

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V • EXAMINATION – WINTER • 2014

Subject Code: 153606

Date: 03-12-2014

Subject Name: Polymeric and Rubber Materials - II

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 (a)** Explain in detail the manufacturing of Silicone Resin. **07**
(b) Write in brief synthesis of Epoxy Resin. **07**
- Q.2 (a)** Write a short note of raw materials used in the preparation of Saturated Polyesters resin. **07**
(b) Write in short the curing system and application of unsaturated polyester resin. **07**
- OR**
- (b)** Describe in detail air inhibition and reaction mechanism of unsaturated polyester resin. **07**
- Q.3 (a)** Write in detail the synthesis of novolacs based phenolic resin. **07**
(b) Write in short the raw materials used for phenolic resin. **07**
- OR**
- Q.3 (a)** Explain in short the history and also explain the modification of phenolic resin on the basis of rosin. **07**
(b) Explain in detail the synthesis of resole based phenolic resin. **07**
- Q.4 (a)** Explain any four raw materials used in amino resin with proper structure and reactions. **07**
(b) Describe the amino resin chemistry on the basis of methylol formation. **07**
- OR**
- Q.4 (a)** Describe the amino resin chemistry on the basis of alkylation/ etherification reactions. **07**
(b) Write in detail the history of amino resin and types of MF Resins used. **07**
- Q.5 (a)** Explain in detail raw materials used in Alkyd Resin. **07**
(b) What are silicones? Explain the characteristics and properties of silicone resin. **07**
- OR**
- Q.5 (a)** Explain in short the vulcanization of rubber and also the cross linking technology. **07**
(b) Give in detail the synthesis of low molecular mass/ liquid BPA- ECH epoxies of epoxy resin. **07**
