# Rajiv Gandhi University of Health Sciences, Karnataka

Second Semester B. Pharm Degree Examination – 14-Dec-2020

**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

**LONG ESSAYS (Answer any Two)** **2 x 10 = 20 Marks**

1. Define elimination reaction. Discuss the Kinetics and mechanism of $E_1$ and $E_2$ reaction with suitable example.
2. Explain kinetics, mechanism, stereochemistry and reactivity of $SN_1$ reaction.
3. Explain the reaction and mechanism of Perkin condensation and Aldol condensation.

**SHORT ESSAYS (Answer any Seven)** **7 x 5 = 35 Marks**

4. Write the general rules for IUPAC nomenclature of alkanes.
5. Define hybridization? Explain $SP^3$ hybridization in ethane.
6. Give the mechanism involved in the electrophilic addition reactions of conjugated dienes.
7. Define and classify carbocations. Write a note on stability of them.
8. How do you distinguish primary, secondary and tertiary alcohols by chemical test.
9. Explain the reaction and mechanism of Cannizzaro reaction.
10. What are carbonyl compounds? Give any three general reactions of ketones.
11. Explain ionisation of carboxylic acid and write the structure of carboxylate anion.
12. Discuses any four chemical reactions of aliphatic amines.

**SHORT ANSWERS (Answer All)** **10 x 2 = 20 Marks**

13. Define metamerism with example.
14. Write the structure and IUPAC name of a) Isopropyl alcohol b) Ethyl acetoacetate.
15. Give an example of Diel's alder reaction.
16. Write the uses of paraffins.
17. Give the structure and use of Tetrachloroethylene and Tetrachloromethane.
18. Write the structure and uses of benzaldehyde and paraldehyde.
19. How do you differentiate aldhydes and ketones by chemical test.
20. Write any two qualitative tests for amides.
21. Write the structure and uses of tartaric acid and citric acid.
22. Write the structure and uses of ethanolamine and amphetamine.

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