

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER– IV(NEW) EXAMINATION – SUMMER 2023****Subject Code:2141908****Date:21-07-2023****Subject Name:Manufacturing Processes -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) State the influence of cold working on mechanical properties of metals.	03
	(b) Define the following terms used in sand mould casting. i) Sprue ii) Core iii) Chills iv) Chaplets	04
	(c) Classify manufacturing processes with the help of a classification tree. Also describe the factors affecting the selection of manufacturing process for a product.	07
Q.2	(a) State the importance of recrystallization temperature in metal working.	03
	(b) Enlist various patterns material and explain any two with their advantages and limitations.	04
	(c) Discuss forging defects, their causes and remedies.	07
	OR	
	(c) Draw the schematic sketch of Gating system for casting. Mention the working function of each Gating system elements.	07
Q.3	(a) State the functions of a riser. The riser must solidify later than the casting – Justify.	03
	(b) Explain the effect of clay content and moisture content on the properties of sand.	04
	(c) What are the different types of patterns? Describe any three patterns with neat figures.	07
	OR	
Q.3	(a) Differentiate between Brazing and Soldering.	03
	(b) Define a welding arc. Explain any two arc initiating methods.	04
	(c) Explain the principle of Resistance welding with the help of resistance welding cycle. Differentiate between Spot and Seam Welding processes.	07
Q.4	(a) State the functions of flux coating over the stick electrode used in SMAW.	03
	(b) What do you understand by straight polarity and reverse polarity in arc welding? Explain the basis of selection of polarities in arc welding.	04
	(c) Write a short note on Laser Beam Welding.	07
	OR	
Q.4	(a) What is stock strip layout? What is its importance?	03
	(b) Explain in detail hot rolling and cold rolling.	04

- (c) Explain wire drawing and tube drawing with neat sketches. **07**
- Q.5** (a) With the help of neat sketches explain blanking, piercing and bending. **03**
(b) Explain the differences between direct and indirect extrusion with neat sketch. **04**
(c) With the help of neat sketch, explain injection moulding process used to manufacture plastic products. **07**
- OR**
- Q.5** (a) Explain various properties of plastics. **03**
(b) What are composite materials? Classify composite materials in brief. **04**
(c) Draw different glass structures. Explain properties and applications of glass. **07**
