

# Rajiv Gandhi University of Health Sciences, Karnataka

## I Year Pharm-D Examination – NOVEMBER 2015

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

### PHARMACEUTICAL ORGANIC CHEMISTRY

**Q.P. CODE: 2854**

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 and classify isomerism with suitable examples.
2. Give the method of preparation and uses of the following:  
a) Benzyl benzoate b) Lactic Acid c) Urea d) Chlorobutol.
3. Define Friedel Crafts alkylation and give its mechanism and limitations. Add a note on Friedel Craft's acylation.

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

4. Explain dehydration of alcohols with mechanism.
5. Discuss Markonikov's rule and peroxide effect with mechanism taking one example each.
6. Give the mechanism of Michael Addition.
7. Write short notes on:  
a) Intermolecular forces.  
b) Effect of hydrogen bonding on boiling points.
8. Write a note on stability of conjugated dienes.
9. Explain chlorination of methane with mechanism.
10. Discuss the mechanism and stereochemistry involved in bimolecular nucleophilic substitution reaction.
11. What are carbocations? How are they generated? Explain the stability of carbocations.

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

12. Write the resonance structure of benzene.
13. What are polar solvents? Give two examples.
14. Define free radical with examples.
15. Give the IUPAC names of acetone and formaldehyde.
16. The dipole moment of trans-dichloroethylene is zero. Why?
17. Define electrophile with examples.
18. What is Hyperconjugation? Give examples.
19. State the Lewis theory of acids and bases.
20. Write the resonance structure of carboxylate ion.
21. Give an example of Reformatsky reaction.

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