

GUJARAT TECHNOLOGICAL UNIVERSITY**B.E SEM-V EXAMINATION-NOV/DEC.-2011****Subject code: 152602****Date: 24/11/2011****Subject Name: Latex Technology****Time: 02.30 am-05.00 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) Answer the following. (14)

1. Write the function and importance of (i)Gelling agent (ii)Wetting agent.
2. List the variable features which affect the sulfur prevulcanisation of N R latex.
3. What do you mean by Casting? Explain the advantage of casting process over a dipping process to prepare a hollow product?
4. What do you mean by heat sensitized latex?
5. Explain the mechanism of planetary mixer used for foam rubber products.
6. Give the schematic diagram showing fabric saturation by using latex compounding.
7. Give the comparison between cut thread & extruded thread.

Q.2 (a) Give the schematic diagram of Evaporation method for concentration of NR latex and explain it in detail. (07)**Q.2 (b) Answer the following.**

1. Write the basic steps for manufacturing of foam rubber products by Dunlop process. (05)
2. Explain the functions of blowing agent for foam rubber products (02)

OR**Q.2 (b) Explain the chemistry of Talaly process in detail. (07)****Q.3 (a) Explain the term Carpet backing and write the advantages of incorporation of latex into carpet. (07)****(b) "The process of latex extrusion is simple in theory but extremely difficult operation in practice." Justify the statement. (07)****OR****Q.3 (a) Give the schematic diagram of carpet backing process by lick roll method and explain it in detail. (07)****(b) Explain latex thread manufacturing process in detail. (07)****Q.4 (a) Explain the following terms for dipped goods manufacturing process: (i) leaching (ii) Beading (iii) Stripping (07)****(b) List the two basic methods used for latex casting process. Explain any one in detail. (07)****OR****Q.4 (a) Explain the dipping system in detail. (07)****(b) List the types of mould used for latex casting process. Explain the casting process by using any one type of mould in detail. (07)**

-----P.T.O.-----

- Q.5** (a) Write the distinguishing features of synthetic lattices relative to N R latex for following : (i) particle size (ii) particle shape (iii) particle size distribution **(03)**
- (b) Short note on Solvent emulsification technique for Artificial Lattices. **(04)**
- (c) List the additives used in formulation of Latex based adhesives. Explain any one in detail. **(07)**

OR

- Q.5** (a) Explain the mud cracking phenomena in Synthetic lattices film. **(03)**
- (b) Short note on phase inversion technique for Artificial Lattices. **(04)**
- (c) Write the advantages & applications of Latex based adhesives. **(07)**
