

- b) Discuss elimination-addition mechanism for nucleophilic aromatic substitution *via* benzyne. (7)
- Q-4** **Attempt all questions** (14)
- a) Give the physical properties of aryl halides and discuss structure of aryl halide. (7)
- b) Explain conformational analysis of 1, 2 & 1, 3 and 1, 4 substituted cyclohexane. (7)
- Q-5** **Attempt all questions** (14)
- a) Explain low reactivity of aryl halides and vinyl halides in detail. (7)
- b) Discuss conformational analysis of butane with energy diagram. (7)
- Q-6** **Attempt all questions** (14)
- a) Write a note on LiAlH_4 reagent. (7)
- b) Explain sequence rules of R, S nomenclature with examples. (7)
- Q-7** **Attempt all questions** (14)
- a) Write a note on nucleophilic aromatic substitution: bimolecular displacement with mechanism. (7)
- b) Discuss conformational analysis of ethane and optical purity. (7)
- Q-8** **Attempt all questions** (14)
- a) Discuss the resolution of acid, base and alcoholic racemic mixture. (7)
- b) Write a short note on optical activity, optical isomer and metamerism. (7)

