

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE, APRIL – 2025**

**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.	Name any two materials used for making patterns.	M1.02	R
2.	Metal shapes inserted in moulds to achieve directional solidification are known as-----.	M1.04	R
3.	Mention one difference between Indirect extrusion and Direct extrusion.	M2.04	R
4.	Write any one application of Powder Metallurgy.	M2.05	R
5.	Name the filler material used in soldering.	M3.05	R
6.	How metal pieces are joined by fusion welding?	M3.01	U
7.	Write any one application of brazing.	M3.05	R
8.	Mention the use of Swages.	M4.02	R
9.	Press working operation which cuts metal pieces from edges of a sheet is known as-----.	M4.03	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.	Discuss the advantages of metal patterns.	M1.02	R
2.	Explain (a) blow holes (b) scab and (c) fins in casting defects	M2.02	R
3.	Discuss the disadvantages of cold working.	M2.03	R
4.	List out the various hot working processes.	M2.04	R
5.	Explain sintering process in powder metallurgy.	M2.05	U
6.	Discuss the advantages of TIG welding.	M3.03	R
7.	Explain blanking operation with a sketch.	M4.04	U
8.	What are the uses of Hardie hole and Pritchel hole in an anvil?	M4.02	R
9.	Explain (a) bolster plate and (b) Stripper plate	M4.03	U
10.	List out the advantages of Open die forging.	M4.01	R

**PART-C**

**Answer ‘all’ questions from the following. Each question carries ‘seven’ marks.**

**(6 x 7 = 42 Marks)**

		Module Outcome	Cognitive level
III.	Explain the various mechanical properties of Materials. <b>OR</b>	M1.01	U
IV.	Sketch and explain (a) Loose piece pattern and (b) Sweep pattern.	M1.02	U
V.	Explain the classification of moulding sands according to specific uses. <b>OR</b>	M1.03	U
VI.	With a schematic diagram explain the elements of a gating system	M1.05	U
VII.	Explain submerged plunger type hot chamber die casting machine with a neat diagram. <b>OR</b>	M2.01	U
VIII.	Explain centrifugal casting process with a schematic diagram. Also mention its applications.	M2.01	U
IX.	Explain thermit welding process with a neat diagram. <b>OR</b>	M3.03	U
X.	Explain MIG welding process with a neat diagram.	M3.03	U
XI.	Explain the various welding positions with sketches. <b>OR</b>	M3.04	U
XII.	Explain the different types of welded joints.	M3.04	U
XIII.	Discuss the advantages and disadvantages of forging. <b>OR</b>	M4.01	R
XIV.	Explain how a press is specified.	M4.03	U

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