Seat No.:	Enrolment No.
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Subject Code: 3322301

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA ENGINEERING - SEMESTER - II • EXAMINATION - WINTER- 2016

\mathbf{T}	Subject Name: Polymer Chemistry Time: 02:30 PM TO 05:00 PM Instructions: 1. Attempt all questions. 2. Make Suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. 4. Use of programmable & Communication aids are strictly prohibited. 5. Use of only simple calculator is permitted in Mathematics. 6. English version is authentic.		
Q.1		Answer any seven out of ten.	14
	1. 2. 3. 4. 5. 6. 7. 8. 9.	List various polymerization techniques. Write the full form of IBM and EBM. Define glass transition temperature (Tg). Define: Polymer morphology List the methods of determination of crystallinity. Write the types of degradation of polymer with example. List various polymer reactions. Give definition of polymer dissolution. Give the reaction for polymerization of PVC. Write chemical reaction for Epoxy preparation.	
Q.2	(a)	Write short note on bulk polymerization technique. OR	07
	(a) (b)	Explain visco-elastic behavior of polymer. Explain glass transition temperature (Tg) of polymer. OR	07 07
	(b)	Explain molecular weight distribution with the help of figure.	07
Q.3	(a) (a) (b)	Explain mechanical degradation with example. OR Explain thermal degradation with suitable example. Write short note on Hydrolysis of polymer. OR	07 07 07
	(b)	Explain Aminolysis reaction of polymer.	07
Q.4	(a) (a) (b)	Describe manufacturing process of polystyrene (PS). OR Explain manufacturing process of Nylon-6. Explain the effect of glass transition temperature (Tg) on proper polymer.	07 07 rties of 07
Q.5	(a) (b) (c)	Discuss the factors which affecting crystallinity. Write applications of solution polymerization technique. Differentiate suspension polymerization technique from emulsic polymerization technique.	07 03 on 04

Date: 05- 01- 2017