

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV (NEW) EXAMINATION – WINTER 2023****Subject Code:3140204****Date:24-01-2024****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.

		MARKS
Q.1	(a) Define manufacturing process and classify the manufacturing processes.	03
	(b) Give the specification of a lathe.	04
	(c) Differentiate between hot working process and cold working process.	07
Q.2	(a) Write the advantages and disadvantages of CNC machines.	03
	(b) List out the types of operation that can be performed in a milling machine.	04
	(c) Explain the working principle of a shaper machine with neat diagram.	07
	OR	
	(c) Show the various parts of drilling machine in a diagram and state the functions of each part.	07
Q.3	(a) Discuss the rolling defects with its causes.	03
	(b) Describe blanking and piercing in brief.	04
	(c) Explain various types of forging operations with neat sketch.	07
	OR	
Q.3	(a) Define: (i) Bloom (ii) Slab (iii) Billet	03
	(b) Write a short note on hot spinning process.	04
	(c) Explain Planetary rolling mill and Tandem rolling mill with suitable diagrams.	07
Q.4	(a) List out the plastic part manufacturing processes.	03
	(b) Give the comparison between Welding, Soldering and Brazing.	04
	(c) Enlist the Resistance welding processes and Explain with neat sketch: (i) Spot welding (ii) Seam welding.	07
	OR	
Q.4	(a) Give the general properties of plastic.	03
	(b) Enlist defects of weld and explain each in brief.	04
	(c) Describe Tungsten Inert Gas welding in detail with neat sketch.	07
Q.5	(a) Why the Allowances are provided for the making a Pattern?	03
	(b) Explain the different types of moulding sands.	04
	(c) Explain the construction and working of cupola furnace with diagram.	07
	OR	
Q.5	(a) Give the factors affecting on the selection of pattern materials.	03
	(b) Write a short note on Centrifugal Casting.	04
	(c) Explain gating system in casting with neat sketch.	07
