

SUBJECT CODE NO:- P-199
FACULTY OF ENGINEERING AND TECHNOLOGY
B.E.(Mech) Examination MAY/JUNE-2016
Elective-I: Power Plant Engineering
(Revised)

[Time: Three Hours]

[Max Marks:80]

“Please check whether you have got the right question paper.”

- N.B
- 1) Solve any three questions from each section.
 - 2) Use separate answer- book for each section.
 - 3) Figures to the right indicate full marks.
 - 4) Assume suitable data, if necessary and state them clearly.
- Section A**
- Q.1
- a) Explain in detail demand factor, capacity factor, use factor and diversity factor. 06
 - b) Explain in detail effect of variable loading on a power plant. 06
- Q.2
- a) Explain in detail dry system and wet system of ash disposal. 06
 - b) Explain in detail electrostatic precipitator. 06
- Q.3
- a) Explain in detail present trends in diesel research. 06
 - b) Explain in detail cooling systems used in diesel engines. 06
- Q.4
- a) Explain in detail types of engines used in diesel power plant. 06
 - b) Explain in detail double classifier ball mill. 06
- Q.5 Write short notes (any four) 16
- a) Unit system and bin system of coal handling
 - b) Overfeed stokers
 - c) Supercharging in diesel engines
 - d) Lubrication system for diesel engines.
 - e) Tangential burners.
- Section B**
- Q.6
- a) Explain in detail performance and operational characteristics of power plant. 06
 - b) Explain in detail environmental aspects of power generation. 06
- Q.7
- a) Explain in detail working principle of BWR reactor. 06
 - b) Explain in detail working principle of homogeneous reactor. 06
- Q.8
- a) Explain in detail four different types of dams with neat sketches. 08
 - b) Explain with neat sketches chute set spillway and siphon spillway. 04
- Q.9
- a) Explain in detail gas cooled reactor. 06
 - b) Explain the components of a nuclear reactor. 06
- Q.10 Write short notes (any four) 16
- a) Water Hammer effect
 - b) Francis turbine
 - c) PWR reactor
 - d) Radioactive waste disposal.
 - e) Nuclear fission and Nuclear fusion