Roll No.: ……

SGT UNIVERSITY

END TERM THEORY EXAMINATION JULY-2022

Faculty/College of Study:	**Engineering & Technology**	**Year/Semester:**	**6th Semester**
Program:	**B. Tech. (ME)**	**Duration:**	**03:00 Hrs**
Course/Subject:	**Power Plant Engineering**	**Maximum Marks:**	**60**
Course/Subject Code:	**13030602**	**Batch:**	**2017**

Instructions:-

1. Write Your Roll No. on the Question Paper.
2. Candidate should ensure that they have been provided correct question paper. Complaint(s) in this regard, if any should be made within 15 minutes of the commencement of the exam. No complaint(s) will be entertained thereafter.
3. All Questions are compulsory. Marks are indicated against each question.
4. Illustrate your answer with diagram wherever required.

SECTION-A

(Very Short Answer Type Questions)

Note: All Questions are compulsory: - **[12X1=12 Marks]**

S. No.	Question	Marks Allotted
1	What is Turbine?	1
2	Name any two non-renewable sources.	1
3	What are the primary sources of energy?	1
4	What does HCV stand for?	1
5	What is function of ash handling unit?	1
6	Define Isotope.	1
7	What is the most commonly used moderator in nuclear plants?	1
8	Differentiate Nuclear Fusion and Fission.	1
9	What is the fuel used in fast breeder reactor?	1
10	Define Half Life.	1
11	What is the function of Surge Tank?	1
12	What is S.I. Engine?	1

SECTION-B
(Short Answer Type Questions)

Note: All Questions are compulsory: - **[4X2=8 Marks]**

S. No.	Question	Marks Allotted
13	Classify different sources of energy.	2
14	Write a short note on supercharging.	2
15	What is basic difference between water tube and fire tube boiler.	2
16	What is combined gas power plant?	2

SECTION-C
(Descriptive Answer Type Questions)

Note: All Questions are compulsory: - **[4X4=16 Marks]**

S. No.	Question	Marks Allotted
17	Explain the mechanical and electrical dust collector. **OR** What are various coal handling devices?	4
18	Explain pulverized firing system with its types. **OR** Contrast unit system and central system of pulverized fuel firing.	4
19	Define Power plant. Explain principle of major power plants used. **OR** Explain Stoker firing and its types with neat and detailed diagram.	4
20	Explain the mechanical and electrical dust collector. **OR** Contrast unit system and central system of pulverized fuel firing.	4

SECTION-D
(Long Answer Type Questions)

Note: All Questions are compulsory: - **[4X6=24 Marks]**

S. No.	Question	Marks Allotted
21	Explain the construction and working of major component of steam power plant. **OR** Explain Water tube boiler with a detailed example.	6
22	Draw a flow chart for coal handling in steam power plant. **OR** With neat and clean diagram explain ash handling systems.	6
23	Explain Rankine cycle with p-v and T-S diagram. **OR** Compare working of PWR and BWR with suitable diagram.	6
24	Explain components and working of Hydroelectric Power Plant with diagram. **OR** Define supercharging and discuss • Methods of supercharging • Advantages of supercharging • Disadvantages of supercharging	6