

B. PHARM
(SEM II) THEORY EXAMINATION 2022-23
PHARMACEUTICAL ORGANIC CHEMISTRY-I

Time: 3 Hours

Total Marks: 75

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt all questions in brief.

10 x 2 = 20

- (a) What is Electromeric effect? Give examples
- (b) Explain the term "Inductive effect" with suitable example.
- (c) What is Walden inversion?
- (d) What is Ozonolysis?
- (e) Write about Diel-Alder reaction.
- (f) Give reaction for Friedel Crafts reaction.
- (g) What is Saytzeff's orientation?
- (h) Rosenmund Reduction is used for?
- (i) Give structure of 3-chloro 2-hydroxy hexanoic acid.
- (j) Write IUPAC name of $\text{CH}_3\text{OCH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CHO}$

SECTION B

2. Attempt any twoparts of the following:

2 x 10 = 20

- (a) Explain kinetics, order of reactivity of alkyl halides, stereochemistry and rearrangement of carbocations regarding SN1 and SN2 reactions.
- (b) Elaborate Basicity, effect of substituent on Basicity of Aliphatic amines with suitable examples.
- (c) In E1 and E2 reactions –Discuss Kinetics, order of reactivity of alkyl halides and rearrangement of carbocations. Elaborate Factors affecting E1 and E2 reactions.

SECTION C

3. Attempt any fiveparts of the following:

7 x 5 = 35

- (a) Describe in detail aldol condensation and Crossed Aldol condensation.
- (b) Explain Structural isomerism in organic compounds.
- (c) Give detailed account of free radical addition reactions of alkenes and Anti-Markownikoff's orientation.
- (d) Give Reactions of Aldehydes and Ketones? What are Nucleophilic addition reactions of Carbonyl compounds and How they differ in acids and Bases?
- (e) Discuss Qualitative tests of Alcohols. Give Structure and uses of Cetosteryl alcohol and Iodoform.
- (f) Give preparations and Reactions of Alkyl Halides.
- (g) Write short note on Structure and Uses of Acetic acid, Citric acid, Acetyl salicylic acid, Amphetamine and Acetone.