	•	GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-III • EXAMINATION – SUMMER • 2014 ect Code: 132602 Date: 04-06-2014 ect Name: Rubber Technology	_
	•	: 02:30 pm – 05:00 pm Total Marks: 70	
	Instruc		
		1. Attempt all questions.	
		2. Make suitable assumptions wherever necessary.	
		3. Figures to the right indicate full marks.	
Q. 1	Ansv	wer the following.	14
~ · -	i	Write the chemical reaction for manufacturing of Butadiene monomer.	
	ii	Write the importance of Fillers in Rubber Compounding.	
	iii	What do you mean by Polymer degradation?	
	iv	Explain the terms: i Adsorption ii Sorbent.	
	V	Describe the mechanism of Orientation.	
	vi	Explain the importance of Lignin as a Natural polymer.	
	vii	Define the term: Polymer Crystallinity.	
Q. 2	a	Give the schematic diagram of Hevea Brasilieansis seed and its mode of	07
		germination and explain it in detail.	
Q. 2	b	"Carbon is important element in polymer chemistry." Justify the statement. OR	07
	b	Explain the importance of Flourine element in polymer chemistry.	07
Q. 3	a	Explain the importance of protein as a natural polymer.	07
	b	List the basic types of Polymer Degradation and explain it with schematic diagram.	07
		OR	
Q. 3	a	Describe in detail about Regenerated Cellulose.	07
	b	Short note on Thermal degradation of polymers.	07
Q. 4	a	Write the name of manufacturing process for synthesis of Styrene monomer &	07
	_	Explain any one in detail with reaction mechanism.	
	b	Define the Term: Glass transition temperature Tg and explain about any two	07
		factors in detail.	
Q. 4	a	OR Explain about Ammoxidation process in detail.	07
	b	Explain the influence of following factors on polymer crystallinity i Polar	07
	C	group ii Cooling rate iii Plasticizer.	07
Q. 5	a	Explain the production of Phenolic Resins and write its properties and	07
		application.	
	b	List the principal methods for Polymer Orientation. Explain any two in detail. OR	07
Q. 5	a	Write about the properties and applications of Amino Resins.	07
-	b	Draw the Schematic diagram showing axes of orientation. Discuss it in detail.	07

Seat No.: ____

Enrolment No._____
