

LIB
4/12/13 AN

Reg. No. :

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Question Paper Code : 31578

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2013.

Seventh Semester

Mechanical Engineering

ME 2403 /ME 73/ ME 1353/10122 ME 704 — POWER PLANT ENGINEERING

(Regulation 2008/2010)

(Common to PTME 2403- Power Plant Engineering for B.E. (Part-time)
Seventh Semester – Mechanical Engineering – Regulation 2009)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List out the major advantages of high pressure boilers in modern thermal power plants.
2. What are types of fluidized bed boilers?
3. Define air standard cycle efficiency.
4. What the advantages of burning coal are in pulverized form?
5. Give the requirements of chain reaction.
6. What is the purpose of surge tank in a hydroelectric power plant?
7. What are the main units in a gas turbine power plant?
8. List out the inherent advantages of the combined power cycle.
9. What are the types of geo thermal power plants?
10. Define flat rate tariff.

PART B — (5 × 16 = 80 marks)

11. (a) Draw a schematic diagram of a hydro power plant and explain its operation. (16)

Or

- (b) Explain the construction and working of any one High pressure boiler with a layout. (16)
12. (a) (i) Discuss the relative merits of different out plant coal handling. (8)
(ii) Describe the hydraulic ash handling system. (8)

Or

- (b) Explain the principle of different types of electrostatic precipitator. (16)
13. (a) Explain the construction and working of Nuclear power plant with a layout. (16)

Or

- (b) Describe the classification of turbines used in hydro electric power plants. (16)
14. (a) (i) List the merits and demerits of the diesel electric power plants. (8)
(ii) Explain the essential components of diesel electric power plants. (8)

Or

- (b) Explain the construction and working of Gas turbine power plant with a layout. (16)
15. (a) Explain the construction and working of Geo thermal power plant. (16)

Or

- (b) Explain the analysis of a central receiver system. (16)