

Enrollment No./Seat No.:

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

Subject Code: 3152510

Date: 15-05-2025

Subject Name: Manufacturing Technology - II

Time: 02:30 PM TO 05:00 PM

Total Marks: 70

Instructions

- 1. Attempt all questions.**
- 2. Make suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks.**

	Marks
Q.1 (a) List various types of patterns used in foundry work.	03
(b) Explain different types of allowances given on patterns with suitable sketches.	04
(c) Describe the complete sand casting process with a neat sketch. Also explain the role of riser and gating system design.	07
Q.2 (a) Define hot working and cold working.	03
(b) Differentiate between wire drawing and tube drawing with sketches.	04
(c) Evaluate forging defects and their remedies with appropriate examples.	07
OR	
(c) Compare MIG and TIG welding in terms of working principle, application, advantages, and limitations.	07
Q.3 (a) Define arc welding and name its types.	03
(b) Analyze the function of flux and electrode coating in welding.	04
(c) Evaluate various types of resistance welding processes and their applications in industry.	07
OR	
(a) Classify plastics with examples.	03
(b) Explain extrusion moulding process with neat sketch and application.	04
(c) Analyze defects in plastic moulding and suggest preventive measures.	07
Q.4 (a) List various types of polishing processes.	03
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(b) Differentiate between lapping and honing processes.	04
(c) Compare barrel tumbling and burnishing in terms of working mechanism, advantages, and limitations.	07

OR

- (a) List three advantages of powder coating over conventional painting. 03
- (b) Compare compression moulding and transfer moulding with diagrams. 04
- (c) Propose a welding procedure for joining aluminum to stainless steel, justifying the method. 07

- Q.5**
- (a) Analyze why preheating is necessary for welding cast iron. 03
 - (b) Compare coining and embossing operations with diagrams. 04
 - (c) Name tests conducted on moulding sand and state their significance. 07

OR

- (a) Explain the process of buffing and its applications. 03
- (b) Explain roll pass sequence used in rolling operations. 04
- (c) Design a forging sequence for a crankshaft, mentioning hammer types and die considerations. 07
