

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-IV • EXAMINATION – WINTER • 2014

Subject Code: 142301**Date: 22-12-2014****Subject Name: Basic Plastics Processing and Thermal Engineering****Time: 02:30 pm - 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.

- Q.1 (a)** Give the classification of Blow Molding Process. Explain Continuous Extrusion Blow Molding Process with neat sketch. **07**
- (b)** List & Explain the basic Material characteristic required for Thermoforming. **07**
- Q.2 (a)** Differentiate: Injection Blow Molding & Extrusion Blow Molding **07**
- (b)** List the types of the Forming process. Explain Straight forming process with neat sketch. **07**
- OR**
- (b)** List the types of Mold used for Compression Molding. Explain Positive Mold with Neat sketch. **07**
- Q.3 (a)** Explain Pot type transfer molding process with neat sketch. **07**
- (b)** Explain in brief: (1) Bulk Factor (2) Preforms **07**
- OR**
- Q.3 (a)** Explain about parison programming in detail. **07**
- (b)** What is plastic processing? Classify the processing method and what are the factors depends on the selection of process for producing a specific product? **07**
- Q.4 (a)** Explain about variables during the compression process? **07**
- (b)** Explain the mode of heat transfer? Explain the plate type heat exchanger. **07**
- OR**
- Q.4 (a)** State and explain the Stefan Boltzmann Law for the rate of heat radiation from black body to another black body. **07**
- (b)** Briefly explain the twin sheet thermoforming process. **07**
- Q.5 (a)** Define: Conduction, Convection & Thermal Radiation. Explain Fourier's Law of Heat Transfer. **07**
- (b)** Give causes and remedies of the following defects : (1) Short-Shot (2) Flash (3) Orange Peel **07**
- OR**
- Q.5 (a)** Explain Stretch Blow molding process with neat sketch. **07**
- (b)** List and Explain about variables of Plug Assist forming process. **07**
