

B.E. / B.Tech. Electrical (Electronics & Power) Engineering (Model Curriculum) Semester-V  
**TE102A / POWER1 - Power Plant Engineering**

P. Pages : 2

Time : Three Hours



**GUG/S/25/13863**

Max. Marks : 80

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- Notes :
1. All questions carry equal marks.
  2. Due credit will be given to neatness and adequate dimensions.
  3. Assume suitable data wherever necessary.
  4. Illustrate your answers wherever necessary with the help of neat sketches.
  5. Use of slide rule, Logarithmic tables, Steam tables, Mollier's chart, Drawing instruments, Thermodynamic tables for moist air, Psychrometric charts and Refrigeration charts is permitted.

1. a) State and explain- 8
- i) Demand factor
  - ii) Average Demand
  - iii) Diversity Factor
  - iv) Plant Capacity Factor

- b) State and explain different types of energy sources used in generating stations. 8

**OR**

2. a) What is the Load curve? & what information is obtained from Load curve? 8
- b) Explain Depreciation and Methods to obtain depreciation charges. 8
3. a) Explain the water steam flow system of thermal power plant. 8
- b) State and Explain auxiliary equipments of thermal power plant. 8

**OR**

4. a) Explain different types of cooling towers and ponds used in cooling system of thermal power plant. 8
- b) State the equipments involved in flue gas flow and explain flue gas flow circuit. 8
5. a) Explain in brief Two stroke Engine and Four stroke Engine. 8
- b) State and explain applications of diesel power plant. 8

**OR**

6. a) Draw and explain different equipments of closed circuit of a diesel engine cooling. 8
- b) Explain in brief about working principle of diesel power plant. 8
7. a) Explain the generalized parts of nuclear power plant. 8
- b) Explain the factors that considering during selection of site for nuclear power plant. 8

**OR**

8. a) Explain in brief about nuclear fission and chain reaction refers to nuclear power plant. 8
- b) State the types of turbines used on the basis of water head in hydroelectric power plant, explain any two shortly. 8
9. a) Explain transformer in power plants with it's various applications. 8
- b) Classify the different cooling system of transformer. 8

**OR**

10. a) Explain closed air cooling of turbo alternator. 8
- b) Mention and explain different types of instruments used in power plants. 8

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