

Roll No.

Printed Pages : 2

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BT-8 / M-15

POWER PLANT ENGINEERING

Paper-ME-904 E

Time allowed : 3 hours]

[Maximum marks : 100

Note : Attempt five questions selecting at least one from each unit. Missing data, if any, may be suitably assumed.

Unit-I

1. (a) Explain Geothermal and tidal energy. 10
(b) Write a note on energy sources in India. 10
2. (a) Explain the process of site selection for hydro power plant. 10
(b) Explain storage type hydro power plant. 10

Unit-II

3. Explain the constructional details and working of Benson Boiler. 20
4. (a) Explain the process of ash handling and disposal. 10
(b) Explain lubrication and cooling systems in a diesel power plant. 10

Unit-III

5. (a) Explain characteristics of gas turbine. 10
(b) Explain combined steam and gas turbine power plants. 10
6. (a) Write a note on nuclear fuel. 10
(b) Explain general components of a nuclear reactor. 10

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Unit-IV

7. A 60 MW power station has an annual peak load of 50 MW. The power station supplies loads having maximum demands of 20MW, 17MW, 10MW and 9MW. The annual load factor is 0.45. Find (i) Average load, (ii) Energy supplied per year, (iii) Diversity Factor and (iv) Demand Factor. 20
8. (a) Explain different methods of calculating depreciation. 10
(b) Explain performance and operating characteristics of power plants. 10

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