

**SYLLABUS FOR THE RECRUITMENT TEST TO THE POST OF
ASSISTANT ENGINEERS (ELECTRICAL/MECHANICAL)**

Total	- 300 Marks	Duration - 3 Hours
General Studies	- 60 Marks	
Technical Paper	- 180 Marks	
Personal Interview	- 60 Marks (for short listed candidates only).	

General Studies :(60 Marks) - General English, General Knowledge, Aptitude.

Technical Papers. (180 Marks)

1. Magnetism – Nature of Magnetism, Laws of Magnetic force, Magnetic field, Field Intensity, Flux density, Magnetic Potential, Tangent law, Gauss’s Theorem, Electromagnetism, Magnetometers.
2. Electrostatic-Nature of Electricity, Electric charge, Coulumb’s law, Electric field and intensity, Electric Flux, Electric Potential, Gauss’s Theorem Electrometers, Capacitance
3. Electromagnetic induction
4. Magnetic Effect of Current
5. Circuit Theory-Ohm’s law, Kirchoff’s laws, Network Theorems, etc.
6. Work, Power and Energy
7. Alternating Current (AC) –AC Fundamentals and AC circuits
8. Transformer- Fundamentals
9. Conversion from AC to DC – Single phase.
10. Cells - Primary Cells, Standard Cells, Secondary Cells, Batteries
11. Fundamentals of DC and AC generators
12. Elementary Electronics- Semiconductors, Diodes, Transistors and their applications
13. Thermo-electricity
14. Photo-electricity
15. Computer Fundamentals
16. Thermodynamics
17. Hydraulics, Hydraulic turbines and pumps
18. Fundamentals of Internal Combustion Engines
19. Common Electrical Appliances.
20. Concept of GIS substations and substation automation systems (SAS)