

S-448

Total Pages : 4

Roll No.

MCH-507

Organic Chemistry-II

M.Sc. Chemistry (MSCCH)

2nd Semester Examination, 2022 (Dec.)

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.

SECTION-A

(Long Answer Type Questions)

Note : Section 'A' contains Five (05) long answer type questions of Nine and Half ($9\frac{1}{2}$) marks each. Learners are required to answer any Two (02) questions only.
($2 \times 9\frac{1}{2} = 19$)

1. What are terpenoids ? How are they classified ? Discuss biosynthetic pathways of terpenoids with examples. [9½]

2. Discuss briefly all of the following :
 - (a) Explain why [10]-annulene are not aromatic in character but [18]-annulene is aromatic.
 - (b) Discuss the medicinal and industrial uses of alkaloids with examples.
 - (c) Skraup synthesis. [9½]

3. What are carbohydrates. Discuss the following terms with respect to carbohydrates :
 - (a) Mutarotation.
 - (b) Epimerization.
 - (c) Reducing and non-reducing sugars.
 - (d) Application of carbohydrates. [9½]

4. Give any three methods of synthesis of phenanthrene. Discuss the important reactions and aromaticity of phenanthrene. [9½]

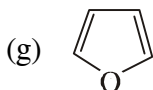
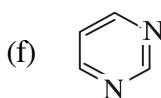
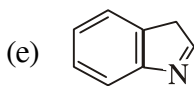
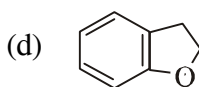
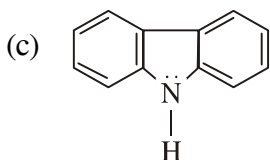
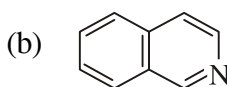
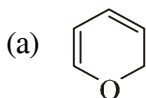
5. Write note on:
 - (a) Methods of isolation of alkaloids
 - (b) D and L Sugar
 - (c) Identification of terpenoids by spectroscopy [9½]

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. Explain the term benzenoid, non benzenoid and polynuclear hydrocarbons. [4]
2. Write the name of the following heterocyclic compounds :



3. Discuss the Fischer Indole synthesis. [4]

4. Describe the biogenetic pathway of monoterpenoids. [4]
5. What is difference between :
- (a) D and L sugar.
 - (b) α and β anomer. [4]
6. Explain Gaig's rule ? How do you classify the following compounds into aromatic and non-aromatic.
- (a) Azulene.
 - (b) Naphthalene.
 - (c) Heptalene.
 - (d) Pentalene. [4]
7. Discuss the electrophilic and nucleophilic substitution in acridine. [4]
8. How the structure of camphor established from degradation reaction. [4]
-