Seat No.: Enrolment No.
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## **GUJARAT TECHNOLOGICAL UNIVERSITY**

ME – SEMESTER III (NEW) – EXAMINATION – WINTER-2016

Subject Code: 2734004 Date:25/10/2016

**Subject Name: Thermosetting Resins & Silane Technology** 

Time: 02:30 pm to 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	(R)	Explain the merits and demerits of Thermoset resins.	(07)
		(b)	List the additives used for Thermoset resins and explain any two in detail.	(07)
	Q. 2	(a)	Discuss about the ball & ring softening point test method for hydrocarbon resin.	(07)
	Q. 2	(b)	Describe the synthesis and chemistry of Epoxy resin.  OR	(07)
		(b)	Write the advantages & disadvantages of Epoxy resin.	(07)
	Q. 3	(a)	Discuss the manufacturing process and uses of Unsaturated Polyester Resin.	(07)
		(b)	Explain the chemistry of Urea Formaldehyde resin formation.  OR	(07)
	Q. 3		Give the classification of Phenolic resin. Explain about any one. Describe the properties and applications of Phenolic resin.	(14)
	Q. 4	(a)	List the methods for application of Silane on substrates and explain any one in detail.	(07)
		(b)	Explain the acrylic monomers and production of acrylic adhesives.	(07)
			OR	
	Q. 4	(a)	Discuss the factors which influences for selection of Silane coupling agent.	(07)
		(b)	Explain the manufacturing process of Amino Resin. Discuss the properties & applications of it.	(07)
	Q. 5	(a)	Discuss in detail about resin action in rubber compound.	(07)
		(b)	Give the comparison of different types of resin in terms of stability.	(07)
			OR	
	Q. 5		List the types of hydrocarbon resin. Explain any two in detail.	(14)
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