

# Rajiv Gandhi University of Health Sciences, Karnataka

## I Year B.Pharm Degree Examination – 23-Mar-2021

**Time: Three Hours****Max. Marks: 70 Marks**

### **PHARMACEUTICAL ORGANIC CHEMISTRY – I** **(Revised Scheme 3)** **Q.P. CODE: 2604**

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 'E1 and E2' reaction with mechanism, kinetics and orientation
2. Explain the addition of HBr to 1,3 – butadiene with mechanism & orientation
3. Explain (a) Cannizzaro reaction (b) Beckmann's rearrangement

**SHORT ESSAYS (Answer any Six)****6 x 5 = 30 Marks**

4. Explain the conversion of carboxylic acid into (a) Acid chloride, (b) Amide (c) Ester (d) Anhydride
5. Explain NO<sub>2</sub> group is deactivating & m-directing but NH<sub>2</sub> group is activating & o-directing in aromatic electrophilic substitution reaction.
6. Explain the nitration of Benzene
7. Write a note on chlorination of methane
8. Write short note on reactivity of alkyl halides towards SN<sup>1</sup> reaction
9. What are cycloalkanes? Write any three methods of preparation of cycloalkanes.
10. Write a note on Diel's Alder reaction
11. Explain the basicity of various amines & effect of substituents on basicity

**SHORT ANSWERS****10 x 2 = 20 Marks**

12. What are Carbenes? Give example
13. Why o –nitrophenol is steam volatile but p-nitrophenol is not?
14. Kharasch peroxide effect
15. Write the structures of (a) 2-butenic acid (b) 2-chloro-2-pentene
16. Example of stereochemical inversion
17. Dipole moment
18. Reimer Tiemann reaction
19. Isomerism
20. Name the electrophiles used in Friedel Craft alkylation and sulphonation of benzene
21. Diazotization

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