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BE Sem VII CBGS – Chem – Elect. II Polymer

10/12/2015

QP Code : 6021

(3 Hours) Total Marks = 80

N.B. (1) Question No 1 is compulsory.

(2) Attempt any three questions out of remaining five questions.

(3) Assumption made, if any should be clearly stated.

(4) Figures to the right indicate full marks.

Q.1	a)	Explain High performance and speciallity polymer	05
	b)	Explain various types of polymer degradation	05
	c)	Explain block and graft copolymer	05
	d)	Explain Natural polymer Cellulose with properties and application	05
Q.2	a)	What are the various ways of expressing molecular weight of polymers? Derive an expression to find out the average molecular weight of the polymer.	12
	b)	Explain the term "Glass Transition Temperature"(Tg) Discuss the significance of Tg in polymer processing	08
Q.3	a)	What is Co-polymerization ? Derive the rate equation for addition Co-Polymerization	10
	b)	Explain with flowsheet manufacturing of polystyrene with properties and application.	10
Q.4	a)	Explain various methods for determination of Monomer Reactivity Ratios	10
	b)	Explain in detail Blow molding process for manufacture of hollow bottle with relevant sketch	10
Q.5	a)	List different types of polymerization technique with their advantages and disadvantages and briefly explain emulsion polymerization technique	10
	b)	What is step growth polymerization and explain in detail kinetics of step growth polymerization.	10
Q.6	a)	Explain post polymerization uint operation in detail technique for polyester manufacturing.	10
	b)	Explain ideal and azeotropic copolymerization	10

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