Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER- III • EXAMINATION - SUMMER 2015

Subject Code: 733003 Date: 02/05/2015

Subject Name: Introduction to Polymer Science and Technology

Time: 2:30 pm to 5:00 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 kinetics of self catalyzed condensation polymerization reaction	07
	(b)	Explain classification of polymer with appropriate example.	07
Q.2	(a)	Define following terms. Degree of polymerization, Inorganic Polymer, Mn and Mw	07
	(b)	Explain geometrical structure of polymers.	07
		OR	
	(b)	Discuss mechanism of free radical polymerization	07
Q.3	(a)	Discuss mechanism of termination with respect to chain polymerization	
	(b)	Explain kinetics of condensation polymerization process.	07
		OR	
Q.3	(a)	Write a short note on ionic polymerization.	
	(b)	Discuss suspension polymerization process with appropriate example	07
Q.4	(a)	Explain bulk polymerization technique of polymerization process.	07
	(b)	Discuss various additives used for polymer processing unit.	07
		OR	
Q.4	(a)	Discuss emulsion polymerization.	07
	(b)	Explain various techniques used for measurement of molecular mass for polymer species.	07
Q.5	(a)	Explain mechanical degradation of polymer material	07
	(b)	Discuss types of degradation based on kinetics.	07
		OR	
Q.5	(a)	Explain extrusion moulding process.	07
	(b)	Write a short note on injection moulding process.	07