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Total No. of Questions : 09

B.Tech (EE) (Sem.-6)
POWER PLANT ENGG
Subject Code : ME-352
M.Code : 57047

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. Write briefly :

- a) Differentiate between a forced and an induced draft fan.
- b) What is the function of feed water heater?
- c) What is a mass curve?
- d) What is a pumped storage plant?
- e) What is the function of surge tank?
- f) Differentiate between fertile and fissile material.
- g) Define nuclear fission.
- h) On what factors the efficiency of a gas turbine plant depends?
- i) Discuss the pollution caused by nuclear power plants.
- j) Discuss the advantages of combined operation of plants.

SECTION-B

- Q2 Briefly discuss the functions of the following equipments in a steam power plant :
- a) Condenser
 - b) Cooling towers
 - c) Heat Exchanger
 - d) Economiser
- Q3 What are the different types of hydro turbines? What are their applications? Discuss their main constructional features.
- Q4 What considerations have to be kept in view in selecting the site for a nuclear power plant?
- Q5 Discuss open and closed cycles for gas turbines.
- Q6 Draw the layout of a diesel power plant and explain it in detail

SECTION-C

- Q7 a) A hydro-plant operates under an effective head of 100 m and a discharge of $200\text{m}^3/\text{sec}$. If the efficiency of the turbine alternator set is 0.9, find the power developed.
- b) Explain briefly the combined operation of different power plants.
- Q8 Draw the layout of a hydro power plant and explain it in detail.
- Q9 Explain briefly :
- a) Effect on environment due to thermal and nuclear power plants.
 - b) Future of nuclear power in India.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.