



**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

**M.Sc. DEGREE EXAMINATION – CHEMISTRY**

THIRD SEMESTER – NOVEMBER 2015

**CH 3815 - SCIENTIFIC RESEARCH METHODOLOGY**

Date : 07/11/2015

Dept. No.

Max. : 100 Marks

Time : 09:00-12:00

**Part-A**

*Answer ALL questions.*

**(10 × 2 = 20)**

1. What is the purpose of a research?
2. How is fundamental research transformed to applied research?
3. Abbreviate the following journals as they appear in references.  
(i) Journal of Physical Chemistry      (ii) Synthetic communications  
(iii) Talanta      (iv) Chemical Reviews
4. Name the various abstracts available in science and technology.
5. Write the difference between communication and notes.
6. What are the needs of technical communications?
7. Write the expansion of the following abbreviations.  
i) et. al.      ii) ibid      iii) q.v.      iv) i.e.
8. What is redundancy?
9. Write the content format of thesis writing.
10. Mention the significance of e-alerts.

**Part-B**

*Answer any EIGHT questions.*

**(8 × 5 = 40)**

11. Explain experimental research.
12. How is positivistic research methodology practiced?
13. Write short notes on index medicus and biological abstracts.
14. How is *das Hauptwerk* very important in Beilstein?
15. Write a short note on chemical abstract services.
16. Why is general subject index referred extensively for the search of chemical abstracts?
17. What are the various referencing styles used in-text? Give suitable examples.
18. What is the format and condition for writing a thesis?
19. Mention the significance of the following punctuations in technical writing.  
i) period      ii) semicolon      iii) comma
20. How are tautology and superfluous words eliminated in scientific writing?
21. What are the services provided by scifinder and scopus?
22. Write the importance of science citation index?

**Part-C**

*Answer any FOUR questions.*

**(4 × 10 = 40)**

23a. What are the characteristics of research?

b. Compare between quantitative and qualitative research. **(5+5)**

24a. Discuss the various indexes of chemical abstracts.

b. Write notes on Lange's handbook of chemistry. **(5+5)**

25a. How are the audiences of technical communications classified? Mention their role in scientific writing.

25b. How is a laboratory notebook maintained? **(5+5)**

26. What are the funding agencies that extend financial support for projects? Explain the format of proposal writing.

27a. How is parallel outlining done? What are the various styles of outlining?

b. Discuss the methods of presenting a table in the thesis. **(5+5)**

28a. What is chemport? Mention its significance.

b. How is scifinder useful to identify a journal and its status? **(5+5)**

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