

A-0993

Total Pages : 3

Roll No.

MSCCH-607

M.Sc. Chemistry (MSCCH)

**Chemistry of Natural Product and
Heterocyclic Compound**

Examination February, 2026

Time : 2:00 Hrs.

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. *Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.*

Section-A

Long Answer Type Questions (2×19=38)

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.

A-0993

(1)

P.T.O.

1. What are terpenoids ? Give structural determination of Menthol.
2. Discuss synthesis and biosynthesis of Cholesterol.
3. Write notes on the following :
 - (a) Flavonoids
 - (b) Diel's Hydrocarbon
4. Discuss the following :
 - (a) Stereochemistry of steroids
 - (b) Stereochemistry of menthol
5. Write notes on the following :
 - (a) 1, 3 Diaxial interaction
 - (b) Aziridines

Section–B

Short Answer Type Questions (4×8=32)

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.

1. Give the synthesis of Morphine
2. Give the method of preparation of Azetidians.

3. Write a short note on the preparations and properties of Phosphorines.
4. Write short notes on the following :
 - (a) Bond angle strain
 - (b) Isoprene rule
5. Describe structure and synthesis of porphyrin skeleton.
6. Discuss the shikimic acid pathway for biosynthesis of flavonoids.
7. Discuss tautomerism in heterocyclic compounds.
8. What are alkaloids ? Classify.
