

M.Sc.- I (Chemistry) (NEP Pattern) Semester-I
NEP-15 / 01MSCCH09 - Research Methodology

P. Pages : 2

Time : Three Hours



GUG/W/23/15077

Max. Marks : 80

1. a) What is the difference between Qualitative & Quantitative research. What are advantages & disadvantages of each. **8**

b) Explain in brief about design and components of research proposal. **8**

OR

c) Differentiate between descriptive research and analytical research. **4**

d) Explain the difference between applied research and fundamental research. **4**

e) Write a note on Research methods & Research methodology. **4**

f) What are the points of differences between conceptual research and empirical research? Explain in details. **4**

2. a) Explain the importance of literature in defining a problem. **8**

b) How to define, formulate and select the research problem? Explain in brief. **8**

OR

c) Discuss in details about primary and secondary sources of literature. **4**

d) Write a short note on. **4**
i) Reviews
ii) Treatise

e) Discuss about monographs and patents. **4**

f) Explain about the development of working hypothesis. **4**

3. a) Explain the uses of MS-Excel, MATLAB & chem draw in data analysis. **8**

b) Write a note on. **8**
i) h-index and i-index
ii) Impact factor
iii) Research gate
iv) Chemspider

OR

c) Write short note on google scholar. **4**

- d) Explain in details about E-Journals and Journal Access. 4
- e) Explain what is Scifinder. Write a short note on Scopus. 4
- f) Discuss about. 4
- i) Hot articles
 - ii) Citation index
4. a) Explain the layout of research paper. 8
- b) What do you mean by predatory journals & publishers. 8
- OR**
- c) What is short communication. Explain. 4
- d) Give in details about review article and monograph. 4
- e) Explain in details about ethics in publishing. 4
- f) Explain terms: 4
- i) Technical Reports.
 - ii) Survey Reports.
 - iii) Dissertation
 - iv) Authored & edited books.
5. a) What are the qualities of good research. 2
- b) Explain the purpose of research methodology. 2
- c) Give significance of literature review. 2
- d) Define the scope of literature review. 2
- e) Give any two examples of E-Journal. 2
- f) Name any two softwares used in research design. 2
- g) What is the primary objective of research presentation? 2
- h) Define Peer reviewing. 2
