

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[BPHARM 0122]

JANUARY 2022
(MARCH 2021 EXAM SESSION)

Sub. Code: 2039

B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)

PCI Regulation 2017 – SEMESTER IV

PAPER I – PHARMACEUTICAL ORGANIC CHEMISTRY III

Q.P. Code : 562039

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)

1. What are geometrical isomers? Explain the methods to determine the configuration of geometrical isomers?
2. Discuss the methods of preparation and electrophilic substitution reactions of pyrrole.
3. Classify rearrangement reactions? Describe the reaction, mechanism, salient features and applications of Beckmann rearrangement.

II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)

1. Applying sequence rules explain RS System of nomenclature.
2. Explain the stereochemistry of biphenyls.
3. Explain the elements of symmetry with suitable examples.
4. Define and classify heterocyclic compounds. Explain the nomenclature of monocyclic and fused heterocyclic compounds.
5. Write the methods of preparation and any two reactions of imidazole.
6. Write the structure and name of monocyclic heterocyclic compounds with two different heteroatoms. Explain the methods of preparation of any one of them.
7. Summarize the synthetic applications of lithium aluminium hydride.
8. Write a brief note on Dakin reaction.
9. Compare and contrast Clemmensen reduction and Wolf Kishner reduction.

III. Short answers on: Answer ALL questions. (10 x 2 = 20)

1. What do you mean by Partial and Absolute asymmetric synthesis?
2. What do you mean by a meso compound?
3. Define stereoselective reactions and give a suitable example.
4. What is enzymatic resolution of racemic modification?
5. Write the structure and numbering for the following heterocyclic compounds
a) Aziridine b) 1,3-diazocine
6. What are purines? Write the structure and use of any one medicinal compound belonging to this category.
7. What is Chichibabin reaction?
8. What is the purpose of liquid ammonia and alcohol in Birch reduction?
9. Write the reduction reactions of pyridine.
10. What is Claisen-Schmidt condensation?
