Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–IV • EXAMINATION – SUMMER 2013

Subject Code: 142301 **Date: 07-06-2013**

Subject Name: Basic Plastics Processing And Thermal Engineering

Time: 10:30am – 01:00pm **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)**	Explain about Bulk Factor and Preforms in detail.	**07**
	(b)	List the Types of Compression mold. Explain about Semi-positive mold in detail with neat sketch.	**07**
Q.2	**(a)**	List and Explain material selection criteria for Thermoforming process.	**07**
	(b)	Explain Pot type Transfer molding process in detail.	**07**
		OR	
	(b)	What is Plastic Processing Techniques (PPT)? Classify PPT as per material to be process and as per product contour.	**07**
Q.3	**(a)**	Define Compression molding. Explain process cycle in detail.	**07**
	(b)	Compare: Compression molding with Transfer molding.	**07**
		OR	
Q.3	**(a)**	Define: Conduction, Convection & Thermal Radiation. Explain Fourier's Law of Heat Transfer.	**07**
	(b)	Explain Stretch Blow molding process with neat sketch.	**07**
Q.4	**(a)**	Give causes and remedies of the following defects : (1) Short-Shot (2) Flash (3) Orange Peel	**07**
	(b)	Explain: (1) Parison Programming (2) Advantages of Injection Blow molding over Extrusion Blow molding	**07**
		OR	
Q.4	**(a)**	Define Thermoforming. List advantages & dis-advantages of it. Also list general process steps.	**07**
Q.4	**(b)**	Explain: (1) Straight Forming (2) Snapback Forming	**07**
Q.5	**(a)**	Explain Plug-Assist forming process in detail. Also explain variables of the Plug-Assist forming process	**07**
	(b)	What is Heat Exchanger? List the types of Heat Exchanger. Explain any one in detail.	**07**
		OR	
Q.5	**(a)**	Define Blow molding. Give classification of Blow molding. Explain Intermittent Extrusion Blow molding process in detail.	**07**
	(b)	Explain the application of Thermoformed articles in the field of Packaging.	**07**

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