

7. (a) Alkynes undergo both electrophilic and nucleophilic addition reactions. Justify.
 (b) Discuss method of preparation and chemical reactions of alkyne.
8. (a) Discuss dehydrohalogenation of alkyl halides.
 (b) Discuss electrophilic addition reactions of alkyne with examples. 2×4=8

SECTION—C

9. (a) Discuss aromaticity.
 (b) Discuss homolytic and heterolytic bond cleavage with example.
 (c) Discuss ring strain in cyclobutane.
 (d) Discuss polymerization reaction of alkene.
 (e) Discuss Diels-Alder reaction. 5×2=10

Roll No.

Total No. of Pages : 2

PC 11432-NH

AS/2111

ORGANIC CHEMISTRY (CHEB 1102T)

Semester—I

Time Allowed : 3 Hours]

[Maximum Marks : 26

Note :— Candidates are required to attempt *two* questions each (4 marks each) from Sections A and B. Section C is compulsory (2 marks each question).

SECTION—A

1. Discuss the following :
 - (a) Bond lengths and bond energy
 - (b) Hydrogen bonding.
2. How are free radical, carbocations and carbenes produced ? Discuss their relative stabilities.
3. Discuss the following :
 - (a) Decarboxylation of carboxylic acid
 - (b) Corey-House reaction.
4. (a) Discuss hyperconjugation and its significance.
 (b) Discuss any two methods of determination of reaction mechanism. 2×4=8

SECTION—B

5. Discuss Baeyer's strain theory and its limitations in detail.
6. Give mechanism for the following :
 - (a) Hydroxylation of alkenes
 - (b) Ozonolysis of alkene.