Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V • EXAMINATION – WINTER • 2014

Subject Code: 152602 **Date: 28-11-2014**

Subject Name: Latex Technology

Time: 10.30 am - 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)**

(i) Write the difference between cream and skim for Natural latex.

(ii) List the basic types of gelling agents used for latex foam products and write their function.

(iii) Draw the schematic diagram of Roll coating process for manufacturing of Rubberized fabric.

(iv) Write the advantages of Latex based adhesive over solution based adhesive.

(v) How Artificial lattices are produced? Explain in brief.

(vi) Write the name of any four Paper coating methods using latex compounds.

(vii) Define the term "mud-cracking".

Q. 2 (a) "Rotational moulding method is more advantageous than Slush moulding method." Justify the statement and explain the Rotational moulding method also. **(07)**

Q. 2 (b) Short note on "Talaly process". **(07)**

OR

(b) Draw the flow diagram for Continuous Dunlop process and explain all the steps. **(07)**

Q. 3 (a) Write in detail about latex extrusion process. **(07)**

(b) Explain the Beater addition process for application of latex to paper and write its advantages. **(07)**

OR

Q. 3 (a) List the processing parameters which affect the latex thread manufacturing and explain their influence. **(07)**

(b) Show the diagram of Spraying technique for latex carpet backing and write the advantages of latex carpet backing. **(07)**

Q. 4 (a) Give the primary and ancillary requirements of an ideal preservative for Natural latex. **(07)**

(b) Write the general formulation for manufacturing of surgical gloves and explain the manufacturing process. **(07)**

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OR

Q. 4	**(a)**	Discuss about theory and process of Centrifugation for concentration of N R latex.	**(07)**
	(b)	Which after treatments are required for latex deposits after Latex Dipping process? Explain it.	**(07)**
Q. 5	**(a)**	Write the procedure of Chloroform-coagulation test for assessment of degree of vulcanisation in sulfur prevulcanized N R latex.	**(05)**
	(b)	How the Polymer can be selected when two differing Polarity Adherends are to be bonded together? Discuss any one approach.	**(05)**
	(c)	Write the name and function of microbicides in compounding of Synthetic lattices.	**(04)**

OR

Q. 5	**(a)**	Describe the Sulfur Prevulcanisation process.	**(05)**
	(b)	List the name of Adhesion modifiers used for latex based adhesive and explain about any one.	**(05)**
	(c)	Give comparison between Synthetic lattices and N R Latex in terms of Particle shape, size and size distribution.	**(04)**

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