

Rajiv Gandhi University of Health Sciences, Karnataka
Fourth Semester B. Pharm Degree Examination – 16-Mar-2021

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. Explain the rules in nomenclature of stereo isomers by R-S and E-Z configuration.

OR

Define heterocyclic compounds? Write their nomenclature and classification with examples.

2. Define geometrical isomers. Discuss the methods used to determine the configuration of geometrical isomers.

SHORT ESSAYS

7 x 5 = 35 Marks

3. Explain the reactions and mechanism involved in Birch reduction.

OR

Explain Fischer-Indole synthesis, giving its mechanism and applications.

4. Discuss stereochemistry of Biphenyl, giving examples.

OR

What are meta hydrides? Give examples. Explain the mechanism of reduction of carbonyl compounds using metal hydrides.

5. Write two methods synthesis and chemical reactions of Isoquinoline.
6. Explain stereo selective and stereo specific reactions with examples.
7. Outline two methods of synthesis and chemical reactions of Oxazole.
8. Explain in detail on elements of symmetry, giving examples.
9. Explain enantiomers and diastereomers with suitable examples. How do they differ from each other?

SHORT ANSWERS

10 x 2 = 20 Marks

10. Write the structure and medicinal uses of any two Pyridine derivatives.
11. Write the cis-trans structure for 1, 2-dichloro ethene.
12. Write the structure and IUPAC name for Pyrazole and Pyrimidine.
13. Write the structure of Debenzazepine and Purine.
14. Write the structure and medicinal uses of any two thiazole derivatives.
15. Outline the Hantzsch synthesis of Pyridine.
16. Write the different Newman projection formulae for isomers of n-Butane.
17. What does D, L and +, - symbols represent and why they are different?
18. What is Clemmensen's reduction? Give an example.
19. What is Claisen-Smiles condensation? Give an example.
