

(i) Printed Pages: 3

Roll No.

(ii) Questions : 9

Sub. Code :

0	2	5	1
---	---	---	---

Exam. Code :

0	0	0	3
---	---	---	---

B.A./B.Sc. (General) 3rd Semester

1128

CHEMISTRY

Paper—(X : Organic Chemistry—A)

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

Time Allowed : Three Hours]

[Maximum Marks : 22

Note :— Attempt **five** questions in all, selecting **one** question from each section and the compulsory question (Section—E).

SECTION—A

1. (a) Explain the order of reactivity of primary, secondary and tertiary alcohols with Lucas reagent.
- (b) Give product obtained when glycerol reacts with excess of ammonia. 2,2
2. (a) Comment on statement that phenoxide ion is more stable than phenol.
- (b) Write mechanism of Fries rearrangement. 2,2

SECTION—B

3. (a) Draw the molecular orbital structure of carbonyl group.
- (b) Discuss synthesis of aldehyde and ketones from 1,3-Dithianes. 2,2

4. (a) Why carbonyl compounds have lower boiling points than corresponding alcohols ?
(b) Discuss the synthesis of ketones from :
(i) Nitriles
(ii) Alcohols. 2,2

SECTION—C

5. (a) Explain why Nucleophilic addition reactions of carbonyl compounds is P^H controlled.
(b) Write mechanism of base catalyzed Aldol condensation. 2,2
6. (a) Give test with equation to distinguish between :
(i) Ethanal and Propanal
(ii) Propanal and Propanone.
(b) A liquid of molecular formula C_7H_6O forms an oxime, reduces Tollen's reagent but does not reduce Fehling solution and undergoes Cannizzaro reaction. Give the structural formula of liquid and explain the reactions involved. 2,2

SECTION—D

7. (a) Comment on the structure of carboxylic and explain why acids do not give reactions of carbonyl group even though acid contains carbonyl group.
(b) Compare acid strength of ortho, meta and para-Hydroxybenzoic acid with that of benzoic acid. 2,2

8. (a) Discuss the mechanism of esterification of carboxylic acids with alcohols.
- (b) Explain the effect of heat on dicarboxylic acids in form of Blane's rule. 2,2

SECTION—E

9. (a) Why alcohols are generally soluble in water.
- (b) Which has higher dipole moment : Phenol or Ethanol ?
- (c) Which of following give positive haloform test : Benzaldehyde or Acetaldehyde ?
- (d) Name the reagent used to convert acetophenone into phenylacetate.
- (e) Give IUPAC name of the primary alcohol, which gives positive haloform test.
- (f) Give structure of dimer of carboxylic acid. 1 each