

Rajiv Gandhi University of Health Sciences, Karnataka

First year B.Pharm Degree Examination – August 2010

Time: Three Hours

Max. Marks: 70 Marks

PHARMACEUTICAL ORGANIC CHEMISTRY – I (Revised Scheme 3)

Q.P. CODE: 2604

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 involved in a) Knoevenagels reaction b) Cannizaro reaction
2. What are elimination reactions? Explain the Mechanism, Orientation and reactivity of Elimination Uni-molecular reaction by selecting an appropriate example
3. What is Bayer's strain theory? Discuss why and how cyclohexane is more stable towards addition reactions than cyclopropane?

SHORT ESSAYS (Answer any Six)

6 x 5 = 30 Marks

4. Discuss the mechanism involved in Beckmanns rearrangement
5. What is Benzoin condensation? Discuss its mechanism
6. Comment on the effect of temperature on the 1,2- and 1,4-additions in conjugated dienes
7. What is Fries rearrangement? Explain the reaction with an appropriate example
8. Enumerate the factors affecting S_N1 and S_N2 reactions
9. Discuss the mechanism involved in the reaction between propene with hydrogen bromide in presence of peroxide
10. Discuss the synthetic uses of Sandmeyer's reaction with equations
11. Why amines are basic in nature? Discuss the effect of substituents on their basicity

SHORT ANSWERS

10 x 2 = 20 Marks

12. What is Curtius reaction? Give an example
13. Outline the conversion of Aniline to Benzoic acid
14. Write down the structures and chemical names of a) Cinnamic acid b) Neopentyl chloride
15. Which of the following compounds would you predict to be able to form hydrogen bonding a) Ethanol b) Diethyl ether?
16. Define "Base" according to Bronsted theory with example
17. Which molecule is polar and why? CH_3Cl and CH_4
18. What is Diel's – Alder reaction? Write an example
19. What are the products obtained on dehydrohalogenation of 1-chloro-2-methyl-butane?
20. What is the significance of heat of hydrogenation? Explain
21. What are polar aprotic solvents? Give two examples
