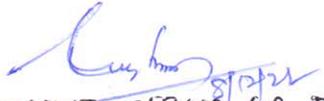


Syllabus for Junior Engineer (Electrical)

The questions shall be in the level of diploma in Electrical Engineering

- Basics of electricity, Fundamental terms, definition, units in electrical engineering, AC/DC fundamentals, series and parallel circuits and polyphase circuits. Effects of electrical voltage, current, energy, Basic circuit theories and numerical problems.
- Different types of cells and batteries and their measurement of voltage and current, charging and maintenance aspects
- Electrical instruments & measurements. Network theory and measurement of work, power and energy and numerical problems.
- Transformers, Induction motors and different types of starters principles, operation and maintenance aspects. Various types of Transformers
- Illumination- terms and definitions, laws of illumination, lighting scheme
- Different types of Electric power generators, uses and specifications.
- Substation elements detailed specifications, periodical tests and maintenance aspects (VCB, Transformer, LT switchgear and panels, UPS, Generator set, rising mains etc). Power factor improvement
- Different types of wiring circuits. Materials and tools used in electrical wiring. Types of wires and cables standard wire gauge.
- Estimation of electrical wiring, Load calculations, bill of materials. Specifications, standards for conduits and accessories, earthing, layout diagram for conduit wiring, earthing selection for domestic and industrial installations
- Fuses, protection and switch gear principles of selection and specifications. Protection for feeders, busbars and transmission lines.
- Industrial utilization of electrical motors, Electrical heating, Lighting and controls
- Basic Electronics: Working principle and troubleshooting of commonly used electrical equipments in Hospital
- Electric safety and standards.
- Elementary first aid. Names of commonly used fire extinguishers and their use.


ADMINISTRATIVE OFFICER (Gr. II/c)