Modified list of specialization

The minimum essential qualifications and desirable areas of specialization in the departments which have vacancies for the post of Assistant Professor

(For first round of rolling advertisement)

Sr. No.	Name of Department	Minimum Essential Qualifications	Specializations
1.	Civil Engineering	**B.E. / B.Tech.** or equivalent in Civil Engineering/planning or **B. Plan** **M.E. / M.Tech.** or equivalent in Civil Engineering/Surveying/ Transportation Engineering / Geotechnical Engineering / Earth Sciences / Structural Engineering / Water Resources Engineering/ Environmental Engineering / Remote Sensing and GIS / Civil Engineering Materials / Construction & Project Management or relevant discipline/ M.Plan/Master of Town & Regional Planning / Master of City Planning/ /M.Tech. (Planning) **Ph. D.** in relevant discipline.	• Construction and Project Management, Building Information Modelling, Construction Law, Quality & Safety Management, Digital Technology, Internet of Things, Equipment management. • Urban Planning / City Planning / Regional Planning / Urban Design / M. Plan/ Master of Town & Regional Planning / Master of City Planning/ M.Tech. (Planning) • Any Specialisation in Environmental Engineering • Rock Mechanics/Geotechnical Engineering • Transportation Planning: Travel Demand Modelling, Transportation Network Analysis, Freight Transportation, Public Transportation Systems, Geospatial Technologies in Transportation Engineering, Highways Materials, Material Characterisation, Pavement Engineering. • Water Resources Engineering, Hydraulic Engineering, Ocean Engineering, Coastal Engineering, Coastal Hydraulics • Structural Engineering/Earthquake Engineering
2.	Chemical Engineering	**B.E. / B.Tech. in Chemical Engineering** **M.E. / M.Tech.** in Chemical Engineering/ Allied Branches **Ph. D**. in relevant discipline.	• Process Control • Chemical Product Design • Modelling and Simulation • Smart Materials Biochemical Engineering
3.	Computer Science and Engineering	**B.E./ B. Tech.** or equivalent in Computer Science & Engineering / Computer Engineering/ Information Technology/ Electronics & Communication Engineering/Computer & Communication Engineering/ Electrical & Electronics Engineering/Electronics Engineering/Artificial Intelligence/ Data Science or any relevant	• Machine Learning • Natural Language Processing • Social Networks Analysis • Data Science • Deep learning • Artificial Intelligence (Cognitive computing) • Robotics • Advance Computer Architecture • High Performance Computing

		discipline **M.E./M.Tech.** or equivalent in Computer Science & Engineering or relevant discipline **Ph. D.** in relevant discipline.	• Quantum Computing • Cloud Computing • Image Processing • Computer Vision • Internet of Things and Cyber Physical Systems • Unmanned Aircraft System (Drone and Related Technology) • Soft Computing • Software Engineering • Digital/Interactive Media • Digital Forensic
4.	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/ 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
5.	Electronics Engineering	**B.E./B.Tech.** or equivalent in Electronics & Communication Engineering/ Electronics/ Communication/ Telecommunication Engineering / Electrical Engineering / Computer Science & Engineering. **M.E./M.Tech.** or equivalent in Electronics Engineering or other relevant discipline. **Ph.D.** in relevant discipline.	• Artificial Intelligence/Machine Learning • Embedded Systems • Analog Mixed Signal VLSI Design • Robotics and Computer Vision • VLSI Design and Technology • 5G Technology • Signal processing • RF IC Design and microwave • High-Speed Interconnects • Process Integration • Nanomaterials and Nanoscience • Silicon Photonics • Quantum biomimetic • Combinatorial optimization

6.	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/ Mechanical & Automation Engineering/ Manufacturing Processes and Automation Engineering/ Manufacturing Engineering **M.E./M.Tech.** or equivalent in Mechanical Engineering /Design/Industrial/Production/ Thermal or any other relevant specialization **Ph.D.** in relevant discipline.	• Design and Dynamics • CAD/CAM, Robotics and Mechatronics • Industrial Engineering • Turbomachines and Jet Propulsion • Thermal and Fluid Engineering • Automobile Engineering • Materials and Metallurgy • Manufacturing and Production Engineering
7.	Artificial Intelligence	**B.E./ B. Tech.** or equivalent in Computer Science & Engineering / Computer Engineering/ Information Technology/ Electronics & Communication Engineering/Computer & Communication Engineering/ Electrical & Electronics Engineering/Electronics Engineering/Artificial Intelligence/ Intelligence/Data Science or any relevant field **M.E./M.Tech.** or equivalent in Computer Science & Engineering or relevant discipline **Ph. D.** in relevant discipline.	• Machine Learning • Natural Language Processing • Social Networks Analysis • Data Science • Deep learning • Artificial Intelligence (Cognitive computing) • Cloud Computing • Computer Vision • Robotics • Cyber physical systems • Soft computing
8.	Mathematics	**Bachelor Degree** in Mathematics or equivalent **Master Degree** in Mathematics or equivalent **Ph.D.** in relevant discipline.	• Probability & Statistics • Algebra • Topology • Number Theory • Computational Mathematics
9.	Humanities & Social Sciences	**Bachelor Degree** of Arts in English **Master Degree** of Arts in English **Ph.D**. in relevant discipline.	• Indian English literature • Indian English Fiction • South Asian Fiction • Communication Skills • Employability skills • Diaspora literature • World Literature
10.	Management Studies	**Bachelor Degree** in any discipline **MBA** or equivalent P.G Degree in Management **Ph.D.** in relevant discipline.	• Finance • Innovation & Entrepreneurship • Marketing • Operation Management • Supply chain management • Organisation behaviour

11.	Chemistry	**Bachelor Degree** in Chemistry or equivalent **Master Degree** in Chemistry or equivalent **Ph.D.** in relevant discipline.	• Analytical Chemistry • Industrial Chemistry • Inorganic Chemistry • Physical Chemistry
12.	Physics	**Bachelor Degree** in Physics or equivalent **Master Degree** in Physics or equivalent **Ph.D.** in relevant discipline.	• Astrophysics • Gravitation and Cosmology • Optics and Photonics • Quantum Computation