

# Rajiv Gandhi University of Health Sciences, Karnataka

I Year B. Pharm Degree Examination – NOV 2016

Time: Three Hours

Max. Marks: 80 Marks

## PHARMACEUTICAL ORGANIC CHEMISTRY - I

(Revised Scheme - 2)

**Q.P. CODE: 1954**

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 carbocations with examples and discuss the factors affecting the stability of carbocations.
2. Explain Perkin's condensation and Allylic rearrangement reactions.
3. Explain the mechanism, kinetics and stereochemistry of  $SN^2$  reaction.

### SHORT ESSAYS (Answer any Eight)

**8 x 5 = 40 Marks**

4. Explain the acidity of phenols. Write the effects of substitution.
5. Write a note on isomerism.
6. Explain Keto-Enol tautomerism with examples.
7. Explain the effects of substituents on electrophilic aromatic substitution reaction.
8. Explain the reactions with mechanisms (a) Aldol condensation (b) Claisen condensation.
9. Write the assay method and medicinal uses of (a) Aspirin (b) Chlorbutol.
10. Explain nitration of benzene with mechanism.
11. Explain dehydration of alcohol with examples.
12. Discuss the reactions of Diazonium salts.
13. Describe Bayer's strain theory.

### SHORT ANSWERS

**10 x 2 = 20 Marks**

14. Define hydrogen bonding with examples.
15. Write a note on Dipole movement.
16. Write a note on Lowry Bronsted theory of acids.
17. Mechanism of  $E_1$  reaction
18. Synthesis of amides from Acyl chlorides
19. What is hyper-conjugation?
20. Explain Huckle rule.
21. Give one method for preparation and one test for purity for lactic acid.
22. Write IUPAC name for (a) Acetone (b) Glycerol.
23. Define peroxide effect.

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