Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER-I(New course)• EXAMINATION - WINTER- 2015

Subject Code: 2/14003			Date: 02/01/2016	
Subj	ect N	ame: Rubber Cultivation & Rubber Latices		
Time	e:2:30	0 pm to 5:00 pm Total Mark	s: 70	
Instr	uctio	ons:		
	1. A	Attempt all questions.		
	2. I	Make suitable assumptions wherever necessary.		
	3. I	Figures to the right indicate full marks.		
Q. 1	(a)	Explain about the principle of Electro-decantation process and its equipment for concentration of Natural Rubber latex with Schematic diagram.	(07)	
	(b)	Short note on Polyisoprene biosynthesis.	(07)	
Q. 2	(a)	Write about important consequences of Styrene/Butadiene ratio on properties of Styrene - Butadiene Co-polymer latex.	(07)	
	(b)	Discuss about production of Polychloroprene rubber latices with flow diagram.	(07)	
		OR		
	(b)	Write the advantages of Carboxylation of polymer. Give the reaction mechanism of carboxylated polymer with polyvalent metal ions and explain it.	(07)	
Q. 3	(a)	Short note on: "Murphy-Madge process".	(07)	
	(b)	Write about Artificial latices of Isobutene-Isoprene rubber latices.	(07)	
	. ,	OR	, ,	
Q. 3		Discuss about comparison between artificial synthetic cis-1,4-polyisoprene latices and high ammonia preserved natural latex in detail.	(14)	
Q. 4	(a)	Explain the Solvent agglomeration process for Synthetic latices in detail.	(07)	
ζ	(b)	What do you mean by Non- aqueous Synthetic latices? Explain its production in detail.	(07)	
		OR		
Q. 4		Draw the schematic diagram for Partial agglomeration of Synthetic latices by freezing and thawing process. Write the advantages of this process also.	(14)	
Q. 5	(a)	Explain the Prevulcanisation of Natural rubber latex by exposure to high energy radiations. Mention the principle ways for the absorption of radiation by polymer molecule.	(07)	
	(b)	Discuss about Chloroform-coagulation test for assessment of degree of Prevulcanised natural rubber latex in detail.	(07)	
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Q. 5		Give a detailed description on sulfur prevulcanization of natural rubber latex.	(14)	