



Code No. : 5224/M

FACULTY OF ENGINEERING
B.E. 4/4 (M/P) II Semester (Main) Examination, May/June 2012
POWER PLANT ENGINEERING (Elective – II)

Time : 3 Hours]

[Max. Marks : 75

Note : Answer *all* questions from Part A.
Answer *any five* questions from Part B.

PART – A

(25 Marks)

1. What are the major sources of energy in India ? 2
2. Which type of coal is available in India and what is its major drawback ? 3
3. What is difference between stoker and a pulverizer ? 2
4. Mention any 3 auxiliaries for a gas turbine. 3
5. What are the units of the capacity of a dam measured ? 2
6. What is the difference between reservoir and pond ? 3
7. In all the five types of reactors you have studied, what is the common factor and how is it related to power production ? 2
8. Compare ash handling in steam power plant and radioactive waste in nuclear power plant. Mention any three major differences. 3
9. Arrange steam, hydro nuclear power plants on the order of capital and operating costs. 3
10. Arrange steam, hydro nuclear power plants in the order of impact on environment. 2

PART – B

(50 Marks)

11. a) Explain the coal handling equipment. How do you select handling equipment for Indian coal ? 5
- b) Before transporting to the power plant, what procedure is carried out at mine ? 5



12. a) Explain the significance of draught system and how is it effected by pulverized burning system. 5
b) Explain working principle of closed gas turbine with a neat sketch. 5
13. a) What are the various flow measurement methods for a hydro power plant ? 5
b) What is the difference between a dam and spillway and how do you classify spill ways ? 5
14. a) Explain the nuclear power plant with a neat sketch. 5
b) Explain the shielding process. 5
15. a) Explain power distribution aspects with respect to steam, hydro and nuclear power plants. 5
b) Describe effluents from steam, hydro and nuclear power plants and their characteristics. 5
16. a) Why is a cyclone furnace required in coal plants ? 5
b) How does cooling system function in pressurized water, boiling water, sodium graphite, fast breeder and homogeneous reactors ? 5
17. a) How is coal stored in humid and dry atmospheres ? 5
b) What is meant by hydrological cycle ? 5