

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-III • EXAMINATION – WINTER • 2014****Subject Code: 132302****Date: 30-12-2014****Subject Name: Manufacturing of Plastic Materials - I****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) Explain about linear, branched and cross linked polymers. **07**
(b) Explain Naphtha Cracking Process with flow diagram. **07**
- Q.2** (a) Differentiate between homopolymer and copolymer with suitable examples. **07**
(b) Discuss the manufacturing process of ethylene and styrene monomers. **07**
- OR**
- (b) Explain Manufacturing of vinyl chloride via acetylene HCL reaction with flow diagram. **07**
- Q.3** (a) Explain manufacturing of Melamine formaldehyde resin with flow diagram. **07**
(b) Give properties & application of phenol formaldehyde resin. **07**
- OR**
- Q.3** (a) Explain solution polymerization in detail. **07**
(b) Explain emulsion polymerization in detail. **07**
- Q.4** (a) Explain: (1) Homo chain & Hetro chain Polymer **07**
(2) Homo Polymer & Co-Polymer
(b) Define: (1) Curing (2) Monomer (3) Polymer (4) Polymerization (5) Atactic **07**
(6) Isotactic (7) Syndiotactic
- OR**
- Q.4** (a) Explain manufacturing process of Propylene monomer. **07**
(b) Explain the term Confirmation & Configuration with suitable example. **07**
- Q.5** (a) Explain manufacturing of Acrylonitrile monomer with flow diagram. **07**
(b) Give properties & application of urea formaldehyde & melamine formaldehyde. **07**
- OR**
- Q.5** (a) Explain the manufacturing process of Polyurethane in brief. **07**
(b) List properties and application of Epoxy resin. **07**
