

Rajiv Gandhi University of Health Sciences, Karnataka

Fourth Semester B. Pharm Degree Examination – 14-Jun-2022

Time: Three Hours

Max. Marks: 75 Marks

Pharmaceutical Organic Chemistry - III

Q.P. CODE: 5013

Your answers should be specific to the questions asked

Draw neat labeled diagrams wherever necessary

All the Questions are compulsory.

LONG ESSAYS

2 x 10 = 20 Marks

1. Give the general methods of preparation and chemical reactions of Pyrrole and Thiophene.

OR

Explain the concept of chirality and chiral carbons? Discuss the different reactions of chiral molecules.

2. Explain in detail the stereochemistry of Biphenyl analogs and the conditions required for their optical activity.

SHORT ESSAYS

7 x 5 = 35 Marks

3. Outline the reaction mechanism of Skraup's Quinoline synthesis and give its applications.

OR

Write the synthetic importance of LiAlH_4 giving reactions. Explain the mechanism of reduction of carbonyl compounds.

4. Write the synthesis and chemical reactions of Acridine.

OR

Discuss conformational isomers in cyclohexane and their relative stability.

5. What is Beckmann's rearrangement? Explain its mechanism and applications.
6. What are heterocyclic compounds? Write their system of nomenclature.
7. Write notes on E & Z and syn-anti system of nomenclature.
8. Explain partial and absolute asymmetric synthesis with examples.
9. Distinguish between configuration and conformation. Explain the conformation in n-Butane.

SHORT ANSWERS

10 x 2 = 20 Marks

10. How do you prepare Furoic acid from Furan?
11. Write the structure and medicinal uses of any two Pyrimidine derivatives.
12. Write the possible stereoisomer's of 2, 3-dibromobutane.
13. What is acridine? Give the structure and use of any one acridine drug.
14. What are axial and equatorial bonds? Illustrate with an example.
15. What is Wolff Kishner's reduction reaction? Give an example.
16. Define alternative axis of symmetry with a suitable example.
17. How does alk. KMnO_4 react with Quinoline and Isoquinoline?
18. Define with an example on Meso compound.
19. Explain why Furan readily undergoes Diel's Alder reaction, but thiophene does not? Give an example.
