue Engineering and Regenerative Medicine - Space Exploration Technologies **Other Relevant Areas** - Automobile Engineering - Maintenance and Safety Engineering - Welding
8	Physics	**Bachelor Degree** in Physics or Engineering Physics **Master Degree** in Physics or equivalent **Ph.D.** in relevant discipline.	• Quantum Computing/Quantum Communications/ Quantum Sensing/ Quantum Materials • Optics and Photonics • Plasma Physics • Semiconductor Physics and Devices • Electronics • Cosmology, Astrophysics, and Space Science • Condensed Matter Physics • Materials Sciences • Computational Nanoscience
9	Chemistry	**B.Sc.** (Chemistry as one of the subjects) **M.Sc.** in Chemistry/Organic / Inorganic / Analytical / Physical Chemistry **Ph.D.** in the area of chemistry	Chemistry/Organic / Inorganic / Analytical / Physical Chemistry

10	Mathematics	**B.Sc./ B.S.** in Mathematics / Mathematics and Computing or B.Tech. in Mathematics and Computing. AND **M.Sc./ M.S./ M.Tech**. in Mathematics /Mathematics and Computing /Computational Mathematics or relevant discipline OR Five Years Integrated/Dual Degree Programme in Mathematics / Mathematics and Computing /Computational Mathematics or relevant discipline Ph.D.in relevant discipline.	• Design and Analysis of algorithms • Machine Learning, Deep Learning • Parallel Computing • Data Management
11	Mathematics & Humanities	**Mathematics** B.Sc./ B.S. in Mathematics / Mathematics and Computing or B.Tech. in Mathematics and Computing. AND M.Sc./ M.S./ M.Tech. in Mathematics /Mathematics and Computing /Computational Mathematics or relevant discipline OR Five Years Integrated/Dual Degree Programme in Mathematics / Mathematics and Computing /Computational Mathematics or relevant discipline Ph.D.in relevant discipline.	• Design and Analysis of algorithms • Machine Learning, Deep Learning • Parallel Computing • Data Management
		Management Bachelor's Degree in Any discipline M.B.A or an equivalent Master Degree in Management/relevant specialization Ph.D. in Management/ relevant specialization	Business Analytics, Data sciences, Operations and Decision Science, Management Information Systems, Finance. Marketing, Innovation and Entrepreneurship

12	Humanities and Social Science	**B.A./B.Sc.** or equivalent in Psychology/English **M.A./M. Sc**. or equivalent in Counselling Psychology/English Ph.D.in Counselling Psychology/English	World literature/ Linguistics/ English Language Teaching/ American Literature/ Translation Studies/ Critical Theory/ Counselling Psychology/ Gender Studies/ Indian English Fiction/ Postcolonial Fiction/ Communication Skills / Employability Skills/ Film Studies/