Model Question Paper

B.Sc. Chemistry, Semester-II

Paper- CC-III (Organic Chemistry-I)

Q-1. Write short notes on:

a) Racemic mixture

b) Enantiomers

c) Distereoisomers

d) Resolution of racemic mixtures.

Q-2. Discuss the mechanism of:

a) Kolbe reaction

b) Corey-House reaction

Q-3. Define homolytic and heterolytic fission with suitable examples. What do you

know about curly arrow rules?

Q-4. Write short notes on:

1. Inductive and resonance effects
2. Carbocations, Carbanions, Free radicals

Q-5. Describe E, Z system of stereochemistry in alkenes based on Cahn–

Ingold–Prelog sequence rules.

Q-6. Write the mechanism of following reactions:

1. Wurtz Reaction
2. Decarboxylation of carboxylic acids.

Q-7. Describe the mechanism of formation of cycloalkanes by Diel’s Alder

reaction and Simmons-Smith reaction.

Q-8. Give a brief description on classification on organic compounds. How *Sp3*

hybridization proceeds in alkanes.

Q-9. What do you know about Saytzeff and Markownikoff rules? Discuss the

mechanism of alkenes hydration by oxymercuration-demercuration reaction.

Q-10. What do you know about Hückel’s rule of aromaticity? Discuss the

mechanism of Friedel-Craft’s alkylation and acylation reaction.

Q-11. Describe the mechanism of Demjanov rearrangement reduction reaction.