

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2023

Subject Code:3162312

Date:04-07-2023

Subject Name:Processing techniques for Thermoplastics

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) What are the different types of thermoforming process?	03
	(b) Briefly discuss vacuum forming process with a diagram.	04
	(c) List and explain material characteristics required for Thermoforming.	07
Q.2	(a) How to specify rotational moulding machine?	03
	(b) What are the advantages of Injection Blow Molding Process?	04
	(c) Define Blow Molding. Explain Extrusion Blow Molding (EBM) process with neat sketch.	07
	OR	
	(c) What is orientation temperature? Explain hoop ratio, axial ratio and blow up ratio.	07
Q.3	(a) What is parison programming? Why it is required?	03
	(b) Explain different Heating methods used for Thermoforming.	04
	(c) Explain injection blow molding process with a diagram.	07
	OR	
Q.3	(a) List points of comparison between Blister Packaging and Skin Packaging techniques.	03
	(b) Write the advantages and disadvantages of rotational moulding process.	04
	(c) Explain Stretch Blow Molding Process with neat sketch	07
Q.4	(a) List the disadvantages of Injection Blow moulding Process.	03
	(b) What is plug assist forming? Explain with figure.	04
	(c) Write a short note on the Rotational Molding Process.	07
	OR	
Q.4	(a) Discuss matched mould forming process.	03
	(b) List the types of Heat Exchangers. Explain any one.	04
	(c) Explain : (1) Slush Molding (ii) Low Pressure Molding	07

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| Q.5 | (a) | Explain independent arm type rotational moulding process. | 03 |
| | (b) | What are the advantages and disadvantages of thermoforming process? | 04 |
| | (c) | Compare: Rotational Molding with Blow Molding Process | 07 |

OR

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| Q.5 | (a) | Explain knife coating technique with a diagram. | 03 |
| | (b) | Discuss about molds used for thermoforming. | 04 |
| | (c) | Discuss plastisol preparation. | 07 |
