Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram

Ref : Advt: IIITDM/NT/R/02/2025 dated 10.07.2025

IIITDM/NT/R/02/2025/JT(ECE) 03.09.2025

SYLLABUS FOR THE POST OF JUNIOR TECHNICIAN (ECE)

Levels	Details
Level 1	General Ability Test (Multiple Choice Test)
Level 2	Technical Knowledge Test (Multiple Choice Test)
Level 3	Skill/Trade Test

Candidates securing minimum qualifying marks as laid down by the selection committee in Level 1 shall be shortlisted for Level 2 and Level 3. Final selection shall be based on aggregate marks obtained from Level 1, Level-2 and Level 3 with weightage of 10%, 50% and 40% respectively.

Level 1

Arithmetic & numerical ability, Quantitative aptitude, Data Interpretation, Logical reasoning, General English, General knowledge and Current affairs.

Level 2

Electric circuits: Ideal voltage and current sources, R, L, C, M elements; Network solution methods: KCL, KVL, Mesh analysis; Network Theorems: Thevenin's, Norton's, Superposition and Maximum Power Transfer theorem; sinusoidal steady-state analysis, resonance, balanced three phase circuits, star-delta transformation, power factor in ac circuits.

Transformer: Single phase transformer: equivalent circuit, phasor diagram, open circuit and short circuit tests, efficiency; Auto-transformer

Analog Circuits: Diode circuits: clipping, clamping and rectifiers. BJT and MOSFET amplifiers: differential amplifiers. Op-amp circuits: Amplifiers, summers, differentiators, integrators, active filters, Schmitt triggers and oscillators.

Digital Electronics: Number representations: binary. Combinatorial circuits: Boolean algebra, minimization of functions using Boolean identities and Karnaugh map, logic gates, multiplexers, decoders. ADCs and DACs. Computer organization.

Instrumentation: Bridges and Potentiometers, Measurement of voltage, current, power, energy and power factor; voltmeters and multi-meters, Phase, Time and Frequency measurement;

Communications: Analog communications: amplitude modulation and demodulation, FM, super heterodyne receivers. Digital communications: PCM, DPCM, digital modulation schemes (ASK, PSK, FSK, QAM), bandwidth, SNR. Fundamentals of error correction.

Basic Data processing using Computer.

Level 3 - Skill/Trade Test

Practical test based on the topics of Level-2

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IIITDM, Kancheepuram Chennai

Registrar