

CHEMISTRY Paper-VI

(Organic Chemistry-B)

Time Allowed : 3 Hours

Max. Marks : 22

Note : Attempt any five questions in all including Question No. 9 which is compulsory question and selecting one question from each Unit I-IV.

Unit - I

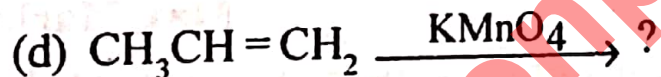
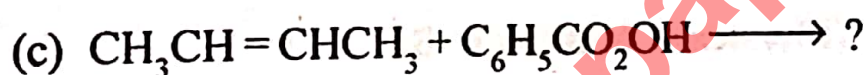
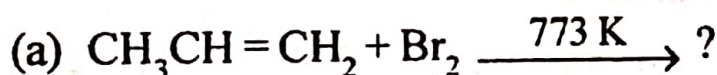
1. With suitable examples, explain the followings :

(a) Hofmann elimination

(b) Ozonolysis

2,2

2. Write the products of following reactions :



4

Unit - II

3. Write appropriate examples, explain the following in relevance to alkynes:

(a) Metal - ammonia reduction

(b) Polymerization

2,2

4. (a) Illustrate the Diels - Alder reaction with example.

(b) With appropriate example, discuss the mechanism of electrophilic addition reaction of alkynes.

1,3

Unit - III

5. (a) Elaborate the mechanism of nitration of benzene.

(b) List the factors which effect the *ortho to para ratio* of the products in aromatic electrophilic substitution.

2,2

6. (a) With resonance contributing forms, discuss the reactivity of halobenzenes towards the aromatic electrophilic substitution.

(b) Write the product/s of following reaction :



Unit – IV

7. (a) Discuss the stereochemistry of S_N^2 reaction.

(b) Describe the addition – elimination mechanism of nucleophilic aromatic substitution reaction. 2, 2

8. (a) What happens when ethyl bromide is treated with :

(i) KCN (ii) NaSH (iii) Na/Dry ether (iv) AgCN

(b) Why allyl halides are more reactive than alkyl halides towards nucleophilic substitution reaction. 2, 2

Compulsory Question

9. (a) Give industrial application of propene.

(b) What do you understand by acidity of alkynes ?

(c) Define Huckel rule with example.

(d) How will you prepare chloroform ?

4 × 1.5 = 6