



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION – CHEMISTRY

THIRD SEMESTER – APRIL 2023

**PCH 3503 – SCIENTIFIC RESEARCH METHODOLOGY AND
COMMUNICATIONS**

Date: 05-05-2023

Dept. No.

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

Part-A

Answer **ALL** Questions.

(10 x 2 = 20)

01. What is historical research?
02. Write the objectives of research.
03. Compare “notes and communications”.
04. What is index guide? Mention its advantages.
05. Who are primary and secondary audiences?
06. What is tautology? How is it eliminated during scientific writing?
07. Illustrate parallel outlining with suitable example.
08. Expand the following abbreviations of funding agencies.
CSIR, DST, ISRO, DRDO.
09. What is citation and h-index?
10. Mention the importance of google scholar.

Part-B

Answer any **EIGHT** questions.

(8 x 5 = 40)

11. Write the difference between research methods and research methodology.
12. What are the criteria of a good research? Explain.
13. Give a brief account on **any two** of the following.
(i) Monographs (ii) Beilstein (iii) Communications (iv) Encyclopaedia
14. How is the search for a journal through chemical abstract services carried out?
15. Name various types of CA indexes. Explain any two in detail.
16. Describe the differences between Abstract and Summary.
17. Classify the types of outlining. Explain each one with specific example.
18. How is a laboratory notebook maintained? Mention its importance.
19. Explain the representation of figures and graphs in a thesis.
20. Why is plagiarism regarded as a serious offence? Suggest the measures to avoid it.
21. Describe the methods of “online searching” of journals.
22. Write short notes on science direct and STN international.

Part-C

Answer any **FOUR** questions.

(4 x 10 = 40)

- 23a. How is basic research converted into action research? Give an example.
 - b. Write a note on testing hypothesis and error handling. **(5+5)**
24. Give a detailed account on the various types of primary, secondary and tertiary sources with suitable examples.
- 25a. What do you mean by *thematic issues* in Chemical reviews?
 - b. What are monographs and treatises? How do they differ from each other? **(5+5)**
- 26a. How are semicolon and comma properly used in scientific reports? Give suitable examples.
 - b. Discuss the Journal referencing styles followed by RSC and ACS. **(5+5)**
27. Write a project proposal for a Major research project (not more than one and half pages) on any one of the current research topics in Chemistry.
- 28a. List out some of the services offered by *Web of Science*.
 - b. What is ChemPort? Mention its importance and services. **(5+5)**
