

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

MANUFACTURING TECHNOLOGY

[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.	Define the strength of a material.	M1.01	R
2.	What is a pattern?	M1.02	R
3.	Define sand mould casting.	M2.01	R
4.	What is the difference between cold working and hot working?	M2.03	U
5.	Define the term welding.	M3.01	R
6.	What are the constituents and their proportions in thermit welding process?	M3.03	R
7.	Name the types of flames used in oxy acetylene welding.	M3.02	R
8.	What is open die casting process?	M4.01	U
9.	What is upsetting in forging operation?	M4.02	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.	Explain any three mechanical properties of engineering materials.	M1.01	U
2.	Explain sweep moulding process.	M1.04	U
3.	Name the different properties of moulding sand.	M1.03	R
4.	What is the difference between gravity die casting and pressure die casting?	M2.01	U
5.	List the various cold working operations.	M2.03	R
6.	How welding process are classified?	M3.01	U
7.	Draw the schematic diagram of shield metal arc welding process.	M3.03	U
8.	Explain the edge preparation in butt welding process.	M3.04	U
9.	Explain the use of swage block.	M4.02	U
10.	Name the different forging operations.	M4.01	R

PART-C

Answer all questions. Each question carries 'seven' marks

(6 x 7 = 42 Marks)

		Module Outcome	Cognitive Level
III.	Define a gating system and with neat sketch explain all the elements in the gating system.	M1.05	U
	OR		
IV.	What are the main constituents of moulding sand and explain the effect of each on moulding sand.	M1.03	R
V.	Explain investment casting with a neat sketch.	M2.01	U
	OR		
VI.	Explain the process hot spinning with sketches.	M2.04	U
VII.	Name and explain different welding defects.	M3.04	U
	OR		
VIII.	With a neat sketch explain TIG welding process.	M3.03	U
IX.	Explain seam welding process with a diagram.	M3.03	U
	OR		
X.	Explain different welding position in arc welding.	M3.04	U
XI.	With the help of sketches explain press working operations.	M4.03	U
	OR		
XII.	What are the advantages and disadvantages of forging?	M4.01	U
XIII.	Explain the different types of mouldings.	M1.04	U
	OR		
XIV.	Briefly explain the classification of moulding sand.	M1.05	U
