

Enrollment No./Seat No.:

GUJARAT TECHNOLOGICAL UNIVERSITY
Bachelor of Engineering - SEMESTER - V EXAMINATION - WINTER 2025

Subject Code: 3152510

Date: 19-11-2025

Subject Name: Manufacturing Technology - II

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. Explain its importance in modern engineering.	03
(b) Classify various manufacturing processes with suitable examples.	04
(c) Discuss in detail the economic and technological definitions of manufacturing. How does process selection depend on product design?	07
Q.2 (a) List types of patterns and state materials used for pattern making.	03
(b) Explain the extrusion process and its advantages.	04
(c) Explain in detail how the selection of manufacturing process affects cost, productivity, and material utilization.	07
OR	
(c) Analyze the forging process and explain how forging defects can be minimized.	07
Q.3 (a) Define soldering and brazing. Differentiate between them.	03
(b) Define hot working and cold working with examples.	04
(c) Explain the design considerations for risers and gating systems.	07
OR	
(a) Define lapping and honing.	03
(b) Differentiate between thermoplastics and thermosetting plastics.	04
(c) Describe the working principles of injection moulding with diagrams.	07
Q.4 (a) List the different types of welding flames and their applications.	03
(b) Explain the process of buffing and polishing.	04
(c) Compare different super-finishing processes such as lapping, honing, and burnishing in terms of surface finish and applications.	07
OR	
(a) Explain the working principle of oxy-acetylene gas welding.	03
(b) Explain the function of electrode coating in arc welding.	04

- (c) Explain the principle, process, and applications of ultrasonic welding. 07
- Q.5** (a) What is strain hardening? 03
- (b) Explain wire drawing process and its limitations. 04
- (c) Describe various sheet metal operations such as blanking, piercing, coining, and bending. 07

OR

- (a) Write any three general properties of plastics. 03
- (b) Explain the process of compression moulding. 04
- (c) Compare blow moulding and transfer moulding processes with applications. 07
