

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE SEM-III Examination-Dec.-2011

Subject code: 132302

Date: 17/12/2011

Subject Name: Manufacturing of Plastic Materials

Time: 2.30 pm -5.00 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) Compare salient features of bulk, solution, suspension and emulsion polymerization techniques. **07**
(b) Discuss the manufacturing process of ethylene and styrene monomers. **07**

- Q.2** (a) Explain differentiate between Thermoplastics and Thermo- sets? **07**
(b) Draw the plant layout of any plastic material manufacturing industry. **07**
OR
(b) Explain Geometric Isomerism of Polybutadiene. **07**

- Q.3** (a) Write the manufacturing technique of acrylonitrile monomer. **07**
(b) Differentiate between homopolymer and copolymer with suitable examples. **07**

OR

- Q.3** (a) Discuss the suspension polymerization technique. **07**
(b) Draw the layout of Naphtha Cracking Process. **07**

- Q.4** (a) Explain differentiate between copolymer and blend. **07**
(b) Differentiate between linear, branched and cross linked polymers. **07**
OR

- Q.4** (a) Explain manufacturing process of Melamine Formaldehyde resin. **07**
(b) Explain in short a) Chain polymerization b) Curing agent c) Initiator. **07**

- Q.5** (a) Give properties and applications of epoxy resins. **07**
(b) Explain the manufacturing process of Resols. **07**

OR

- Q.5** (a) Explain properties and applications of Urea formaldehyde resin. **07**
(b) Explain manufacturing process and applications of Unsaturated Polyester resins. **07**
