

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Pharm Degree Examination – NOVEMBER 2015

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 the (A) Nitration and (B) Chlorination of Benzene
2. Discuss the mechanism involved in the following reactions
(A) Benzoin condensation (B) Aldol condensation
3. Write the mechanism of Electrophilic addition. Write about the reaction of hydrogen halides with alkenes. Write the effect of peroxide on the above reaction

SHORT ESSAYS (Answer any Six)

6 x 5 = 30 Marks

4. What are carbenes? Discuss the mechanism involved in the reaction between phenol and chloroform in the presence of sodium hydroxide
5. What is Williamson's synthesis? Give its limitations
6. What is Isomerism? Explain different types of isomerism with examples
7. Discuss the mechanism involved in Beckmann rearrangement
8. Comment, phenol is acidic but not ethanol
9. Explain the factor affecting the nucleophilic aliphatic substitution reaction
10. What are dienes? Discuss the stability of conjugated dienes
11. Give reasons, amino group is activating and ortho, para directing in electrophilic aromatic substitution

SHORT ANSWERS

10 x 2 = 20 Marks

12. Define with examples (a) Electrophile (b) Nucleophile
13. Explain how allyl carbocation is stabilized?
14. Propene is treated with chlorine at about 500^o C. Write the reaction
15. Compare and contrast E1 versus E2 reactions (Any four points)
16. What do you mean by hydride shift? Give one example
17. Explain Hoffmann's elimination with an example
18. Write down the structures of the following
(A) Acetophenone (B) Ethyl acetoacetate
19. How do you convert Benzoic acid to Benzamide
20. Complete the reaction with chemical structures. Aniline is treated with acetic anhydride in presence of acetic acid and the compound obtained is then treated with nitrating mixture
21. What is Grignard reagent? Give any one example
