

Rajiv Gandhi University of Health Sciences, Karnataka

Fourth Semester B. Pharm Degree Examination – 02-Dec-2020

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

LONG ESSAYS (Answer any Two)

2 x 10 = 20 Marks

1. Discuss the concepts of optical activity, enantiomerism, diastereomerism, meso compounds with suitable examples.
2. a. Write the nomenclature of geometrical isomers with reference to Cis-Trans, E-Z and Syn-Anti systems.
b. Explain three methods for determination of configuration of geometrical isomers.
3. Write the methods of synthesis and chemical reactions of Pyrrole. Compare and explain its aromaticity with furan and thiophene.

SHORT ESSAYS (Answer any Seven)

7 x 5 = 35 Marks

4. Explain the different types of elements of symmetry with examples.
5. Explain stereo specific and stereo selective reactions with examples.
6. Write two methods each for the synthesis of thiophene and furan.
7. What are heterocyclic compounds? Classify the mono and bicyclic systems with structural examples.
8. Explain the conformational isomerism in n-Butane and show their energy relationships.
9. What is Clemmensen's reduction? Write the mechanism involved.
10. Write two synthesis and chemical reactions of Pyrazole.
11. Write the methods of synthesis of Pyridine. Give the name, structure and medicinal uses of two pyridines.
12. Define Beckmann's rearrangement and Schmidt rearrangement, give examples.

SHORT ANSWERS (Answer All)

10 x 2 = 20 Marks

13. Write the structure and medicinal uses of two azepines.
14. Write the synthesis of Indole by Fisher's method.
15. What are the conditions for stereo isomerism in biphenyls?
16. What is Claisen-Schmidt reaction? Give an example.
17. Write the structure and uses of any two Thiophene derivatives.
18. Write the structure and uses of any two Imidazole derivatives.
19. Compare the basicity of Pyrimidine with Pyridine.
20. Write one method for the synthesis of Quinoline.
21. What is Wolf Kishner's reduction? Give an example.
22. Write one method for the synthesis of Acridine.
