Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE –SEMESTER IV– EXAMINATION –SUMMER 2015

Subject Code:2142301 **Date:08/06/2015**

Subject Name: Basic Plastic Processing & Thermal Engineering

Time: 10:30am-1.00pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Describe pot type transfer molding process. Give advantages and limitations of transfer molding.	**07**
	(b)	Explain types of molds for compression molding with neat diagram.	**07**
Q.2	**(a)**	Give various forming techniques. Discuss straight forming process with neat diagram.	**07**
	(b)	Explain basic compression molding process steps along with its advantages and limitations.	**07**
		OR	
	(b)	Why preheating of a material is required? Explain various process variables for compression molding process.	**07**
Q.3	**(a)**	Write about (1) Drape forming (2) Snapback forming.	**07**
	(b)	Define: (1) Preforms (2) Cavity (3) Bulk factor (4) Radiation (5) Pinch-off (6) Convection (7) Core.	**07**
		OR	
Q.3	**(a)**	Discuss injection stretch blow moulding process with neat diagram and their advantages and disadvantages.	**07**
	(b)	Discuss any three Problems, Causes and Remedies of thermoforming and blow moulding process each.	**07**
Q.4	**(a)**	What is transfer molding? Differentiate between compression and transfer molding.	**07**
	(b)	Classify blow molding processes. Give difference between Injection Blow Molding and Extrusion Blow Molding.	**07**
		OR	
Q.4	**(a)**	What is the function of Heat Exchanger? Explain shell and tube heat exchanger in with neat diagram.	**07**
	(b)	Define conduction. Derive Fourier's law equation for conduction.	**07**
Q.5	**(a)**	What is parison programming? Explain parison programming in detail.	**07**
	(b)	Explain plug assist thermoforming process with neat diagram.	**07**
		OR	
Q.5	**(a)**	List various cold forming process. Explain any one in detail. Give advantages and disadvantages of cold forming process.	**07**
	(b)	Define thermoforming. Discuss various types of materials used in thermoforming and material selection criteria in detail.	**07**

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