Seat No.:	Enrolment No

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV • EXAMINATION - SUMMER • 2014

•	Subject Code: 143602 Date: 23-06- Subject Name: Rubber Chemistry and Natural Polymers			
_	: 10:	30 am - 01:00 pm	Total Marks:	70
	2.]	Attempt all questions. Make suitable assumptions wher Figures to the right indicate full		
Q.1	(a)	Answer the following questions: (i) Write basic reaction for the formation of Urethane Group (ii) What is special property of Polychloroprene? (iii) What are the monomers of Buna-N? (iv) Name the repeating unit of Natural Rubber? (v) What is Neoprene? (vi) What are Vitons and Hypalon? (vii) What is Sulfur vulcanization		
	(b)	Match the following		07
		\mathbf{A}	В	
		 a) Buna –S b) Natural Rubber c) EPDM d) Sucrose e) Butyl Rubber f) Protein g) Cellulose 	i)Limited Olefin Functionality ii) Biopolymer iii)Cis Poly isoprene iv)IIR v)Polysaccharide vii) SBR viii)Disaccharide	
Q.2	(a) (b)		operties and uses of Nitrile Rubbers. mi Efficient and Efficient Sulphur	07 07
	(b)		OR monomers including its synthetic routes prene d) Isobutylene	07
Q.3	(a) (b)	Write a detailed note on rubbe Write note on the natural poly	er compounding. mers with examples and structures? OR	07 07
Q.3	(a) (b)	Explain in detail showing the	ubber is confirmed using Ozonation?	07 07

Q.4	(a)	Write note on extraction and preservation of Natural Rubber latex. What is the typical composition of Natural Rubber Latex extracted from tree?	07	
	(b)	Write important ingredients used for the production of SBR or NBR with examples. OR	07	
Q.4	(a)	Write a detailed note on Neoprene including its synthesis and coagulation for making solid rubber.	07	
	(b)	Write the structure of Chitosan. Write the preparation of Chitosan from Chitin and its bio medical usage.	07	
Q.5	(a)	What are the important ingredients used for the manufacturing of polyurethane elastomers and general reaction scheme for production.	07	
	(b)	usage and environmental benefits.		
Q.5	(a)	OR Write a note on production, properties and usage of EPDM.	07	
	(b)	Write notes on any two i) Halo butyls ii) Natural Polymers iii) Cellulose and its derivatives iv) Natural Rubber Collection & preservation	07	
