Seat No.:	Enrolment No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-IV • EXAMINATION – WINTER 2013** 

Subje	ect C	Code: 143602	Date: 26-12-2013	
•	: 02: ctions:		ners Total Marks: 70	
	2. N	Attempt all questions.  Make suitable assumptions wherever necessary.  Figures to the right indicate full marks.		
Q.1	(a)	Answer the following questions: (i) Explain what vulcanization is? (ii) Write full form of IIR. (iii) What are special properties of Polychloroprene? (iv) What are the monomers of Buna-N? (v) Write Chemical Name of Natural Rubber. (vi) Write names of some natural polymers. (vii) What are the monomers for the production of polymers.		07
	(b)	A B	rene ber ride	07
Q.2	(a) (b)	Explain in detail rubber compounding and role of different compounding ingredients.		07 07
	<b>(b)</b>	OR Write short notes on any two monomers including its a) Butadiene b) ACN c) Isobutylene d) Isoprene	s synthetic routes	07
Q.3	(a)	Explain Conventional, Semi Efficient and Efficient S	Sulphur Vulcanization.	07
	<b>(b)</b>	Write note on the disaccharides and polysacchar structures?	rides with examples and	07
Q.3	(a)	OR Explain in detail with chemical reactions of ozonoly structure of natural rubber.	sis method to confirm the	07
	<b>(b)</b>	Write a detailed note on the production of SBR , its $\boldsymbol{\mu}$ applications.	properties and important	07
Q.4	(a)		* -	07
	<b>(b)</b>	composition of Natural Rubber Latex extracted from Explain hot and cold emulsion polymerization. W used in emulsion polymerization.		07

Q.4	(a)	Write a detailed note on the production ,properties and application of Polychloroprene.	07
	<b>(b)</b>		07
Q.5	(a)	Write general reaction scheme for making polyurethanes. Also write important usage of polyurethanes.	07
	<b>(b)</b>	What are biopolymers, explain with examples, their classification, types, usage and environmental benefits.	07
		OR	
`	(a)	Write a detailed note on production, properties and usage of Butyl Rubbers.	07
	<b>(b)</b>	Write notes on any two	07
	` ´	i) Rubber Tapping	
		ii) EPDM	
		iii) Synthetic Polyisoprene	
		iv) Cellulose and its derivatives	

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