

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER– IV (New) EXAMINATION – WINTER 2019****Subject Code: 2141908****Date: 16/12/2019****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.

		MARKS
<b>Q.1</b>	(a) Define terms: (1) Pattern (2) Cope and (3) Drag	<b>03</b>
	(b) List the Type of patterns and Explain any two with Sketch.	<b>04</b>
	(c) Classification of manufacturing processes. Also describe the factors affecting the selection of manufacturing process for a product.	<b>07</b>
<b>Q.2</b>	(a) Explain the functions of (1) Facing sand (2) Backing sand (3) System sand	<b>03</b>
	(b) Explain the Shell Moulding process with suitable sketch.	<b>04</b>
	(c) State the types of furnaces used in foundries and discuss in brief the working of cupola furnace.	<b>07</b>
	<b>OR</b>	
	(c) List various types of core. Explain Three cores with suitable sketch.	<b>07</b>
<b>Q.3</b>	(a) Classify the metal joining processes.	<b>03</b>
	(b) List of welding joints and explain any two in brief.	<b>04</b>
	(c) Describe the types of flame obtained in oxy-acetylene gas welding with neat sketch.	<b>07</b>
	<b>OR</b>	
<b>Q.3</b>	(a) List welding symbols? Explain two Basic symbols with figure.	<b>03</b>
	(b) Explain the principle of Arc welding.	<b>04</b>
	(c) Explain the friction welding process. States advantages, limitation and application.	<b>07</b>
<b>Q.4</b>	(a) State the material properties which are important in metal forming.	<b>03</b>
	(b) Explain the terms: Ingot, slab, bloom and billet.	<b>04</b>
	(c) Discuss the defects, causes and remedies of forging defects.	<b>07</b>
	<b>OR</b>	
<b>Q.4</b>	(a) State the advantages and limitations of forging process.	<b>03</b>
	(b) Describe the piercing and blanking processes.	<b>04</b>
	(c) Explain forward and backward extrusion process with suitable sketch.	<b>07</b>
<b>Q.5</b>	(a) List step of powder processing method for manufacturing of ceramic matrix composites.	<b>03</b>
	(b) Draw the various glass structures and list its properties.	<b>04</b>
	(c) Explain Transfer Moulding process and stating its advantages, limitation and application.	<b>07</b>
	<b>OR</b>	
<b>Q.5</b>	(a) Classification of plastics materials and its applications.	<b>03</b>
	(b) List various ceramic structures and explain any one in details.	<b>04</b>
	(c) Classification of composites and explain any two Composites.	<b>07</b>

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