(b) Tertiary alkyl-Halides are never used in the preparation of alkanes from alkyl-Halides by Wurtz reaction. Explain. **3**

7. (a) Explain, why **3**

(i) Terminal alkynes are acidic in nature.

(ii) Alkynes undergo nucleophilic addition Reaction.

(b) Why are alkyne less reactive than alkene towards Electrophilic Addition Reactions ? **3**

8. (a) Distinguish between S_N1 and S_N2 Reaction. **3**

(b) Discuss the factors which affect the rate of S_N1 Reaction. **3**

No. of Printed Pages : 05 Roll No. .....

52065

B. Sc. EXAMINATION, 2026

(Second Semester)

(Re-appear Only)

CHEMISTRY

Paper VI

CH-106

Organic Chemistry

Time : 3 Hours] [*Maximum Marks : 32*

Before answering the question-paper, candidates must ensure that they have been supplied with correct and complete question-paper. No complaint, in this regard will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting *two* questions from each Section. Q. No. **1** is compulsory.

1. (a) What is Walden Inversion ?

(b) Compare the boiling and Melting points of *cis* and trans-2-Butene. Explain giving reasons.

(c) Haloalkanes are polar in nature ? Still they are insoluble in water explain.

(d) What are cumulated dienes ? Give examples. **2 each**

Section A

2. (a) Give Mechanism of Dehydration of Alcohols. **3**

(b) How will you convert : **3**

(i) But-2-ene to Ethanoic Acid

(ii) Ethene to Methanol.

3. (a) What is peroxide Effect ? Why is it shown only by HBr and not by HF, HCl, and HI ? **3**

(b) Discuss the mechanism of Dehydrohalogenation of alkyl Halides to form alkenes. **3**

4. (a) Differentiate between aromatic, antiaromatic and non aromatic compounds by giving examples. **3**

(b) What is meant by aromaticity ? State Huckel rule with suitable examples. **3**

5. (a) Why Friedel-Craft acylation preferred over Friedel-Craft alkylation ? **3**

(b) Explain m-directing nature of nitro-group in Benzene Ring. **3**

Section B

6. (a) Give any *two* methods for the Synthesis of alkynes. **3**

9. (a) Discuss Benzyne Mechanism by taking example of chlorobenzene. **3**

(b) Explain the following : **3**

(i) Gattermann Reaction

(ii) Hunsdiecker Reaction

❖❖❖❖❖❖❖

9. (a) Discuss Benzyne Mechanism by taking example of chlorobenzene. **3**

(b) Explain the following : **3**

(i) Gattermann Reaction

(ii) Hunsdiecker Reaction

❖❖❖❖❖❖❖