

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE, NOVEMBER – 2023**

POWER PLANT ENGINEERING

[Maximum Marks: 75]

[Time: 3 Hours]

PART-A

I. Answer *all* the following questions in one word or one sentence. Each question carries 'one' mark.

(9 x 1 = 9 Marks)

		Module Outcome	Cognitive level
1.	Name any one nonconventional type of power plant.	M1.02	R
2.	Write the number indicating the quality of gasoline or petrol.	M1.04	U
3.	Name any one hydroelectric power plant located in Kerala.	M2.01	R
4.	Identify the large pipe that carries water from reservoir to turbine.	M2.01	U
5.	Identify the reaction in which energy is released by combining two or more nuclei.	M3.02	R
6.	State the use of Heavy water in a nuclear reactor.	M3.05	U
7.	Write any one method to reduce air pollution caused by power plants.	M4.03	U
8.	Name any one greenhouse gas.	M4.02	R
9.	Write any one safety to be observed in power plants.	M4.04	R

PART-B

II. Answer any *eight* questions from the following. Each question carries 'three' marks.

(8 x 3 = 24 Marks)

		Module Outcome	Cognitive level
1.	List any three factors affecting the choice of a power plant.	M1.02	U
2.	Write a short note on run off river hydroelectric power plant.	M2.02	U
3.	List any three components of a diesel power plant.	M2.04	U
4.	Summarise the advantages of a hydroelectric power plant.	M2.03	U
5.	Write the essential components of a hydroelectric power plant.	M2.01	U
6.	Define nuclear fission.	M3.02	U
7.	Write a note on safety policy to be observed in power plants.	M4.04	U
8.	List any three safety practices in chemical handling systems.	M4.05	U
9.	Describe acid fog.	M4.02	U
10.	Write short note on water pollution caused by power plants.	M4.03	U

PART-C

Answer all questions from the following. Each question carries 'seven' marks.

(6 x 7 = 42 Marks)

		Module Outcome	Cognitive level
III.	Sketch and explain the working of thermal power plant. OR	M1.03	A
IV.	Describe the working of a Junker's Gas Calorimeter with a neat sketch.	M1.05	U
V.	Classify the fuels. Mention its merits and demerits. OR	M1.04	U
VI.	Explain reheating in modern steam turbines with a line diagram.	M1.03	U
VII.	Illustrate the working of hydroelectric power plant with schematic diagram. OR	M2.01	A
VIII.	Sketch and explain the working of gas turbine power plant.	M2.05	U
IX.	Illustrate the working of a nuclear power plant with schematic diagram. OR	M3.06	A
X.	Describe about fuel materials and moderators used in nuclear reactor.	M3.05	U
XI.	Illustrate the working of a nuclear reactor with schematic diagram. OR	M3.03	A
XII.	Describe about control rods and coolants used in nuclear reactor.	M3.05	U
XIII.	Express Greenhouse effect. Explain its effects and prevention. OR	M4.02	U
XIV.	Summarise the statutory provisions related to boiler operation.	M4.06	U
