

**R09****Code No: 09A70302****JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech IV Year I Semester Examinations, May/June - 2013****Power Plant Engineering  
(Mechanical Engineering)****Time: 3 Hours****Max. Marks: 75****Answer any Five Questions  
All Questions Carry Equal Marks**

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1. What are the different methods of out plant coal handling? Discuss their relative merits and demerits. [15]
2. Explain multi - retort underfeeds stoker with a neat diagram. [15]
3. Give a general layout of Diesel power plants and describe. [15]
- 4.a) With help of a block diagram explain the main components of a open cycle gas turbine power plant.
- b) Give the classification of gas turbine power plants. [10+5]
- 5.a) Explain the terms hydrograph, flow duration curve and mass curve.
- b) Explain the construction and features of different types of types of dams. [7+8]
- 6.a) Describe the construction and working of a solar cell.
- b) Explain the working of a fuel cell. [7+8]
- 7.a) Write the classification of nuclear reactors.
- b) Discuss the advantages and disadvantages of Pressurized Water Reactor.
- c) Explain briefly about radiation hazards and shielding? [15]
- 8.a) What is meant by load curve? Explain its importance in power generation.
- b) A power station has a maximum demand of  $80 \times 10^3$  kW and daily load curve is defined as follows :

Time (Hr)	0-6	6-8	8-12	12-14	14-18	18-22	22-24
Load (MW)	40	50	60	50	70	80	40

Determine the load factor of power station.

[7+8]

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