

# Rajiv Gandhi University of Health Sciences, Karnataka

I Year Pharma-D Degree Examination – Dec-2014

Time: Three Hours

Max. Marks: 70 Marks

## PHARMACEUTICAL ORGANIC CHEMISTRY

**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. Define and give the mechanism of Markovnikov's addition and Anti-Markovnikov's addition.
2. Define and give the mechanism of (a) Cannizaro reaction (b) Aldol condensation
3. Explain SN1 and SN2 reaction with respect to mechanism and stereochemistry. Compare SN1 and SN2 reactions.

### SHORT ESSAYS (Answer any six)

**6 x 5 = 30 Marks**

4. Write the preparation and uses of Aspirin and Citric Acid.
5. Discuss about 1,2-addition and 1,4-addition and effects of temperature on them.
6. Explain the Bayer's strain theory.
7. Discuss Friedel Craft's Alkylation with mechanism.
8. Explain the mechanism of dehydrohalogenation of Alkyl halides.
9. Write the mechanism of Halogenation of Benzene.
10. Write the effects of substituents on Acidity of Carboxylic acids.
11. Give the mechanism of Hoffmann's degradation.

### SHORT ANSWERS

**10 x 2 = 20 Marks**

12. Give two methods of synthesis of cyclo alkanes.
13. What are dienes? Give an example.
14. Define an electrophile with example.
15. Define Keto-enol tautomerism with example.
16. State Lewis theory of Acids and Bases.
17. Give the method of preparation of Dimercaprol.
18. What is Homolysis and Heterolysis?
19. Write the resonance structures of Benzyl radical.
20. Write the structure and IUPAC names of (a) Acetone (b) Formaldehyde.
21. How nitrobenzene converted into chlorobenzene?

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