

A-060

Total Pages : 3

Roll No.

MSCCH-504

M.Sc. CHEMISTRY (MSCCH)

**(Group Theory, Instrumentation Chemistry and
Computer for Chemist)**

1st Semester Examination, 2024 (June)

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-060/MSCCH-504 (1)

P.T.O.

1. What is point group and how they are classified ?
Discuss each with suitable examples.
2. Discuss any two methods used for the X-rays structure analysis of crystals.
3. Explain memory and its types in details.
4. Define the term errors and explain its types and determination with examples.
5. Discuss the character table for the point group present in the H₂O molecule.

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. Discuss the principle, types and application of paper chromatography.
2. Write a note on Least squares analysis and arithmetic logic unit.
3. What is computer ? Explain different types of computers in details.

4. Discuss the isotopic dilution methods and its advantage.
5. What is lattice energy ? Write C programme to evaluate lattice energy.
6. Write a note on MATLAB and DBASE.
7. Discuss the principle and instrumentation of gas chromatography.
8. What is group ? Discuss the abelian and non-abelian group with examples.
