

[This question paper contains 4 printed pages.]

1909

Your Roll No.

B.Sc. Prog./II

E

CH-202 : ORGANIC CHEMISTRY

(Admissions of 2008 and onwards)

Time : 2 Hours

Maximum Marks : 50

*(Write your Roll No. on the top immediately
on receipt of this question paper.)*

*Attempt any four questions.
Q.No.1 is compulsory*

1. (a) An alkene C_7H_{14} , after ozonolysis yielded two products [A] and [B]. [A] Gives positive iodoform reaction whereas [B] gives negative iodoform reaction. Identify [A] and [B] and also name the alkene.
- (b) How will you differentiate between [A] and [B] obtained above? Explain with reaction.
- (c) Mention of electrophile in each of the following reaction: Nitration, sulphonation, chlorination,

P.T.O.

Friedel-Craft's alkylation.

(5,5,4)

2. (a) Explain the reaction involved in the synthesis of ethylacetoacetate starting from ethyl acetate. Give the structures of tautomers of ethylacetoacetate.

(b) Starting from ethylacetoacetate synthesise the following (any **three**)

(i) Succinic acid

(ii) 3-methyl-2-pentanone

(iii) Crotonic acid

(iv) Methyl isoxazolone

(6,6)

3. Give reasons why

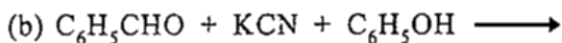
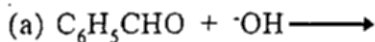
(a) Nitrobenzene is m-directing whereas toluene is o-, p-directing.

(b) Terminal alkynes react with NaH_2 where alkenes don't.

(c) Conjugated dienes are more stable than isolated dienes.

(d) Chlorobenzene is less reactive than methyl chloride towards nucleophilic substitution. (4×3)

4. Name and explain the mechanism of following reactions



5. Write short notes on

(a) Salient features of $\text{S}_\text{N}1$ and $\text{S}_\text{N}2$ type of reactions

(b) Ozonolysis

(c) Kharasch effect (3×4)

6. Complete the following reactions:

