

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Second Semester B.Pharm Degree Examination – 16-Nov-2021**

**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 the mechanism, stereochemistry and kinetics involved in the  $SN_2$  reaction with appropriate example  
**OR**  
What is isomerism? Classify structural isomerism giving examples
2. Discuss the mechanism of a) Perkin condensation b) Cannizzaro reaction

**SHORT ESSAYS**

**7 x 5 = 35 Marks**

3. What is peroxide effect? Write the reaction mechanism of peroxide effect  
**OR**  
Explain the stability of conjugated dienes
4. Describe halogenation of alkanes  
**OR**  
How do you convert acetic acid into acetamide and ethyl acetate?
5. Discuss the stability of allyl cation.
6. Explain the effect of substituents on the acidity of carboxylic acids.
7. What is Saytzeff rule? Illustrate with an example.
8. Explain with mechanism nucleophilic addition to carbonyl compounds.
9. Give any three qualitative tests for alcohols with reaction.

**SHORT ANSWERS**

**10 x 2 = 20 Marks**

10. What is free radical? Give their order of stability.
11. What is Diel-Alder reaction?
12. What are Electrophiles? Give examples.
13. How do you convert salicylic acid into methyl salicylate?
14. Write the structure and uses of hexamine.
15. What is carbocation? Give example.
16. Write the structures of cetostearyl alcohol and glycerol.
17. What are protic solvents? Give examples.
18. Write the structures of chloroform and dichloromethane.
19. Give the structure of a) Paraldehyde b) Dimethyl phthalate.

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