

# Rajiv Gandhi University of Health Sciences, Karnataka

## I Year B.Pharm Degree Examination – Mar 2013

**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. Discuss electrophilic aromatic substitution mechanism. Explain the effect of halogens on electrophilic aromatic substitution
2. Discuss SN<sub>2</sub> and SN<sub>1</sub> reaction with mechanism and stereochemistry
3. Explain the following with mechanisms: (i) Aldol condensation (ii) Benzoin condensation

**SHORT ESSAYS (Answer any Eight)****8 x 5 = 40 Marks**

4. Explain the acidity of phenol
5. Explain peroxide effect with mechanism.
6. What are carbocations? Classify and explain the relative stabilities of carbocations
7. Write any two methods for conversion of acids to acid chloride and amides
8. Explain dehydration of alcohol with mechanism.
9. Write the mechanism of halogenation of methane
10. Explain any two cycloaddition reactions
11. Explain the mechanism of Fries rearrangement
12. What is isomerism? Give its classification with examples
13. Explain Bayer's strain theory of cycloalkanes

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

14. Define resonance and give an example
15. What are polar aprotic solvents? Give two examples
16. Write structure and IUPAC name of formaldehyde and acetone
17. What is Kolbe's reaction? Give an example
18. Explain Saytzeff's rule with an example
19. Give reason: the boiling point of ether is lower than its isomeric ethyl alcohol
20. What are nucleophiles? Give any two examples
21. How will you convert ethanol to acetaldehyde
22. Define and classify amines with examples.
23. Explain with an example williamson's synthesis