

**DIPLOMA IN MECHANICAL ENGINEERING
(DME)**

Term-End Examination

December, 2018

00073

BME-058 : POWER PLANT ENGINEERING

Time : 2 hours

Maximum Marks : 70

Note : Attempt any seven questions. All questions carry equal marks.

1. (a) Describe the general layout of Thermal power plant. 5
- (b) Discuss the advantages of Hydro-electric power plant over Thermal power plant. 5
2. (a) Explain the working principle of Cochran boiler with the help of neat diagram. 5
- (b) Discuss the different performance parameters of a boiler. 5
3. Explain the following : 5×2=10
 - (a) Diversity factor
 - (b) Demand factor
 - (c) Load factor
 - (d) Plant use factor
 - (e) Capacity factor

4. (a) Explain the working of cooling tower and describe any one with the help of neat diagram. 5
- (b) Discuss the selection criteria of a Hydro-electric power plant. 5
5. What are the importance of rainfall and runoff data in the design of Hydro-electric power plant ? What factors affecting the runoff data for a particular site ? 10
6. List the various pollutants from the Thermal power plant. What are their adverse effects ? How will you control the effects ? 10
7. Discuss the scenario of power generation in a country like India. 10
8. List the renewable and non-renewable energy resources and explain the working principle of Geo-thermal power plant and Wind power plant. 10
9. Write short notes on any *two* of the following : $2 \times 5 = 10$
- (a) Gas Cooled Reactors
- (b) Heavy Water Reactors
- (c) Fusion Power Reactors
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