



# Rajiv Gandhi University of Health Sciences, Karnataka

**I Year Pharm-D Degree Examination – 21-Jan-2020**

**Time: Three Hours**

**Max. Marks: 70 Marks**

## **PHARMACEUTICAL ORGANIC CHEMISTRY (RS2)**

**Q.P. CODE: 2877**

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. Discuss in detail on the stability of cycloalkanes. Write a note on bayer's strain theory.
2. Discuss the reaction and kinetics, stereochemistry in nucleophilic aliphatic substitution mechanism.
3. Explain Markovnikov's and anti-markovnikov's rules with examples.

### **SHORT ESSAYS (Answer any six)**

**6 x 5 = 30 Marks**

4. Give any four methods for preparation for cyclo alkanes.
5. Write a note on elimination vs substitution reaction of alkyl halides.
6. Define free radical and classify. Explain stability and reactivity of free radicals.
7. Explain orientation and reactivity of free radical additions to conjugated dienes.
8. Write the preparation of different acid derivatives with example.
9. Discuss the mechanism involved in nitration and sulphonation of benzene.
10. Explain the mechanism involved in benzoin condensation.
11. What is isomerism? Explain keto-enol isomerism.

### **SHORT ANSWERS**

**10 x 2 = 20 Marks**

12. Conversion of acids to amides and anhydrides.
13. Write the structure of vinyl bromide and allyl iodide
14. Walden's inversion.
15. Diels-Alder reaction.
16. Structure and uses of sodium lauryl sulphate.
17. Nomenclature of aldehydes.
18. Write the structure and uses of chlorbutanol.
19. Perkin condensation.
20. Protic and aprotic solvents.
21. Give examples and structural isomers.

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