

Rajiv Gandhi University of Health Sciences, Karnataka
Fourth Semester B. Pharm Degree Examination – 23-Oct-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. What is racemic modification? Discuss the different methods for resolution of racemic modification.

OR

- a) What is geometrical isomerism? Explain their conditions and nomenclature.
b) Discuss stereoisomerism in biphenyl compounds.
2. a) Explain the concept of aromaticity in pyrrole and compare with furan and thiophene.
b) Explain the reactivity and orientation of pyrrole towards Electrophiles.

SHORT ESSAYS

7 x 5 = 35 Marks

3. Define and explain asymmetric synthesis and its types with examples.

OR

Discuss stereoisomerism in tartaric acid.

4. Discuss any four methods for the determination of configuration of geometrical isomers.

OR

What are heterocyclic compounds? Classify them with examples.

5. Write any two methods each for the synthesis for pyrrole and furan.
6. What is Schmidt rearrangement? Give an example and write the mechanism involved.
7. Write any two methods of synthesis and chemical reactions of oxazole.
8. Explain the reactivity and orientation of pyridine towards Nucleophiles. Give two examples.
9. What is Birch reduction? Write its applications and mechanism.

SHORT ANSWERS

10 x 2 = 20 Marks

10. What is DL system of nomenclature in optical isomerism?
11. Define enantiomerism with one example.
12. Define conformation. How do they differ from configuration?
13. Differentiate between Stereo selective and Stereo specific reactions.
14. Write the resonance structure for thiophene.
15. Name any three medicinal derivatives of furan. Give the structural and use of any one.
16. Write one method for the synthesis of Dibenzazepine.
17. Give the structure and medicinal use of any two pyrazoles.
18. What is Wolf Kishner's reduction? Give an example.
19. What is Oppenauer oxidation? Give an example.
