

Code No: 127GP

R15

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech IV Year I Semester Examinations, October/November - 2020

POWER PLANT ENGINEERING

(Mechanical Engineering)

Time: 2 hours

Max. Marks: 75

**Answer any Five Questions
All Questions Carry Equal Marks**

- 1.a) What are the advantages of central system over unit – system for coal handling?
b) Describe various methods used to fire pulverized coal. [7+8]
- 2.a) Name and explain the various sources of energy.
b) What are the various types of solid fuels? Describe? [7+8]
- 3.a) What are the important features of diesel plants over thermal plants? Why diesel plants are not used for high capacity?
b) Mention the different methods of fuel injection used in Diesel plants. Which method is mostly used? [8+7]
- 4.a) What is meant by auto – ignition? Why is excess air always used in a CI engine?
b) Discuss the wet sump lubrication system pertaining to a diesel engine. [7+8]
- 5.a) Explain the components of tidal power plant.
b) Describe flat plate collector with a diagram. Compare flat plate collectors and focusing collectors. [7+8]
- 6.a) Describe advantages and disadvantages of hydroelectric power plant.
b) What is spill way? Explain any two spill ways. [7+8]
- 7.a) What is boiling water reactor? How does it differ from pressurized water reactor?
b) Give the classification of nuclear waste in detail. [8+7]
- 8.a) What do you mean by depreciation? Enumerate and explain briefly various methods used to calculate the depreciation cost.
b) What are the effects of SO₂, NO₂ and hydrocarbons on the human and crop lives? [8+7]

--ooOoo--