

Enrollment No./Seat No.:

GUJARAT TECHNOLOGICAL UNIVERSITY

Bachelor of Engineering - SEMESTER - V EXAMINATION - WINTER 2025

Subject Code: 3151912

Date: 21-11-2025

Subject Name: Manufacturing Technology

Time: 10:30 AM TO 01:00 PM

Total Marks: 70

Instructions

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

	Marks
Q.1 (a) Define Manufacturing processes and enlist various manufacturing processes.	03
(b) List out types of Pattern and explain any three pattern with a neat sketch.	04
(c) Explain Investment casting process.	07
Q.2 (a) Explain Hot and Cold working Processes.	03
(b) Discuss about various types of rolling mill arrangements.	04
(c) Distinguish between wire drawing and tube drawing with neat sketches.	07

OR

(c) Explain the types of forging defects and write name of four products which are manufactured using the forging process.	07
Q.3 (a) Describe the carburizing flame with a neat sketch. Mention the materials which use this flame for welding.	03
(b) Critically compare TIG with MIG welding process.	04
(c) Explain the working principle of Resistance welding. Differentiate between Spot and Seam Welding processes.	07

OR

(a) Distinguish between welding, soldering, Brazing joining processes.	03
(b) Compare the leftward and rightward welding technique with diagram.	04
(c) Enlist the defects that are generally found in welding. Describe their cause and remedies.	07
Q.4 (a) Write the difference between thermosetting and thermoplastics.	03
(b) Write short note on compression molding.	04
(c) Enlist various plastic processing technologies. Explain injection moulding process with neat sketches.	07

OR

(a) Discuss about general properties of Plastics.	03
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(b) Explain calendaring process. **04**

(c) Explain briefly the following forging operations with neat sketches: (a) Coining operations: (b) Heading operation; (c) Punching operation (d) Blanking **07**

Q.5 (a) What is casting? List out step by step procedure of sand casting. **03**

(b) Compare the lapping and honing super finishing processes. **04**

(c) Enlist types of super finishing processes. Discuss the selection criteria for appropriate super finishing process. **07**

OR

(a) Explain Blow holes, Shrinkage and warpage in terms of casting. **03**

(b) State the significance of the superfinishing process. **04**

(c) Explain Burnishing process with a neat sketch. **07**
