

Code No: 57023

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, February/March - 2016

POWER PLANT ENGINEERING

(Mechanical Engineering)

Time: 3 Hours

Max. Marks: 75

Answer any Five Questions
All Questions Carry Equal Marks

- 1.a) Explain the different components used in steam power plant.
- b) Draw a chart showing operations and devices used in coal handling plant. [7+8]

2. What are the different methods of out plant coal handling? Discuss their relative merits and demerits. [15]

3. Describe the following systems in brief with respect to Diesel Power Plant.
 - a) Fuel storage and supply system
 - b) Exhaust system
 - c) Lubrication system. [5+5+5]

- 4.a) With the help of a block diagram explain the main components of an open cycle gas turbine power plant.
- b) Give the advantages and disadvantages of closed cycle gas turbine power plant. [8+7]

- 5.a) What are the functions of a surge tank fore bay and draft tube in a hydraulic power plant?
- b) Explain the terms hydrograph, flow duration curve. [8+7]

- 6.a) Explain the working of a fuel cell.
- b) With appropriate diagrams explain the working principle of a solar cell. [7+8]

- 7.a) Discuss the advantages and disadvantages of Pressurized Water Reactor.
- b) Explain briefly about radiation hazards and shielding? [8+7]

- 8.a) Differentiate between fixed and running charges in the operation of a power plant.
- b) Explain load curve and load duration curve. [8+7]

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