Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI • EXAMINATION - SUMMER • 2014

	•	Code: 162302 Date: 21-05-2014	
Tir	ne: 1	Name: Plastic Structure Property and Relationship 0:30 am - 01:00 pm Total Marks: 70 ns: Attempt all questions.	
	2. 3.	ı v	
Q.1	(a) (b)	Discuss about C-H bond and its effect on properties of polymer. Explain about Linearity, branching and cross-linking of polymer and its effect on the properties of polymer?	07 07
Q.2	(a) (b)	Discuss about structure and properties of Polystyrene. Compare: Crystalline Polymer with Amorphous Polymer. OR	07 07
	(b)	Discuss effect of Fluorine (F) and Silicone (S) on polymer properties.	07
Q.3	(a) (b)	Discuss about structure and properties of Polyester. Explain effect of molecular weight on thermal properties of Polymer. OR	07 07
Q.3	(a) (b)	Discuss effect of stabilizers on the properties of Polymer. Write chemical structure of Polymetylmethacrylate (PMMA). Why PMMA is transparent? Explain	07 07
Q.4	(a)	Explain effect of plasticizer on Electrical Properties like: (1) Resistance (2) Dielectric Properties	07
	(b)	What is conformation and configuration? Explain classification of Polymer on basis of Tacticity. OR	07
Q.4	(a)	What is Glass Transition Temperature (Tg)? Describe factors affecting Tg.	07
	(b)	Write the chemical structure of Nylon 6 and Nylon 66. Compare the properties of Nylon 6 and Nylon 66 on the basis of their chemical structural difference.	07
Q.5	(a) (b)	Explain effect of molecular orientation on properties of Polymer. Explain effect of n-alkyl side chain length on molecular flexibility. OR	07 07
Q.5	(a)	Define: (1) Hydrogen Bond (2) Covalent Bond (3) Homopolymer (4) Copolymer (5) Polar bond (6) Ionic Bond (7) coefficient of thermal expansion	07
	(b)	Explain how the structure of a polymer affects its chemical properties.	07
