

IV B.Tech I Semester Supplementary Examinations, April/May 2005
POWER PLANT ENGINEERING

(Common to Mechanical Engineering and Production Engineering)

Time: 3 hours

Max Marks: 70

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Why non-conventional sources are considered as future major power resources to face power crisis in the world? Which of them more prominent?
(b) Describe the thermal power development in India.
2. (a) Draw a neat diagram of cyclone burner and describe its working. What are its outstanding features compared with other burners?
(b) What are different factors to be considered for site selection for thermal power stations?
3. (a) Explain different methods used to store the coal in order to reduce oxidation and combustion.
(b) With the help of a neat diagram, explain the working of a spreader type stoker.
4. (a) With the help of a neat diagram, explain the working of fuel storage and supply system.
(b) Explain the working of a fuel cell and list out its advantages over other non-conventional systems of power generation.
5. (a) With the help of a neat diagram, explain the working of a closed cycle gas turbine plant.
(b) Explain the working of thermionic system with neat sketch and explain the effects of those factors which control the power generation capacity.
6. (a) What are different methods used to measure rainfall?
(b) Draw a neat diagram of storage type hydro-electric power plant and describe the function of each component used in the plant.
7. (a) With the help of a neat diagram, explain the working of boiling water reactor.
(b) What is the necessity of shielding of a reactor? What are the desirable properties of a good shielding material?
8. Write short notes on the following:
 - (a) Load duration curve
 - (b) Load factor
 - (c) Pulverised fuel burning system.
 - (d) Pumped storage plant.
