

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

## GUJARAT TECHNOLOGICAL UNIVERSITY

M.E –II<sup>st</sup> SEMESTER–EXAMINATION – JULY- 2012

Subject code: 1722404

Date: 14/07/2012

Subject Name: Secondary Plastics Processing Techniques

Time: 10:30 am – 13:00 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) With neat sketch explain the following thermoforming process with their advantage & disadvantages-- a) Snap-back vacuum forming b) Pressure forming. **07**
- (b) Explain advantage of FRP over metals & Describe Centrifugal Casting Process. **07**

- Q.2** (a) Write about the role of Configuration and describe the process of Calendaring in detail. **07**
- (b) Explain Match Die Moulding process with a neat diagram with its applications. **07**

**OR**

- (b) Explain in detail about Three methods of Machining of Plastics. **07**
- Q.3** (a) Write about the Electrostatic Powder Gun Coating & its applications. **07**
- (b) Give details of process of manufacture of hollow article, its merits and demerits. **07**

**OR**

- Q.3** (a) Explain the Pultrusion Technique in detail & its advantage and disadvantages. **07**
- (b) Discuss in detail about Spin & Ultrasonic Welding. **07**
- Q.4** (a) Describe the Slush Casting Process in detail and give its applications. **07**
- (b) With a neat sketch explain the High Pressure Structural Foam Moulding Process. **07**

**OR**

- Q.4** (a) Write note on Laser Cutting, Buffing, Threading and Tapping. **07**
- Q.4** (b) Explain the Physical & Chemical Foaming Process. **07**

- Q.5** (a) Write short note on-a) Material selection criteria for the thermoforming process and b) Stretch ratio. **07**
- (b) What is Hot Stamping Process? Write in details about Hand lay-up and Spray-up Technique. **07**

**OR**

- Q.5** (a) Explain the (i) Calendaring Process & its variables and (ii) Electroplating method **07**
- (b) Explain the High Frequency Welding Thermal Sealing in detail. **07**

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