Seat No.: _____ Enrolment No._____

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 (2) Homo Polymer & Co-Polymer	**07**
	(b)	Define: (1) Curing (2) Monomer (3) Polymer (4) Polymerization (5)Atactic (6) Isotactic (7) Syndiotactic	**07**
		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**

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