Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–IV (NEW) - EXAMINATION – SUMMER 2017

Subject Code: 2142605 **Date: 30/05/2017**

Subject Name: Latex Technology

Time: 10:30 AM to 01:00 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		**Answer the following:**	**(14)**
	1	List the ways to improve the yield of Natural Rubber latex.	
	2	Write the basic composition of Natural latex.	
	3	What do you mean by Gelation?	
	4	List the vulcanizing agents used for latex.	
	5	Write the function of Colloid mills.	
	6	Give formula to determine the Alkalinity of latex.	
	7	Define the term: Latex	
	8	At which angle Tapping of latex is done?	
	9	Name the Natural substances present in latex which adversely affect the colloidal stability of latex.	
	10	List the different types of Inorganic fillers used for compounding of latex.	
	11	Give the importance of Flex Resistance measurement of foam rubber products.	
	12	Name the substance which is responsible for Allergy in Natural latex.	
	13	Define the tem : Latex casting	
	14	What do you mean by Dispersions?	
Q.2	**(a)**	Why Preservation of Natural latex is necessary? Give reason.	**(03)**
	(b)	List the techniques for improvement of latex yield. Explain about any one in brief.	**(04)**
	(c)	Draw the schematic diagram showing latex centrifugation process and explain it in detail.	**(07)**
		OR	
	(c)	"Concentration process is necessary for Natural latex." Justify the statement.	**(07)**
Q.3	**(a)**	Write about the geometry of Planetary mixer.	**(03)**
	(b)	Name the equipment to measure the hardness of foam rubber and write its working mechanism.	**(04)**
	(c)	List the methods of gelation and explain all in detail.	**(07)**
		OR	
Q.3	**(a)**	Draw the schematic diagram of Turbo-Stirrer.	**(03)**
	(b)	Explain the use of Compression set tester for foam rubber sheet.	**(04)**
	(c)	Give the basic classification of Accelerators used for latex compounding and explain about any one in detail.	**(07)**
Q.4	**(a)**	What do you mean by Anaphylaxis?	**(03)**
	(b)	Write about latex Allergy symptoms.	**(04)**
	(c)	Short note on Attrition mills.	**(07)**

……P.T.O……

		OR	
Q.4	**(a)**	Write in brief about Latex Fruit Syndrome.	**(03)**

	(b)	Explain about the management of latex Allergies in healthcare staff and patients.	**(04)**
	(c)	Discuss about the geometry and working mechanism of Ball mill.	**(07)**
Q.5	**(a)**	Explain the term : "Volatile Fatty Acid number"	**(03)**
	(b)	Give a brief procedure to determine the Sludge content of Natural latex.	**(04)**
	(c)	Discuss about latex moulding by using Non-Porous mould.	**(07)**

OR

Q.5	**(a)**	How the Total Solid Content (TSC) of latex can be measured?	**(03)**
	(b)	What do you mean by mechanical stability of latex? How it can be determined?	**(04)**
	(c)	Describe the Rotational moulding process.	**(07)**

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