PHARMACEUTICAL ORGANIC CHEMISTRY – I
(GUESS PAPER 2025–26)

SECTION A (10 × 2 = 20)
1. Define inductive effect with example.
2. What is ozonolysis of alkenes?
3. Define Saytzeff's rule.
4. What is Markownikoff's rule?
5. Define SN1 and SN2 reactions.
6. What is Diels–Alder reaction?
7. Define isomerism.
8. What are electrophiles and nucleophiles?
9. Define aldol condensation.
10. Write uses of acetic acid.

SECTION B (Attempt any TWO – 2 × 10 = 20)
1. Explain SN1 and SN2 reactions with mechanism and factors affecting them.
2. Explain Aldol and Cannizzaro condensation reactions with mechanism.
3. Discuss Markownikoff's and Anti-Markownikoff's addition reactions with examples.
4. Explain E1 and E2 elimination reactions and differentiate between them.

SECTION C (Attempt any FIVE – 5 × 7 = 35)
1. Explain structural isomerism with examples.
2. Describe acidity of aliphatic carboxylic acids and effect of substituents.
3. Explain basicity of aliphatic amines and factors affecting it.
4. Explain Aldol and Perkin condensation reactions.
5. Explain 1,2 and 1,4 addition reactions of conjugated dienes.
6. Describe qualitative tests of alcohols and amines.
7. Write structure and uses of ethanolamine, acetone and aspirin.

■ QUESTION FREQUENCY ANALYSIS (2019–2025)

Topic	Times Asked	Exam Weight
SN1 & SN2 Reactions	7 / 7	■■■■■
Aldol / Cannizzaro Condensation	7 / 7	■■■■■
Markownikoff & Anti-Markownikoff Rule	6 / 7	■■■■■
E1 & E2 Elimination Reactions	6 / 7	■■■■
Structural Isomerism	6 / 7	■■■■
Basicity of Amines	5 / 7	■■■■
Acidity of Carboxylic Acids	5 / 7	■■■■
Conjugated Dienes (1,2 & 1,4 addition)	5 / 7	■■■■
Qualitative Tests & Uses	4 / 7	■■■