

Step Academy official

Model Town Grw PH: 03016652757

| | |
|--------------|------------|
| STUDENT NAME | |
| PAPER CODE | 55700 |
| TIME ALLOWED | 40 |
| Paper Date | 24-02-2026 |



| | |
|-------------|------------------------|
| CLASS | New 1st Year (FSC/ICS) |
| SUBJECT | Chemistry |
| TOTAL MARKS | 25 |
| Paper Type | |

Q1. Choose the correct answer.

5X1=5

1.

An alkene undergoes ozonolysis followed by reduction with zinc dust and water to yield propanone and methanal. The alkene is:

- (A) 1-Butene (B) 2-Butene (C) 2-Methylpropene (D) 2-Methyl-2-butene

2. Halogenation of alkanes is an example of:

- (A) Electrophilic substitution (B) Nucleophilic substitution (C) Free-radical substitution (D) Oxidation

3. The most stable carbonium ion among the following is:

- (A) CH_3^+ (B) CH_3CH_2^+ (C) $(\text{CH}_3)_2\text{CH}^+$ (D) $(\text{CH}_3)_3\text{C}^+$

4. Markownikov's rule is applicable to :

- (A) $\text{CH}_2 = \text{CH}_2$ (B) $\text{CH}_3 - \text{CH}_2 - \text{CH}_3$ (C) $\text{CH}_3 - \text{CH} = \text{CH} - \text{CH}_3$ (D) $(\text{CH}_3)_2 - \text{C} = \text{CH}_2$

5. What intermediate is formed during the electrophilic addition of HBr to an alkene?

- (A) Carbocation (B) Carbanion (C) Radical (D) Epoxide

Q2. Write short answers of the following questions.

5X2=10

1 . Why alkanes are least reactive?

2 . Write structural formulas of: (a) 1, 3-Butadiene (b) Vinyl bromide.

3 . Prepare ozonide from ethene.

4 . Explain how inductive effects from alkyl groups stabilize carbocations in alkenes.

5 . What are closed chain hydrocarbon give example.

Q3. Write detailed answers of the following questions.

2X5=10

1 . Describe the free radical halogenation of methane using Cl_2 as an example.

2 .

Explain the following reactions of alkenes with examples: (i) Halogenation (ii) Ozonolysis (iii) Epoxidation d) Polymerization