

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



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

**THIRD SEMESTER – NOVEMBER 2019**

**18PCH3MC03 – SCIENTIFIC RESEARCH METHODOLOGY AND COMMUNICATIONS**

Date: 02-11-2019

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

**Part-A**

*Answer ALL questions.*

**(10 × 2 = 20)**

1. How can a research be motivated?
2. How is basic research converted into action research? Give an example.
3. Why are patents to be purchased with caution?
4. Compare “notes and communications”.
5. What are tertiary sources? Give examples from general and science category.
6. What are the indexes available with Chemical Abstract services?
7. How do ASAP alerts function?
8. What do you mean by primary technical report?
9. What are redundancy and overcomplex words? How can they be corrected?
10. What are the funding agencies which assist science and engineering projects?

**Part-B**

*Answer any EIGHT questions.*

**(8 × 5 = 40)**

11. Explain positivistic research methodology.
12. Explain the objectives of research.
13. How are biological abstracts helpful for chemical research?
14. Write a short note on Beilstein.
15. Explain the importance of “Merck index” and “Dictionary of Organic Compounds”.
16. Enumerate the features of “Chemical Abstracts” issues.
17. How is literature search done using Scifinder?
18. Name various CA indexes. Explain any two in detail.
19. Bring out the differences between technical and non technical communications.
20. How are the punctuations, semicolon and comma, properly used in technical reports?
21. What is parallel outlining? Explain with a specific example.
22. How are figures and graphs represented in a thesis individually and as parts of the text?

### Part-C

*Answer any FOUR questions.*

**(4 × 10 = 40)**

- 23a. Illustrate the characteristics of research.
- b. Define assessment and evaluation. Mention their differences. (5+5)
- 24a. What are Index Chemicus and Merck index?
- b. Discuss in detail the earlier and current publication status of journal articles. (5+5)
- 25a. Write a short note on reviews as secondary source of information.
- b. Give a systematic searching of chemical abstract by retrospective method. (5+5)
- 26a. What are the informations available in a “chemical abstract”? Write a format of a chemical abstract.
- b. Write short notes on sciencedirect and STN international. (5+5)
- 27a. How is a technical report written for primary and secondary audiences?
- b. Bring out the differences between footnotes and endnotes with suitable examples. (5+5)
- 28a. How are figures and tables presented in results and discussion? Give suitable examples.
- b. Write a project proposal (not more than 1 page) on any one of the following topics.  
solar power; nano materials; organic synthesis; coordination complexes. (5+5)

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