

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V (NEW) EXAMINATION – WINTER 2021****Subject Code:3151912****Date:27/12/2021****Subject Name:Manufacturing Technology****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.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Write name of different type of oxy-acetylene gas flame and explain any one of it.	03
	(b) Give broad classification of various manufacturing processes.	04
	(c) Write difference between Hot rolling and Cold rolling. Explain the terms: Bloom, Billet, Slab, Plate and sheet.	07
Q.2	(a) What is Shrinkage allowance and Draft allowance?	03
	(b) Explain properties of moulding sand.	04
	(c) Write name of different die-casting methods. Explain any one with fig.	07
	OR	
	(c) Write name of different types of patterns and Explain any three patterns with details.	07
Q.3	(a) Write function of electrode coating.	03
	(b) Explain welding power source characteristic.	04
	(c) Describe Metal Inert Gas Arc welding also write advantage, Disadvantages and application of MIG Arc welding.	07
	OR	
Q.3	(a) Explain polarity in arc welding.	03
	(b) Explain principal of resistance welding with fig.	04
	(c) Write the name of defects in welded joints. Explain any three with cases and remedies.	07
Q.4	(a) Derive relationship between True Stress(σ) and Engineering stress(S). True Strain(ϵ) and Engineering strain(e).	03
	(b) Differentiate direct and indirect Extrusion process.	04
	(c) Enlist the various type of presses used in forging. Explain with neat sketch.	07
	OR	
Q.4	(a) Explain sheet-metal working processes: Shearing, Piercing and Blanking.	03
	(b) How do you compare forged components with cast components?	04
	(c) Discuss wire drawing & Tube drawing.	07
Q.5	(a) Name the different Thermosetting Resins and Thermoplastic Resins.	03
	(b) Explain finishing process: 1. Honing 2. Lapping	04
	(c) Explain injection moulding processes stating its advantages, limitations and application.	07

OR

- Q.5** (a) Differentiate Thermosetting plastics and Thermoplastics.
(b) Write short note on compression molding.
(c) Write short note on the following:
(i) Grinding (ii) Chemical mechanical polishing.

03

04

07

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