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/JTS(Phy) 03.09.2025

SYLLABUS FOR THE POST OF JUNIOR TECHNICAL SUPERINTENDENT (PHYSICS)

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

- **Mathematical Physics:** Vector algebra, vector differentiation, vector integration, Curl, Divergence and Gradient, Stokes Theorem, Divergence Theorem
- **Waves and Optics:** Simple Harmonic Oscillation, Damped and Forced Oscillator, Geometrical optics, Interference, Diffraction and Polarization, Maxwell's equation, Electromagnetic wavs, Lasers
- **Electricity and Magnetism:** Electrostatics, electric potential, dielectric properties of matter, Magneto statics, Para magnetism, Dia magnetism, Ferro magnetism, Hysteresis loop, electromagnetic, Faraday's law, Induction, Electro motive force, Electrical Circuits (LC, LR, RC, LCR etc.)
- **Properties of matter:** Surface tension, Viscosity, elasticity, stress, strain, Modulus of elasticity
- **Heat and Thermodynamics:** Kinetic theory of gases, Equipartition theory, Maxwell Velocity distribution, Laws of Thermodynamics, Entropy, Heat engines
- **Electronics:** PN Junction Diode, BJT transistor, Logic Gates, Rectifiers, Clipping-clamping, Amplifiers
- **Basic Data processing using Computer**.

Level 3

- Measurement of acceleration due to gravity
- Finding rigidity modulus of a string
- Experiments related to diffraction of light
- Air Wedge/Newton ring experiments
- Experiments performed using Prism-table
- Finding Magnetic susceptibility of a material
- PN junction diode characterization
- PN junction diode rectifiers and clipping clamping circuits

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IIITDM, Kancheepuram Chennai

Registrar