

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER- V (New) EXAMINATION – WINTER 2019****Subject Code: 2152606****Date: 21/11/2019****Subject Name: Latex Processing & its application****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** (a) Write the importance of Coacervant solution for latex processing? How it can be prepared? (03)
(b) Write about the basic design of Dipping tank with schematic diagram for latex dipped goods production. (04)
(c) Discuss about the Heat sensitized dipping process in detail. (07)
- Q.2** (a) Mention the basic ways for gelation of latex thread. (03)
(b) List the parameters which affect the latex extrusion processing. Write about the effect of any one. (04)
(c) Explain about Dunlop process for foam rubber products in detail. (07)
- OR**
- (c) Describe the technology of Revertex gel process. (07)
- Q.3** (a) Give the basic difference between latex Doubling and latex Combining. (03)
(b) Explain about Bound-crum rubber carpet underlay. (04)
(c) Discuss about the problems and their remedies by incorporation of latex with cementitious compositions. (07)
- OR**
- Q.3** (a) Draw the schematic diagram for knife-over-diaphragm spreading technique. (03)
(b) Give the advantages of latex carpet backing. (04)
(c) Explain about reasons for modification of cement with latex. (07)
- Q.4** (a) What is "Mud-craking" phenomenon? Why it occurs in latex products? (03)
(b) Write about the practical situation where Positex treatments are necessary in latex processing? How it can be given? (04)
(c) Discuss about advantages and disadvantages of latex based adhesives relative to other adhesives. (07)
- OR**
- Q.4** (a) Mention the basic processing differences between latex and rubber. (03)
(b) Draw the schematic diagram for Rando Feeder and Webber. (04)
(c) Discuss about the polymer selection criteria for bonding of two dissimilar substrates by latex adhesives. (07)
- Q.5** (a) Draw the schematic diagram for "The paddle-blade process" and explain it. (03)
(b) Explain about the latex addition technique at Beater stage during paper manufacturing. (04)
(c) Describe the basic considerations about type of lattices for latex based surface coatings. (07)
- OR**
- Q.5** (a) Write the working mechanism for "The Champion on-machine process" with schematic diagram. (03)
(b) Mention the advantages of paper saturation process over Beater addition process. (04)
(c) Discuss about importance of Vinyl Acetate homopolymers and copolymers lattices as latex based surface coating compositions. (07)
