

Supply

Rajiv Gandhi University of Health Sciences, Karnataka

Second Semester B.Pharm Degree Examination – 03-May-2025

Time: Three Hours

Max. Marks: 75 Marks

Pharmaceutical Organic Chemistry-I

Q.P. CODE: 5006

Your answers should be specific to the questions asked

Draw neat labeled diagrams wherever necessary

All the questions are compulsory

LONG ESSAYS

2 x 10 = 20 Marks

1. Discuss Markovnikov's rule and peroxide effect with mechanism taking one example each.
OR
Explain the following with mechanisms.
a) Benzoin condensation
b) Cannizzaro reaction
2. Discuss the mechanism, kinetics and stereochemistry involved in unimolecular nucleophilic substitution reaction by selecting an appropriate example.

SHORT ESSAYS

7 x 5 = 35 Marks

3. What is hybridization? Write a note on sp^3 hybridization in alkane.
OR
What are alkyl halides? Discuss any three-general method of preparation for alkyl halides.
4. Write the kinetics and mechanism of E_2 reaction.
OR
What are carboxylic acids? Explain the acidity of carboxylic acid.
5. Explain the basicity of aliphatic amines. Describe the effect of substituent on basicity.
6. What is Aldol condensation? Explain its mechanism.
7. Write the general rules for IUPAC nomenclature of alkane.
8. Enlight the concept of rearrangement of carbocation with suitable examples.
9. Explain factors affecting SN^2 reaction.

SHORT ANSWERS

10 x 2 = 20 Marks

10. Write about Saytzeff's rule.
11. What is Perkin condensation reaction?
12. Define resonance effect with example.
13. Write esterification reaction.
14. Write structure and uses of a) Acetyl salicylic acid b) Amphetamine.
15. Write structure and IUPAC name a) Acetaldehyde b) Acetone *cinnemaldehyde*
16. Write qualitative test a) Benzaldehyde b) Benzoic acid.
17. Give an example of Diel's alder reaction.
18. Write the structure and uses of Chloroform and chloral hydrate.
19. Define functional isomerism with example.
