

P-80

Total Pages : 4

Roll No.

MCH-507

Organic Chemistry-II

M.Sc. Chemistry (MSCCH)

2nd Semester Examination, 2023 (June)

Time : 2 Hours]

[Max. Marks : 35

Note : This paper is of Thirty Five (35) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein. Candidates should limit their answer to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

SECTION–A

(Long Answer Type Questions)

Note : Section 'A' contains Five (05) long answer type questions of Nine and Half (9½) marks each. Learners are required to answer any Two (02) questions only.

(2×9½=19)

1. What are alkaloids ? How they are classified ? Give the general method of structural determination of alkaloids.
2. Write synthesis and one industrial application of following compounds.
 - (a) Quinolene.
 - (b) Carbazole.
 - (c) Isoquinolene.
 - (d) Acridine.
3. What are carbohydrates ? How are they classified ? Discuss.
 - (a) Kiliani-Fischer synthesis.
 - (b) Mutarotation.
4. What are terpenoids ? Give classification of terpenoids. Explain the structure elucidation of α -terpeniol from degradation studies.
5. Write note on :
 - (a) Methods of isolation of alkaloids.
 - (b) D and L Sugar.
 - (c) Identification of terpenoids by spectroscopy.

SECTION-B

(Short Answer Type Questions)

Note : Section 'B' contains Eight (08) short answer type questions of Four (04) marks each. Learners are required to answer any Four (04) questions only. (4×4=16)

1. Discuss aromaticity, antiaromaticity and non-aromaticity by using suitable examples.
2. What is the significance of the following :
 - (a) Isoprene rule.
 - (b) Special isoprene rule.
 - (c) Gem-dialbyl rule.
3. Describe two methods for the synthesis of benzofurans from phenols.
4. Discuss two methods for the synthesis of isoquinolene.
5. How alkaloids are detected ? Describe general procedure for the extraction of alkaloids.
6. Draw the conformation of D-ribose and 2-deoxy-D-ribose.

7. Explain the following :

- (a) Aldose and Ketose.
- (b) Huckel's rules limitations.

8. Give the name of the following heterocyclic compounds :


