

Supply

Rajiv Gandhi University of Health Sciences, Karnataka

Fourth Semester B. Pharm Degree Examination – 29-Apr-2025

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. Discuss any five methods for the resolution of racemic mixtures. Explain partial and absolute asymmetric synthesis with examples.

OR

- a. What are heterocyclic compounds? Write the rules for their nomenclature with examples.
- b. Explain the aromaticity in Furan and compare with Thiophene.

2. What are geometrical isomers? Explain any five methods to determine their configuration. Explain E-Z nomenclature with examples

SHORT ESSAYS

7 x 5 = 35 Marks

3. Explain optical isomerism and its conditions with example.

OR

Give an account on the chemical reactions of Pyrrole.

4. Give one synthetic method for Quinoline and Isoquinoline. Write the structure and uses of one medicinal derivative for each.

OR

Explain the Basicity of Pyridine and compare with Pyrrole and Piperidine.

5. Explain Fischer-Indole synthesis with mechanism.
6. Explain Clemmenson's reduction with mechanism.
7. Explain Beckmann's rearrangement with mechanism.
8. Discuss the conformational isomerism in Cyclohexane with energy relationships.
9. Explain stereo selective and stereo specific reactions with examples.

SHORT ANSWERS

10 x 2 = 20 Marks

10. Define Enantiomers with examples.
11. Write the importance of Oppenauer oxidation reaction.
12. Give the basic structure of Azepine, Dibenzazepine and Benzodiazepine.
13. Give any one method of synthesis of Pyrimidine.
14. Write the structure and medicinal uses of any two Furan derivatives.
15. Write the resonance structure of Thiophene.
16. What are Syn and Anti reactions?
17. Define ordinary light and monochromatic light.
18. Define alternative axis of symmetry with an example.
19. Distinguish between D-L and R-S nomenclature.
