

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**I Year B.Pharm Degree Examination – Sep 2012**

**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 the mechanism, orientation and reactivity of electrophilic addition reactions of alkenes
2. Give the mechanism of  $E_1$  and  $E_2$  reactions. Discuss the dehydration and oxidation of alcohols
3. Define and give mechanism of a) Aldol Condensation b) Reformatsky reaction

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

4. Explain ionization of carboxylic acid and acidity constant
5. What is Markovnikov's rule? Give an account of different reactions involving Markovnikov's addition
6. Explain diazotization reaction with mechanism
7. Give one method each for conversion of carboxylic acids into acid chloride, ester and anhydride
8. Describe Friedel Crafts Acylation reaction with mechanism
9. Explain the effect of halogen on aromatic compounds
10. Explain the mechanism and stereochemistry of  $S_N1$  reaction
11. Explain hydrogenation in alkenes with examples and mechanism
12. Define and give the mechanism of Hoffmann rearrangement
13. Give any two methods for preparation of cycloalkanes

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

14. Explain protic and aprotic solvents with examples
15. Aromatic amines are less basic than aliphatic amines. Give reasons
16. Define free radicals, give examples
17. Define alkyl shift and hydride shift with examples
18. Give the structure and uses of citric acid
19. Define nucleophile with example
20. Give one method of preparation and uses of paraldehyde
21. Explain Diels Alder reaction
22. Define Keto-Enol tautomerism
23. Give the structure of the following a) m-cresol b) Chloral hydrate

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