

FACULTY OF PHARMACY

B. Pharmacy IV - Semester (PCI) (Backlog) Examination, March 2024

Subject: Pharmaceutical Organic Chemistry-III

Time: 3 Hours

Max. Marks: 75

PART-A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. Why Pyridine is more basic than Pyrrole.
2. What is optical activity and give its significances.
3. Give any two applications of Lithium Aluminium hydride.
4. Draw the structures and uses of Pyrazole and Pyrimidine.
5. Define Birch reduction and give the example.
6. Mention any two reactions of Thiophene.
7. Write the structures and medicinal uses of Isoxazole and Thiazole.
8. What is the reason for electrophilic substitution at 2nd position in Pyrrole.
9. Draw the structures of Acridine and Indole.
10. Draw the structure and medicinal uses of Purine.

PART-B

Note: Answer any two questions.

(2 x 10 = 20 Marks)

11. Explain the mechanisms and applications of following reactions.
 - (a) Beckmann rearrangement
 - (b) Oppenauer oxidation.
12. Write any three synthesis, reactions and medicinal uses of Pyrazole and Oxazole.
13. Define racemic mixture. Explain the various methods of resolution of racemic mixture.

PART-C

Note: Answer any seven questions.

(7 x 5 = 35 Marks)

14. Write the mechanism involved in Wolf -kishner rearrngement.
15. Write any three reactions and uses of Acridine.
16. Outline the method of preparation of Quinoline and Isoquinoline.
17. Compare and contrast the acidity of Pyrrole and basicity of Pyridine.
18. Explain the relative aromaticity and reactivity of Pyrrole, Furan and Thiophene.
19. Explain Fisher Indole synthesis.
20. Write a note on Atropisomerism.
21. Describe the mechanism of Clemmenson reduction and mention its applications.
22. Explain stereospecific and Stereoselective reactions with examples.
