Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME – SEMESTER-1 (NEW) EXAMINATION – WINTER 2016

Subject Code: 2714003 **Date:05/01/2017**

Subject Name: Rubber Cultivation & Rubber Lattices

Time: 2:30 pm to 5:00 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 in detail about Low-ammonia preservation systems for Natural latex.	(07)
	(b)	Write in detail about the Elementary theory and practice of Centrifugation process with Schematic diagram.	(07)
Q. 2	(a)	Why Partial agglomeration of Synthetic lattices is carried out? Explain any one agglomeration technique in detail.	(07)
	(b)	List out the distinguishing features of synthetic lattices relative to natural latices. Explain about any two.	(07)
		OR	
	(b)	Show the Schematic conversion-time curve for Emulsion polymerization reaction and explain it.	(07)
Q. 3	(a)	What do you mean by RVNRL? Mention its basic features.	(07)
	(b)	Write in brief about sulfur-prevulcanized NR latex and also write about the choice of Accelerators and Activators for Sulfur prevulcanization.	(07)
		OR	
Q. 3		Discuss in detail about Assessment methods for degree of vulcanization of Prevulcanized NR latex.	(14)
Q. 4	(a)	What do you mean by Artificial latices? Explain all the fundamental techniques for production of Artificial latices.	(07)
	(b)	Short note on "Trumbull – Dickson process."	(07)
		OR	
Q. 4		Give a detailed description on Artificial latices of reclaimed rubbers.	(14)
Q. 5	(a)	Draw the flow diagram for the production of Styrene-Butadiene rubber latex by Continuous Emulsion polymerization and explain it in detail.	(07)
	(b)	Short note on Acrylonitrile-Butadiene lattices.	(07)
		OR	
Q. 5	(a)	Discuss about the effect of monomer ratio on properties of Styrene-Butadiene copolymers.	(07)
	(b)	Describe the production of Polychloroprene lattices.	(07)

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