

Code No: 158DA

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech IV Year II Semester Examinations, September - 2022

BASICS OF POWER PLANT ENGINEERING

(Common to CE, ME, ECE, CSE, IT)

Time: 3 Hours

Max.Marks:75

**Answer any five questions
All questions carry equal marks**

- 1.a) Explain the concept of super critical brilers.
b) Describe the hydraulic ash handling system. [7+8]
- 2.a) Write the difference between Rankine cycle and Modified Rankine Cycle.
b) Explain about binary cycles and cogeneration systems. [7+8]
- 3.a) Mention the advantages and disadvantages of a diesel power plant over a gas turbine power plant.
b) Give a maintenance schedule for diesel engine power plant. [7+8]
- 4.a) With the neat sketch, explain the boiling water reactor power plant ?
b) What are the advantages and disadvantages of nuclear power plant? [7+8]
- 5.a) Write down the safety measurements for nuclear power plants in detail.
b) Write the difference between BWR and PWR. [7+8]
- 6.a) Sketch and discuss FBR and PHWR in detail.
b) Draw the layout and subsystems of nuclear power plant. [7+8]
- 7.a) What are the various factors to be considered in selecting the site for a hydroelectric power plant and discuss about primary and secondary investigation.
b) Describe the classification of turbines. [8+7]
- 8.a) Describe the Pollution control Technologies in detail.
b) Write the load distribution parameters of Economic and Environmental issues. [7+8]

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