

Rajiv Gandhi University of Health Sciences, Karnataka

Fourth Semester B. Pharm Degree Examination – 29-May-2024

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. a) Explain the elements of symmetry.
b) What are relative and absolute configuration and explain the rule in determining R & S configuration.

OR

Explain the stereochemistry of Biphenyl compounds and criteria for a molecule to exhibit optical activity.

2. Define and classify heterocyclic compounds with examples and explain aromaticity and reactivity of Furan, Pyrrole and Thiophene.

SHORT ESSAYS

7 x 5 = 35 Marks

3. Write a note on asymmetric synthesis.

OR

Explain Enantiomers and Diastereomers with suitable examples.

4. Write a note on E & Z and Syn and Anti systems of nomenclature.

OR

Give any three methods of synthesis of Thiophene.

5. Write the method of synthesis and chemical reactions of Quinoline.
6. Describe the method of synthesis and reactions of Imidazole.
7. Discuss Paal-Knorr synthesis of Pyrrole.
8. Explain the mechanism involved in Beckmann's rearrangement.
9. Write the Dakin reaction and its synthetic applications.

SHORT ANSWERS

10 x 2 = 20 Marks

10. Define racemisation and racemic modification.
11. Define asymmetric carbon and give the formula to calculate isomeric forms.
12. Define conformers with example.
13. Define Stereoselective reaction with example.
14. Write the structure of five membered heterocyclic compounds containing single heteroatom.
15. Write the structure and medicinal uses of drug containing Furan nucleus.
16. Give any one method of synthesis of Isoquinoline.
17. Write the structure and uses of Pyridine derivatives.
18. Write Wolff-Kishner reduction reaction.
19. Enumerate the application of Oppenauer-oxidation reaction.
