

Indicative Syllabus for written test and selection criteria for recruitment to the post of **TECHNICAL ASSISTANT (CSE and ECE), Pay level 6
(Advt. No. NITM.1/(2C-Estt)/MP/R-N/2022/903, dated 11th March 2025)**

TECHNICAL ASSISTANT (COMPUTER SCIENCE AND ENGINEERING)	
Paper I	Paper II
<p>1. Programming and Data Structure - C Language, Object oriented Programming. functions. datatype, Recursion, Arrays, Stacks, Queues. Binary Search Trees, Sorting.</p> <p>2. Operating system — System calls, processes, threads, Inter process communication, concurrency and synchronization. Deadlock. CPU and I/O scheduling. Memory management and virtual memory</p> <p>3. Computer Networks- OSI and TCP/IP Protocol Stacks, Basics of packet, circuit and virtual circuit switching, framing, error detection, Medium Access Control, Ethernet bridging. Fragmentation and IP addressing, IPv4, CIDR notation.</p> <p>4. Digital Logic- Boolean algebra. Combinational and sequential circuits. Minimization. Number representations and computer arithmetic.</p> <p>5. Computer Organization and Architecture- Machine instructions and addressing modes. ALU, datapaths and control units. Instruction pipelining, pipeline hazards, Memory hierarchy- cache, main memory and secondary storage.</p> <p>6. Algorithms- Searching, sorting, hashing. Asymptotic worst-case time and space complexity. Algorithm design techniques: greedy, dynamic programming and divide-and-conquer. Graph traversals, minimum spanning trees, shortest paths.</p>	<p>The syllabus for the skill test is as follows:</p> <p>Hardware: Assembling of PC; Installation of Systems and troubleshooting, BIOS settings, Installation and testing of a printer. Printer Maintenance. Scanner Installation, Installation and Maintenance of UPS Systems, Installation of Firewalls and Connectivity of LAN & WAN, Installation of Wireless network devices.</p> <p>Software: Debugging C/ C++ Programs; Installation and Administration of SQL & Oracle, Installation of various variants of Operating systems like Windows and Linux, Installation of Software like Visual Studio, UML, Cisco Packet tracer, Working of MS-Office components like Word, Excel & PowerPoint, Configuring and sharing internet in PCs and other devices</p> <p>7. Object oriented Programming: Functions. Data type, Recursion. Arrays, Stacks. Queues. Binary Search Trees, Sorting</p>
TECHNICAL ASSISTANT (ELECTRONICS AND COMMUNICATION ENGINEERING)	
Paper I	Paper II
Basic Electronics, devices and circuits. Electrical circuits, Electronic Instruments and Measurements, Communication Engineering, Digital Electronics, Power Electronics, Microprocessor, Electronics Design and Simulation.	Trade or Skill test will be based on the syllabus provided in Paper I.

Post Name: Technical Assistant (CSE,ECE) – Scheme of Examination, Selection criteria and Instructions		
Scheme of Examination	Selection Criteria	Instructions
Paper –I Marks: 100 Duration: 2 hours Paper II : Skill Test Marks: 50 Duration: 01 hour	a) Candidates fulfilling the minimum eligibility criteria will be considered provisionally eligible to appear for the Paper I. b) Minimum qualifying mark for paper-I is 50 marks c) Candidates, who qualify in Paper-I will be called to appear for Paper II, which of qualifying in nature. d) Candidates, who qualify in Paper II, will be recommended for appointment, in order of their merit, only on the basis of the marks obtained in Paper I. e) Success in the examination confers no right of appointment unless the Institute is satisfied after conducting enquiry that the candidate is suitable in all respects of appointment to the service/post	<ul style="list-style-type: none"> • Paper I consists of two parts, Part-A and Part-B. 30 multiple choice questions in part-A and 70 multiple choice questions in part-B. • One (1) mark will be awarded for each correct answer and minus one fourth (-1/4) mark awarded for the each incorrect answer. The unanswered questions will not attract negative marks. • Paper II is of qualifying in nature and is based on Paper I syllabus only. • Compensatory time for persons with Benchmark Disabilities (Divyangjan) will be provided as per the extant orders of Government of India.