Rajiv Gandhi University of Health Sciences, Karnataka

I Year Pharma-D Examination – Feb / Mar 2012

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. Discuss Baeyer's strain theory and its limitations. Explain briefly how this theory is modified.
2. Discuss the mechanism involved in (a) Addition of HBr to propene in presence of peroxides (b) Chlorination of methane. (c) Nitration of benzene.
3. (a) What is aromaticity? Give the criteria for aromaticity. Give examples.
   (b) Define and classify isomerism with examples.

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

4. Write a short note on hyperconjugation.
5. What is Knoevenagel reaction? Discuss its mechanism.
6. Give the preparation, assay and medicinal uses of saccharin sodium.
7. Discuss the stability of benzyl radical.
8. What are activating and deactivating groups? Discuss the theory of reactivity in aromatic rings.
9. Discuss Phase transfer catalysis with suitable example.
10. Explain the mechanism of Cannizzaro and crossed Cannizzaro reaction appropriate examples.
11. Give the mechanism of dehydrohalogenation of alkyl halides.

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

12. Give the characteristics of esterification reactions. Give an example.
13. What are protic solvents? Give examples.
14. Define hydrogen bond with examples.
15. Define and classify nucleophiles giving examples.
16. Compare the acidity of acetic acid and chloroacetic acid.
17. Write the IUPAC name of isobutene and neopentane.
18. Outline the conversion of benzene to p-nitrotoluene.
19. Write a note on addition of carbenes to alkenes.
20. Which is having higher boiling point; ethanol or dimethyl ether? Why?
21. Give the structure and uses of Mephenesin and Lactic acid

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