

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV (NEW) EXAMINATION – WINTER 2018

Subject Code: 2142301

Date: 22/11/2018

Subject Name: Basic Plastic Processing and Thermal Engineering

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.

		MARKS
Q.1	(a) (1) What do you mean by breathing in compression molding? (2) PET bottles are manufactured by _____ process. (3) Define conduction	03
	(b) (1) Define plastic processing. (2) Wastage is less in injection blow molding than extrusion blow molding. (True or False) (3) What is a parison? (4) Insert molding can be done by transfer molding process. (True/False)	04
	(c) Write a short note on plug assist vacuum forming technique.	07
Q.2	(a) What is bulk factor? Explain in brief.	03
	(b) List four points of difference between thermoplastics & thermosets.	04
	(c) List the advantages and disadvantages of rotational molding process.	07
	OR	
	(c) Explain the plunger type transfer molding process with a neat sketch.	07
Q.3	(a) List the steps in compression molding.	03
	(b) What are preforms? Advantages of preforms in compression molding.	04
	(c) List the types of molds in compression molding and explain any one.	07
	OR	
Q.3	(a) What is breathing and why is it important in compression molding process?	03
	(b) List the material characteristics required for thermoforming process.	04
	(c) With a neat sketch explain pot type transfer molding process.	07
Q.4	(a) List the types of heat exchanger and explain any one.	03
	(b) Explain the pressure forming process.	04
	(c) Write a short note on parison programming.	07
	OR	
Q.4	(a) Compare blow molding process with rotational molding.	03

- (b) What is pinch-off in blow molding. **04**
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- (c) Differentiate between injection blow molding and extrusion blow molding. **07**
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- Q.5** (a) List any three defects occurring in blow molding and give its causes and remedies. **03**
- (b) Enlist the advantages and disadvantages of transfer molding process. **04**
- (c) Explain the Injection blow molding process. **07**
- OR**
- Q.5** (a) Define convection & radiation. Explain Fourier's law of heat transfer. **03**
- (b) Explain rotational molding process briefly. **04**
- (c) Discuss the steps in compression molding process along with advantages and disadvantages. **07**

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