

R09

Code: 9A03710

B.Tech IV Year I Semester (R09) Supplementary Examinations, May 2013

POWER PLANT ENGINEERING

(Mechanical Engineering)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions
All questions carry equal marks

1. (a) Explain different types of equipments used for transferring coal.
(b) How is coal formed? What are the important coal properties relevant to boilers?
2. (a) Explain the working of cyclone burner and fluidized bed combustion system.
(b) Explain about the importance of high purity water in boilers.
3. (a) What is the objective of super charging? Why is it more beneficial in a CI engine compared to an SI engine?
(b) State the applications of a diesel power plant.
4. What are the major components of a gas turbine plant? Discuss the effect of inter cooling and reheating in a gas turbine plant.
5. (a) What are the different types of pumped storage power generation?
(b) What is the function of surge tank in a hydro electric power plant?
6. Draw the layout of a MHD open cycle generator and explain its functions of components.
7. (a) What is a moderator in nuclear reactor? Explain the desirable properties of a good moderator.
(b) How are nuclear reactors classified?
8. (a) Briefly explain about fossil fuel pollution.
(b) What are the effects of SO₂, NO₂ and hydro carbons on the human and crop lives?
