

B.Tech. 7th Semester (Mechanical Engineering)

Examination December-2013

POWER PLANT ENGINEERING-VII

Paper-ME-407-F

*Time allowed : 3 hours]**[Maximum marks :100*

Note : Question No. 1 is compulsory. Students have to attempt five questions in total at least one question from each section.

1. (a) What is rainfall ?
- (b) What is electrostatic precipitator ?
- (c) What is load curve ?
- (d) What is OTEC ? 5×4=20

Section-A

2. What is power plant Engg. ? What are different types of power plants ? How the plants are selected ? Also explain basic thermodynamic cycles used in power plant. 20
3. (a) What are different components of Hydro-electric power plant ? 10
- (b) What is rainfall and run-off measurement ? 10

Section-B

4. (a) Explain in detail the feeding and burning of pulverized of fuel. 10
- (b) What is mechanical dust collector and electrostatic precipitator ? 10

5. Write short note on the following :

- (i) Site selection for the steam power plant.
- (ii) PFBC System. 10+10

Section-C

- 6. (a) What is nuclear power plant ? Explain the principle of nuclear power plant. 10
- (b) What is power plant economics ? Explain the economic load sharing. 10

7. Write short note on the following :

- (i) PWR
- (ii) BWR
- (iii) Advantages and limitations of nuclear power plant. 20

Section-D

- 8. (a) What is non-conventional power generation ? Explain the geothermal power plant. 10
- (b) What is direct energy conversion system ? Explain in detail fuel cell ? 10

9. Write short note on the following :

- (i) Wind power plant
- (ii) Tidal power plant
- (iii) Thermoelectric power generation. 20