



IITPKD/R/NF/03/2024/04

26th Dec 2024

Recruitment for the post of Junior Technician - Electrical Engineering (Post Code: 24301) vide Advt. No.: IITPKD/R/NF/03/2024 dated August 30, 2024.

The selection process, indicative syllabus and date of examination for the post of Junior Technician - Electrical Engineering advertised vide Advt. No.: IITPKD/R/NF/03/2024 dated August 30, 2024.

Junior Technician - Electrical Engineering (Post Code : 24301)

The selection process shall consist of written test and practical test:

Syllabus:

Subject		Maximum Marks	Duration
Level I Written test	Electrical Circuits Network theorems - Kirchoff' Laws, Thevenin's theorem, Norton's theorem, Superposition theorem. Properties of AC waveform - frequency, average, RMS, form factor, peak factor etc. Single phase and polyphase circuits - series and parallel circuits, circuits with R, L and C elements, power calculations - active, reactive and apparent	40	2 hrs
Level II Practical test	Power Electronics Symbols, characteristics, operation and gate circuits of semiconductor devices Uncontrolled rectifiers (1-ph and 3-ph), phase controlled rectifiers (1-ph and 3-ph), DC chopper circuits Inverters (1-ph and 3-ph) Circuits and electrical machines Basic circuit theory, basic circuit theorems and applications, circuits with diodes, transistors and operational amplifiers, magnetic circuit basics, Magnetic materials and magnetization, Faraday's law and Lenz's law, ac and dc machines basics, static and rotating machines, Basic electrical machine equivalent circuits and important operating characteristics (ac and dc), basic tests on ac and dc	60	3 hrs

	<p>electrical machines and standard operating procedures, electrical machine windings and basic electrical machine constructional aspects (ac and dc).</p> <p>Control systems Linear Time invariant system, Laplace transform, transfer function. Mathematical Modelling: Integro-differential equations for electrical, mechanical systems. Time response analysis. Stability; Routh criterion, Root Locus. Frequency Response methods: Nyquist and Bode plots and criteria. Gain and phase margin. State space analysis and design.</p>		
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Tentative Schedule of Examination: 06-Jan-2025

The details of venue, time and other instructions shall be shared along with the hallticket that will be issued to the shortlisted candidates over email in due course.

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Registrar