

Roll.No.

25PCHCT3010

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai - 600 044.

M.Sc.Chemistry - END SEMESTER EXAMINATIONS - NOVEMBER 2025
SEMESTER - III

25PCHCT3010 - Research Methodology

Total Duration : 2 Hrs. 30 Mins.

Total Marks : 60

Section B

Answer any **SIX** questions ($6 \times 5 = 30$ Marks)

1. i) Name any four journals published by the American Chemical Society (ACS)
ii) Explain the difference between basic and applied research.
2. Explain any two types of tables used in data presentation
3. Describe the steps involved in planning and conducting experiments.
4. Explain the role of current awareness searching in scientific research.
5. i) Define plagiarism. Why is it considered unethical in research?
ii) List any three forms of scientific writing. Mention their significance.
6. Explain the correct method for presenting tables and figures in a research report.
7. Discuss the usefulness of CA Collective Index (CI) and Decennial Index (DI) for retrospective searches.
8. Describe the importance of problem selection in the research process.

Section C

I - Answer any **TWO** questions ($2 \times 10 = 20$ Marks)

9. i) Elaborate on primary, secondary, and tertiary sources of chemistry literature with examples.
ii) Prepare a detailed project proposal format, including objectives, methodology, expected outcome.
10. i) Compare and contrast the different sampling techniques with their advantages and disadvantages.
ii) Explain the methods of collecting primary data in detail.
11. i) Differentiate between retrospective and forward searching in chemical abstracts.
ii) Discuss the use of molecular formula for searching in CA indexes.

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12. i) Explain the standard format and guidelines for writing a project report.
- ii) Discuss the role of appendices and footnotes in enhancing the clarity of a research report.

II - Compulsory question (1 × 10 = 10 Marks)

13. i) Explain the usefulness of reviews, monograph in in literature research.
- ii) Construct a simple project proposal for a study on water quality analysis.
