

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2023****Subject Code:3163614****Date:12-07-2023****Subject Name:Synthesis of Thermosets****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.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) What do you mean by vulcanization Process?	03
	(b) Write a short note on alkyd resin.	04
	(c) Write down the various techniques to prepare polyester resin.	07
Q.2	(a) Explain Oil length. Give the classification of alkyd resin based on oil length.	03
	(b) What are the components of Polyurethane resin?	04
	(c) Write in brief about epoxy resin curing stages.	07
	OR	
	(c) Explain the manufacturing of alkyd resin with any one method.	07
Q.3	(a) Write a brief note on amino resin.	03
	(b) Write down the effect of various hardeners on Epoxy resin with its suitable examples.	04
	(c) What are the structural properties and applications of epoxy resin?	07
	OR	
Q.3	(a) Write in brief about Laminating resins.	03
	(b) Write down the properties and application of UF resin.	04
	(c) Give the comparison between epoxy resin and polyester resin.	07
Q.4	(a) Give the comparison between various polyester fiber preparation methods.	03
	(b) Write a short note on unsaturated polyester resin.	04
	(c) Explain the manufacturing process for Phenol formaldehyde resin with suitable flowsheet.	07
	OR	
Q.4	(a) Write down the properties of polyester resin.	03
	(b) Discuss the types of Polyols used in the preparation of PU resin?	04
	(c) Give the difference with novolac and resol.	07
Q.5	(a) What is Phenolic resin?	03
	(b) Mention the different types of Polyurethane.	04
	(c) Write a short note on thermosetting acrylics material.	07
	OR	
Q.5	(a) Mention the applications of acrylic resin.	03
	(b) Write down the difference between Sulphur vulcanization and Peroxide vulcanization.	04
	(c) Write a short note on fiber reinforced polyester composites.	07
