M.Sc. Chemistry Semester II (CBSE)

C-203 Macromolecule (polymer) chemistry

Question bank

Prepared by,

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1. Give answer of given questions (2 marks of each question)

Q 1.   What is copolymer? Explain co polymerization

Q 2.   Explain methods of initiating in free radical chain polymerization

Q 3.   Explain Flory and Mayo chain termination

Q 4.   Explain the kinetics of cationic chain polymerization

Q 5.   Explain co-ordination polymerization

Q 6.   Explain the various reactivity ratio and resultant polymer in case of copolymerization carried out between two monomers

Q 7.   Explain the emulsion polymerization method for the polymer synthesis

Q 8.   Give the types of free radical polymerization.

Q 9.   Explain stepwise polymerization with the example of polystyrene

Q 10.   Explain thermodynamics of ring transformation to linear polymer (ring scission polymerization)

Q 11.   Explain fractionation precipitation method

Q 12.   Explain thermal degradation of polymer obtained through the rapture of main chain

Q 13.   Explain cross linking reaction/ vulcanization of rubber.

2. Give answer of given questions (5 marks of each question)

Q 1.   Write down note about free radical polymerization.

Q 2.   Derived equation of kinetics of poly condensation polymerization reaction (Carothers equation)

Q 3.   Explain solution method for the synthesis of polymer.

Q 4.   Explain functionality of monomers used in polymerization.

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Q 5.   Explain ring scission polymerization with example of polyurethanes.

Q 6.   Briefly explain the copolymerization and its types.

Q 7.   Write down physical properties of polymer.

Q 8.   Write note about different chemical properties of polymer.

Q 9.   Write down note about the polymer gives cross linking product in physic chemical properties with proper example.

Q 10.   Explain the types of method of formation of polymers.