

S-460

Total Pages : 3

Roll No.

MSCCH-502

Organic Chemistry-I

M.Sc. Chemistry (MSCCH)

1st Semester Examination, 2022 (Dec.)

Time : 2 Hours]

Max. Marks : 70

Note : This paper is of Seventy (70) 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 Nineteen (19) marks each. Learners are required to answer any Two (02) questions only.

(2×19=38)

1. Discuss aromaticity, anti-aromaticity and non aromaticity with suitable example.

2. What are non classical carbocations ? Discuss the stability of non classical carbocations.
3. What are crown ethers ? Give methods of preparation of crown ethers. Give some application of crown ether.
4. Write explanatory note on :
 - (a) Stereochemistry of spiranes.
 - (b) Confirmation of decalines.
5. What are Biphenyls and catenanes ? Write down their synthesis.

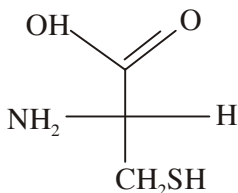
SECTION-B

(Short Answer Type Questions)

Note : Section 'B' contains Eight (08) short answer type questions of Eight (08) marks each. Learners are required to answer any Four (04) questions only. (4×8=32)

1. Explain aromaticity for benzenoid and non benzeoid compounds.
2. Write down the important method for the generation of carbocation.

3. Find out the absolute configuration of L-cystien according to the R,S Nomenclature.



4. Discuss with example the cross conjugation bonding in organic compounds.
5. What is meant by singlet and triplet carbene.
6. Explain why benzyl carbocation is more stable than cyclohexyl carbocation.
7. Resonance energy of benzene is much more higher than 1,3-butadiene, why?
8. Give brief account of the following :
- (a) Hyperconjugation.
 - (b) Resonance energy.
