

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-IV EXAMINATION – WINTER 2015

Subject Code: 142301**Date: 22/12/2015****Subject Name: Basic Plastic Processing and Thermal Engineering****Time: 02:30pm to 05:00pm****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) Define Thermoforming. List advantages and Disadvantages of Thermoforming compare to Injection molding process. **07**
(b) List and explain material selection criteria for Thermoforming. **07**
- Q.2** (a) What is Bulk Factor? What is Preforms & explain with Advantages & Disadvantages. **07**
(b) Compare: Extrusion Blow molding with Injection Blow molding. **07**
- OR**
- (b) Give the classification of Blow Molding Process. Explain Continuous Extrusion Blow Molding Process with neat sketch. **07**
- Q.3** (a) State and explain the Stefan Boltzmann Law for the rate of heat radiation from black body to another black body. **07**
(b) Define mold. List type of Compression molds. Explain Semi-positive mold with neat sketch. **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) Compare: Compression Molding with Transfer Molding. **07**
(b) Explain about parison programming in detail. **07**
- OR**
- Q.4** (a) Define Transfer molding and Explain Pot type transfer molding process with neat diagram. **07**
(b) List various process used for manufacture Thermoformed articles. Explain any two in detail. **07**
- Q.5** (a) Compare: Skin packaging with Blister packaging. **07**
(b) List the types of Heat Exchanger. Explain any two in detail. **07**
- OR**
- Q.5** (a) Explain: (1) Straight Forming (2) Match tool Forming **07**
(b) Explain the Types of Compression Molds in details. **07**
