

BACHELOR OF PHARMACY (B. PHARM.) (CBCS-2019 COURSE)
B. Pharm. Sem-IV : WINTER- 2022
SUBJECT : PHARMACEUTICAL ORGANIC CHEMISTRY-III

Day : Saturday

Time : 02:00 PM-05:00 PM

Date : 21-01-2023

W-20670-2022

Max. Marks : 75

N.B.

- 1) All questions are **COMPULSORY**.
- 2) Answers to both the section should be written in **SEPARATE** answer books.
- 3) Figures to the right indicate **FULL** marks.

SECTION – I

- Q.1** Answer **All** questions of the following: **2 × 10 = 20** **(20)**
- i) What is chirality?
 - ii) What is plane of symmetry?
 - iii) What is R and S in the configuration of optical isomers?
 - iv) Give examples for chiral catalyst.
 - v) Define geometrical isomerism with example.
 - vi) Define the meaning of restricted rotation with example.
 - vii) Define stereoselective reactions with examples.
 - viii) Which of the heterocyclic compound is more aromatic among pyrrole, furan and thiophene.
 - ix) Why nitration of pyrrole cannot be carried in concentrated acids.
 - x) Write the Diels Alder reaction of furan.

- Q.2** Answer any **TWO** from the following **THREE** **2 × 10 = 20** **(20)**
- a) Explain conformational isomerism in Ethane and cyclohexane in detail.
 - b) What are heterocyclic compounds, classify and describe the nomenclature of heterocyclic compounds.
 - c) Define the terms optical isomerism, enantiomers, diastereomers and meso compounds. What is racemic modification and in detail write the methods of resolution of racemic mixture.

SECTION - II

- Q.3** Answer any **SEVEN** from the following **NINE**: **7 × 5 = 35** **(35)**
- a) Give three methods of preparation and two medicinal uses of Purine and their derivatives.
 - b) Give two methods of preparation and three chemical reactions of Imidazole.
 - c) Explain in brief about Wolff Kishner reduction.
 - d) Give two methods of preparation and three chemical reactions of Quinoline.
 - e) Give two methods of preparation and three chemical reactions of Thiophene.
 - f) Explain Dakin reaction and its applications.
 - g) Give three methods of preparation and two chemical reactions of Indole.
 - h) Give three methods of preparation and two chemical reactions of Furan.
 - i) Write a short note on Claisen-Schmidt condensation.

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