

# Rajiv Gandhi University of Health Sciences, Karnataka

Second Semester B.Pharm Degree Examination – 04-Jun-2024

Time: Three Hours

Max. Marks: 75 Marks <sup>Supply</sup>

## 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. What are elimination reactions? Discuss the kinetics, mechanism, orientation and reactivity of  $E_1$  reaction.

**OR**

Discuss the mechanism, stereochemistry and kinetics involved in bimolecular nucleophilic substitution reaction by selecting an appropriate example.

2. Explain the mechanism of Perkin condensation and crossed Aldol condensation.

### SHORT ESSAYS

**7 x 5 = 35 Marks**

3. Give the IUPAC name of (a) Acetone (b) Acetic acid (c) Neopentane (d) Formaldehyde (e) Isobutane.

**OR**

What is peroxide effect? Explain its mechanism.

4. Write the mechanism of 1,2 and 1,4 addition reactions of conjugated dienes.

**OR**

What are alkyl halides? Give any three chemical reactions of alkyl halides.

5. Qualitative test for alcohol any three
6. Explain the reaction and mechanism of Cannizzaro reaction.
7. Explain the mechanism of Benzoin condensation.
8. Write any two chemical tests to distinguish primary, secondary and tertiary amines.
9. What are carboxylic acids? Discuss any three-general method of preparation of carboxylic acids.

### SHORT ANSWERS

**10 x 2 = 20 Marks**

10. What is Keto-enol tautomerism? Give example.
11. Write the structure and IUPAC name of: a) Tert-Butyl chloride b) Formamide.
12. Give one example for rearrangement of carbocation.
13. Why poly substituted alkenes are more stable than monosubstituted alkenes.
14. Give the structure and use of Ethyl alcohol and Benzyl alcohol.
15. Write any one qualitative test for vanillin and acetone.
16. Write the structure and uses of cinnamaldehyde and paraldehyde.
17. Explain why methyl amine is stronger base than ammonia.
18. What is esterification? Give reaction.
19. Write the structure and uses of benzyl benzoate and dimethyl phthalate.

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