

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Pharm Degree Examination – 17-Nov-2021

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. Define aromatic Electrophilic substitution reactions. Discuss the reaction mechanism of nitration and sulphonation.
2. Define elimination reaction. Discuss the mechanism of E1 and E2 reaction with suitable example.
3. Define and give the mechanism of following reactions
(i) Aldol condensation (ii) Benzoin condensation

SHORT ESSAYS (Answer any Eight)

8 x 5 = 40 Marks

4. Explain the Bayer's strain theory of cycloalkanes.
5. Define Nucleophilic aliphatic substitution reaction? Give the mechanism of S_N1 reaction.
6. Define and give the mechanism of Cannizzaro reaction.
7. What is electrophilic addition reaction and give the mechanism of Markovnikov's addition.
8. Write a note on acidity of phenols.
9. Explain the mechanism of Curtius reaction.
10. Give one method each for the conversion of carboxylic acid into acid anhydride, acid amide and acid chloride.
11. Explain Friedel crafts acylation reaction.
12. Write chlorination of methane with mechanism.
13. Write a note on dehydration of alcohols.

SHORT ANSWERS

10 x 2 = 20 Marks

14. Define the terms "Polarity" and "Polar aprotic solvent."
15. What is hydrogen bond? Give two example showing hydrogen bonding.
16. Give the structure and uses of (i) Aspirin (ii) Dimercaprol
17. Define electrophiles with examples.
18. What is diazotization reaction? Give an example.
19. How do you synthesize ester from carboxylic acid?
20. What is a carbocation? Give an example
21. Define ring activating and deactivating group with examples
22. Define acids and bases according to Bronsted-Lowry and Lewis theory.
23. Define Keto-enol tautomerism.
