

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-IV (NEW) EXAMINATION – SUMMER 2022****Subject Code:3140204****Date:04-07-2022****Subject Name:Automotive Manufacturing Processes and Technology****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.

		<b>MARKS</b>
<b>Q.1</b>	(a) Explain the reasons for development of non- traditional machining process.	<b>03</b>
	(b) Describe any four operations that can be carried out on Milling machine along with neat sketches	<b>04</b>
	(c) Explain working principle of Lathe machine with neat sketch.	<b>07</b>
<b>Q.2</b>	(a) Give brief information about Honing super finishing technology.	<b>03</b>
	(b) Explain briefly Electro Discharge Machining with neat sketch	<b>04</b>
	(c) Describe Compression Moulding Plastic manufacturing process with neat sketch along with its applications	<b>07</b>
	<b>OR</b>	
	(c) Describe Extrusion Moulding Plastic manufacturing process with neat sketch along with its applications	<b>07</b>
<b>Q.3</b>	(a) Give difference between welding, soldering and welding	<b>03</b>
	(b) Explain the Oxy Acetylene Gas flames with suitable sketch.	<b>04</b>
	(c) Explain principle of Resistance Welding and describe Resistance Seam Welding with neat sketch	<b>07</b>
	<b>OR</b>	
<b>Q.3</b>	(a) Give detailed classification of welding processes	<b>03</b>
	(b) Explain the metal transfer mode in GMAW welding with suitable sketch.	<b>04</b>
	(c) Explain Electron Beam Welding with Suitable sketch	<b>07</b>
<b>Q.4</b>	(a) Differentiate between Casting and Forging process	<b>03</b>
	(b) Explain shrinkage allowances and draft allowance in casting.	<b>04</b>
	(c) What is pattern? list different types of patterns and explain any two with neat sketch	<b>07</b>
	<b>OR</b>	
<b>Q.4</b>	(a) List out various casting defects. Explain any two.	<b>03</b>
	(b) Explain the Investment casting process with suitable sketch.	<b>04</b>
	(c) Explain Core Print with its purpose. Explain with neat sketch any two types of Core.	<b>07</b>
<b>Q.5</b>	(a) Define Ingot, Slab and Billet.	<b>03</b>
	(b) What are the advantages of hot working over cold working of metals?	<b>04</b>
	(c) Explain Wire drawing and Tube drawing with suitable sketch	<b>07</b>
	<b>OR</b>	
<b>Q.5</b>	(a) Importance of recrystallization temperature for mechanical working process.	<b>03</b>
	(b) Describe the punching and bending processes with suitable sketches.	<b>04</b>
	(c) What is forging process? Explain drop forging & roll forging.	<b>07</b>

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