(i) **Printed Pages: 2** **Roll No. .....**

(ii) **Questions : 9** **Sub. Code :** 0 1 5 2

Exam. Code : 0 0 0 2

B.A./B.Sc. (General) 2nd Semester

1059

CHEMISTRY

Paper-VI (Organic Chemistry-B)

(Same for B.Sc. Microbial and Food Tech.)

Time Allowed : Three Hours] **[Maximum Marks : 22**

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

UNIT—I

1. (a) Describe the mechanism of dehydration of alcohols.
   (b) Explain oxymercuration-reduction with suitable example. 2,2

2. (a) Discuss Hofmann elimination with any example.
   (b) With appropriate example, illustrate the substitution at the allylic position of alkenes. 2,2

UNIT—II

3. (a) Elaborate the mechanism of nucleophilic addition reaction of alkynes.

   (b) Write the products of following reactions :

$$? \xleftarrow[(Cl_2 + H_2O)]{HOCl} HC \equiv CH \xrightarrow[Ba(CN)_2]{HCN} ?$$

3,1

4. (a) Differentiate between cumulated and conjugated dienes.

(b) Explain the following with appropriate examples (dienes and alkynes) :

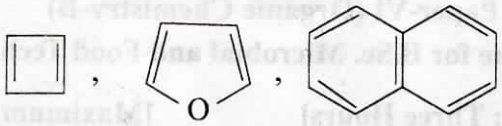
(i) Diels-Alder Reaction

(ii) Hydroboration-oxidation. 1,3

UNIT—III

5. (a) Discuss the mechanism of sulphonation of benzene.

(b) Explain Huckle rule. Which of the following compounds are aromatic and why ?



2,2

6. (a) How will you prepare ethyl benzene and what happens when ethyl benzene is treated with Br_2/hv ?

(b) Describe the factors affecting ortho/para ratio in aromatic electrophilic substitution. 1,3

UNIT—IV

7. (a) Discuss the elimination-addition mechanism of nucleophilic substitution in aryl halide.

(b) Depict the energy profile diagram of S_N^1 reactions. 3,1

8. (a) List the differences between S_N^1 and S_N^2 reactions.

(b) With chemical equations, complete the following conversion :

(i) Chlorobenzene to o-chloro toluene

(ii) Benzyl chloride to toluene. 2,2

(Compulsory Question)

9. (a) How will you convert propene into propan-2-ol ?

(b) Give a brief account of acidity of alkynes.

(c) List one method of preparation of biphenyl.

(d) Describe the formation of Freon from CCl_4.

4×1.5=6