TED (21) – 3035
REVISION 2021

QID :

Reg. No. ……..
Name : …….

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/ COMMERCIAL PRACTICE-NOVEMBER 2024

MECHANICAL ENGINEERING

Time: 3 hours Maximum Marks: 75

PART A

I. Answer all the following questions in one word or sentence.

(9 x 1 = 9 Marks)

		Module Outcome	Cognitive level
1	The product of mass density and acceleration due to gravity is known as ……..	M1.01	R
2	The absolute pressure is the sum of …….	M1.02	R
3	Specific gravity of water is ……	M1.03	R
4	Explain incompressible flow of fluid	M2.02	R
5	Keplan Turbine is an example of ……..type of turbine	M3.01	R
6	Explain the classification of water turbine	M3.02	R
7	Write any two application of steam boiler	M4.01	R
8	Stroke is …….	M4.03	R
9	Light duty vehicles are generally……stroke engine	M4.04	R

PART B

II. Answer any Eight questions from the following

(8 x 3 = 24 Marks)

		Module Outcome	Cognitive level
1	Define Gauge pressure, vacuum pressure and Absolute pressure	M1.03	U
2	A fluid of specific gravity 0.4 is flowing through a pipe find out the density of the fluid	M1.04	A
3	Explain the following (a) Uniform flow (b) Rotational flow (c) Compressible flow	M2.01	U
4	Water flows through a pipe 200mm diameter 50m long with a velocity of 1.5 m/s. Find the head lost in friction (take f = 0.003)	M2.04	A
5	Define the following terms 1. Air vessel 2. Hydraulic efficiency	M3.02	U
6	A turbine running with a rotational speed of 900RPM under a head of 10M, developing a power of 30KW. Find out the specific speed of turbine	M3.02	A
7	Explain a hydroelectric power plant	M3.03	U
8	Write about the functions of steam boiler	M4.01	U
9	Explain the working of an IC engine	M4.03	U
10	Explain the comparison between two stroke and four stroke engine	M4.02	U

PART C

Answer all questions from the following. Each question carries seven marks
(6 x 7 = 42 Marks)

		Module Outcome	Cognitive level
III.	Summarize the various properties of fluids	M 1.04	A
	OR		
IV.	Explain a U tube manometer with figure	M 1.04	A
V.	Explain Bernoulli's theorem with assumptions and limitations	M2.04	A
	OR		
VI.	Explain the water hammer and its effects	M2.04	U
VII.	Using simple figure , Explain the working of a centrifugal pump	M3.01	U
	OR		
VIII.	Using simple figure , write about impulse and reaction turbines	M3.02	U
IX.	Explain multistage pump and selection of KW rating based on head	M3.03	U
	OR		
X.	Distinguish Kaplan turbine & Francis turbine	M3.0	U
XI.	Explain the working of four stroke petrol engine	M4.04	U
	OR		
XII.	Using block diagram , write about water tube and fire tube boiler	M4.01	U
XIII.	Explain the working principle of impulse and reaction turbine	M4.02	U
	OR		
XIV.	With neat figure explain the parts of an IC engine	M4.04	U

Name of Setter :

Signature with date :

Designation :

Name of Scrutinizer :

Signature with date :

Designation :