

Roll No.

Total Pages : 3

BT-8/M-20

38172

POWER PLANT ENGINEERING

Paper–ME-404-N

Time Allowed : 3 Hours]

[Maximum Marks : 75

Note : Attempt **five** questions in all, selecting at least **one** question from each Unit. All questions carry equal marks.

UNIT-I

1. (a) What are the advantages and disadvantages of hydro electric power plants? 5
- (b) Explain :
 - (i) Hydrographs
 - (ii) Storage and pondage
 - (iii) Water hammer. 10
2. (a) What are the various factors that must be considered while selecting water turbines? 5
- (b) How are geothermal power plants different than tidal power plants? 5
- (c) Write a short note on flow duration curves. 5

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UNIT-II

3. (a) Explain Rankine cycle. 5
- (b) What is pulverized coal? Explain the BIN system with a neat diagram. List the advantages and disadvantages of using pulverized coal. 10
4. (a) Sketch and explain La Mont steam generator. 10
- (b) Explain Carnot cycle. 5

UNIT-III

5. (a) Sketch and explain the layout of a diesel engine power plant. 10
- (b) List at least five advantages and five disadvantages of Diesel Power Plants. 5
6. (a) Explain the working principle of closed cycle gas turbine with neat sketch. 5
- (b) With the help of neat sketch, explain the working of combined gas turbine and steam turbine plant. 10

UNIT-IV

7. (a) Give the classification of nuclear reactors. 5

- (b) Write an explanatory note on disposal of nuclear waste and related issues. 10
- 8. (a) How are power plant equipment selected? 5
- (b) How is nuclear fission different than nuclear fusion? 5
- (c) List and explain various performance metrics of power plants. 5