Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V • EXAMINATION – SUMMER 2015

Subject Code: 153602 **Date:07/05/2015**

Subject Name: Technology of Polymeric and Rubber Materials-I

Time:2.30PM-5.00PM **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)**	Write detailed note on the synthesis of ABS plastic, its properties and application.	**07**
	(b)	Explain in detail synthesis of Nomex including reaction and its important properties.	**07**
Q.2	**(a)**	Explain in detail production SMA resin and its important properties & application.	**07**
	(b)	Write short note on the synthesis of (i) PMMA (ii) Polyacrylic acid	**07**
		OR	
	(b)	Write short note on the synthesis of (i) Poly acrylonitrile (ii) HDPE	**07**
Q.3	**(a)**	Explain the production of SAN plastic, its application and important properties.	**07**
	(b)	Write a note on the production of PEEK and its important properties and major applications.	**07**
		OR	
Q.3	**(a)**	Write general scheme for the synthesis of polyamides. Explain in detail production of Nylon6, 6 and its major usage.	**07**
	(b)	Write short notes on (i) Polyacrylonitrile (ii) HIPS	**07**
Q.4	**(a)**	Write a detailed note on Polyester production. Explain in detail with reaction scheme mechanism of trans-esterification.	**07**
	(b)	Write a detailed note on the synthesis of PVC including main monomers used and its important properties	**07**
		OR	
Q.4	**(a)**	Explain in detail PAES production including monomers used and reaction mechanism involved.	**07**
	(b)	Write short notes on (i) LDPE (ii) PET	**07**
Q.5	**(a)**	Write a detailed note on the synthesis of Polycarbonate including main monomers used and its important properties.	**07**
	(b)	Write in detail about production technology of Kevlar and its important properties and applications.	**07**
		OR	
Q.5	**(a)**	Explain in detail production technology for EPDM and its major usage.	**07**
	(b)	Write short notes on (i) Nylon 6,6 (ii) Nylon 11.	**07**

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