

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V (NEW) EXAMINATION – WINTER 2023****Subject Code:3152510****Date:07-12-2023****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: (a) Pattern (b) Nugget	03
	(b) Classify the joining processes.	04
	(c) Distinguish between hot forging and cold forging process.	07
Q.2	(a) Enlist the types of patterns.	03
	(b) Explain the function of parting sand and backing sand.	04
	(c) Construct the sketch of complete gating system and labeled the same.	07
	OR	
	(c) Calculate the draft allowance for the wooden single piece pattern to cast cube workpiece of 211mm X 211mm X 211mm. Take draft value 0.60°. Draw the sketch of pattern and labeled the final dimensions.	07
Q.3	(a) Write the types of casting defects.	03
	(b) Describe the working principle of TIG welding process.	04
	(c) Write the name of three types of flame used in gas welding with their most common applications.	07
	OR	
Q.3	(a) Write the properties require for core sand.	03
	(b) Discuss the advantages and disadvantages of soldering process.	04
	(c) Give any two applications of each: (a) Seam welding (b) Friction welding (c) Explosive welding.	07
Q.4	(a) List the names of different sheet metal processes.	03
	(b) Distinguish advantages and disadvantages of hot extrusion over cold extrusion.	04
	(c) Explain the working principle of embossing process with neat sketch and propose its applications.	07
	OR	
Q.4	(a) Write the types of sheet metal dies.	03
	(b) Write any two defects with reason(s) occurred in forming processes.	04
	(c) Explain the principle of blanking operation with neat sketch.	07
Q.5	(a) Write the general properties of plastics.	03
	(b) Demonstrate the working principle of compression moulding through neat sketch and labeled the same.	04
	(c) Discuss the working principle and applications of buffing.	07

OR

- Q.5**
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| (a) | Identify any three superfinishing processes in which loose abrasives are used. | 03 |
| (b) | Demonstrate the working principle of blow molding process through neat sketch and labeled the same. | 04 |
| (c) | Explain the working principle of burnishing with neat sketch. | 07 |
