

C103

Total Pages : 4

Roll No.

MCH-507

Organic Chemistry-II

M.Sc. Chemistry (MSCCH-20)

2nd Semester Examination, 2022 (June)

Time : 2 Hours]

Max. Marks : 40

Note : This paper is of Forty (40) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

SECTION-A

(Long Answer Type Questions)

Note : Section 'A' contains Five (05) long answer type questions of Ten (10) marks each. Learners are required to answer any Two (02) questions only.

(2×10=20)

1. (a) Explain with example the terms aromatic, antiaromatic and non aromatic compounds. 5
(b) [10]-annulene satisfies Huckel's rule but it is not aromatic. Explain. 5

2. Give any three important methods of synthesis of azulene?
Discuss the important reactions and aromaticity of azulene. 10
3. Describe the following methods for the synthesis of indole :
(a) Fisher indole synthesis.
(b) Grandberg synthesis.
(c) Madelung synthesis. 10
4. Describe the synthesis of quinine. 10
5. (a) What are the structural features in reducing and non-reducing sugars? 5
(b) Explain Huckel's rule of aromaticity. 5

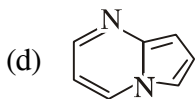
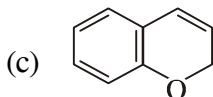
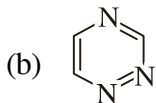
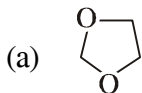
SECTION-B

(Short Answer Type Questions)

Note : Section 'B' contains Eight (08) short answer type questions of Five (05) marks each. Learners are required to answer any Four (04) questions only. (4×5=20)

1. What are the structural features necessary for a molecule to be aromatic? 5
2. How anthracene is synthesized and explain its aromatic behaviour? 5

3. Write the name of the following heterocyclic compounds :



4. Explain the following :

(a) Bischler-Napieralski synthesis.

(b) Skraup Synthesis.

5

5. What are natural products? Draw the structure of any four natural product drugs.

5

6. Explain with example :

(a) Hofmann exhaustive methylation.

(b) Emde degradation of an alkaloid.

5

7. Draw the conformation of β -D-ribose and 2-deoxy- β -D-ribose. 5
8. Describe one synthesis of sucrose. 5
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