

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- IVth SEMESTER-EXAMINATION – MAY/JUNE- 2012****Subject code: 142301****Date: 23/05/2012****Subject Name: Basic Plastic Processing & Thermal Engineering****Time: 10:30 am – 01:00 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) Define Term Plastic Processing. List the various methods used for Processing of Thermoplastic & Thermoset materials **07**
(b) List & Explain the Material characteristic required for Thermoforming. **07**

- Q.2** (a) Define Thermoforming. List Advantages & Disadvantages of Thermoforming. List the basic Process steps of it. **07**
(b) Give the classification of Blow Molding Process. Explain Intermittent Extrusion Blow Molding Process with neat sketch. **07**

OR

- (b) List the types of the Forming process. Explain Drape forming process with neat sketch. **07**

- Q.3** (a) Explain about application of Thermoformed materials in the field of Packaging. **07**
(b) Differentiate: Injection Blow Molding & Extrusion Blow Molding **07**

OR

- Q.3** (a) Define: (1) Compression Molding (2) Curing (3) Core (4) Cavity (5) Preforms (6) Blow-Up- Ratio (7) Pinch-off **07**
(b) List the types of Mold used for Compression Molding. Explain Semi-Positive Mold with Neat sketch. **07**

- Q.4** (a) Explain in brief: (1) Bulk Factor (2) Heaters for Compression Mold **07**
(b) Differentiate: Compression Molding & Transfer Molding **07**

OR

- Q.4** (a) Define Transfer Molding. List types of Process of Transfer Molding. Explain any one with neat sketch. **07**
(b) Define Blow Molding. Explain Material characteristic required for Blow Molding Process. List the basic Process steps for Blow Molding. **07**

- Q.5** (a) List the modes of Heat Transfer. Explain any two in brief. **07**
(b) List General laws of Heat Transfer. Explain any one. **07**

OR

- Q.5** (a) Explain Shell & Tube heat Exchanger. **07**
(b) What is Temperature correction factor f ? Explain its importance. **07**
