

End Semester Examination (ESE), 2021

Semester – 6th

Subject – Power Plant Engineering

Subject code – Me-607

New Syllabus

Total marks – 56

Time: 2 Hours 30 minutes

All questions are compulsory

PART A = 10 marks

Sl. no	Description	Marks
1	The ratio between average load and rated load for a period of time is termed as _____	1
2	1 Gigawatt = _____ Megawatts	1
3	Superheater, Evaporator and _____ are the components of a boiler.	1
4	During expansion process of a Rankine cycle, temperature i) Increases ii) decreases iii) remains constant	1
5	Boiler in a Rankine cycle is associated with i) Sensible heating ii) Latent heating iii) Superheating iv) All of the above	1
6	Feedwater heater is used in i) Simple Rankine cycle ii) Reheat Rankine cycle iii) Regenerative Rankine cycle iv) None of the above	1
7	Kinetic energy of water is used to drive the turbine in hydro power plants. State True or False.	1
8	In BWR, ordinary water is used both as moderator and coolant. State True or False	1

9	Reflector is a component of nuclear reactor. State True or False	1
10	Shielding in a nuclear reactor protects the harmful radiations. State True or False.	1

PART B = 46 marks

11	Write the use of economizer, evaporator and superheater.	3
12	Write some safety practices to be observed in boiler operations	3
13	Draw a schematic diagram of nuclear reactor showing all the components.	3
14.	Define the terms: a. Heat rate b. Capacity factor c. Reserve capacity	3
15.	Write the function of a moderator and control rods in nuclear power plant? What kind of moderators are generally used?	3
16.	What are the classifications of solid fuel injection system in Diesel power plant? Explain any one of them.	4
17.	Write the uses of the following in hydropower plant. i) Surge tank ii) Spillway iii) Forebay iv) Draft tube	4
18.	Discuss about conventional and non-conventional sources of energy.	4
19.	State the various factors considered in selecting a site for Steam Power Plant.	4
20.	What are the modifications of Rankine cycle? Explain any one of them with a block diagram.	5
21.	Draw the general layout of Hydro power plant? How dams are classified?	5
22.	Write the advantages and disadvantages of Hydroelectric power plant.	5