

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

[B.PHARM 0323]

MARCH 2023  
(SEPTEMBER 2022 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. Describe in detail the RS system of nomenclature of optical isomers.
2. Explain various reactions and medicinal uses of furan and its derivatives.
3. Explain the mechanism for birch reduction and discuss any four synthetic applications.

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

1. Explain partial asymmetric synthesis.
2. Basicity of pyridine.
3. Dakin reaction.
4. Any three methods of determination of configuration of geometrical isomerism.
5. Conformational isomerism of cyclohexane.
6. Electrophilic aromatic substitution reactions of pyrrole.
7. Reactions of chiral molecules.
8. Chemical reactions of thiophene.
9. Stereoselective reactions.

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

1. Schmidt rearrangement.
2. Reduction reaction of thiazole.
3. Conformers of ethane.
4. Define optical isomers.
5. Medicinal uses of purine.
6. Aromaticity of furan.
7. Structure and uses of acridine.
8. Optical isomers of tartaric acid.
9. Any one reduction reaction using sodium boro hydride.
10. Oxidation of pyridine.

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