Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–IV (New) EXAMINATION – WINTER 2015

Subject Code:2142605 **Date:19/12/2015**

Subject Name: Latex Technology

Time: 02:30pm to 05:00pm **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)**

(i) Write in brief about tapping system for Hevea Brasiliensis tree.
(ii) What do you mean by colloidal destabilization of Latex?
(iii) Why Concentration of Natural latex is required?
(iv) List the types of accelerators used used for latex compounding.
(v) Write advantages and disadvantages of latex casting process.
(vi) How the Solutions can be prepared for Latex compounding?
(vii) Write the importance of gelation in latex processing.

Q. 2 (a) Write about primary and ancillary requirements of preservative for Natural latex in detail. **(07)**

Q. 2 (b) Explain the principle of Electrodecantation process with the help of schematic diagram. **(07)**

OR

Q. 2 (b) Draw the schematic diagram showing Evaporation process for concentration of Natural latex and explain it in detail. **(07)**

Q. 3 (a) Short note on Attrition mill. **(07)**

(b) Write in detail about vulcanization activators for latex compounding. **(07)**

OR

Q. 3 (a) Short note on Ball mill. **(07)**

(b) Explain the importance of Network – bound Antioxidants. **(07)**

Q. 4 (a) Explain the geometry and function of Planetary mixer used for latex industry. **(07)**

(b) Discuss about the differences between processing of latex and milled rubber. **(07)**

OR

Q. 4 (a) How the mechanical stability test of natural latex can be carried out? Explain about process and equipment also. **(07)**

(b) Discuss the Zinc Oxide thickening test and its importance for Natural latex. **(07)**

…….P.T.O…….

Q. 5 (a) Describe in detail about Rotational casting. **(07)**

	(b)	Write about the Causes and remedies for Natural latex allergy.	**(07)**
		OR	
Q. 5	**(a)**	Explain the latex casting process by using porous moulds.	**(07)**
	(b)	Give an overview of Latex allergy and write about its basic types.	**(07)**

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