

M.Sc. BOTANY
II SEMESTER EXAMINATION MAY 2024

Paper Name: **Research Methodology**

Paper Code: **MBO-CFC202**

Time: **2½ hours**

Maximum Marks: **60**

Note: This paper has 3 sections A, B, and C.

Section A: Answer all the questions. **Section B:** Attempt any 5 out of 6.

Section C: Attempt any 2 out of 3.

Instructions: An equal representation of each course outcome should be done in each section.

Abbreviations used:

CLO-Course Learning Outcomes

CLO 1: understand the philosophy of science and the history of scientific development, and be able to critically evaluate different philosophical and theoretical approaches to scientific research;

CLO 2: demonstrate knowledge of various research methods and designs, including the ability to formulate research problems, objectives, and hypotheses, and design research plans accordingly and research ethics;

CLO 3: understand the principles of good laboratory practices (GLPs) and scientific measurements, and be able to apply them in practice;

CLO 4: develop effective scientific communication skills, including the ability to write research proposals, manuscripts, reviews, and theses, and to communicate scientific information effectively to diverse audiences and critical thinking skills and the ability to evaluate and interpret research findings and scientific data;

CLO 5: understand the principles of sponsored research and be able to identify and secure funding from government or foreign bodies/agencies/departments/councils and the importance of intellectual property rights (IPRs) and the protection of innovations in research, and be able to apply them in practice

CLO 6: apply the principles and methods of scientific research to real-world problems and develop innovative solutions.

BTL-Bloom's Taxonomy Levels

1- Remembering, 2-Understanding, 3-Applying, 4-Analyzing, 5-Evaluating, 6-Creating

SECTION A

Very Short Type Question (15 questions)

15 x 1 = 15 marks

Q.No.	Questions	Marks	CO	BTL
1	Define Pragmatism.	1	1	1
2	What is Comte's positivism?	1	1	1
3	What is top-down and bottom-up reasoning?	1	2	3
4	What is Syllogism?	1	2	1
5	What is secondary data?	1	2	1
6	What is pilot study in research?	1	3	2
7	Benefits of Intellectual Property Rights (IPRs).	1	5	4
8	Mention two key ethical conduct in scientific research.	1	5	2

Please turn over

9	What is the full form of CSIR?	1	5	1
10	Define patent.	1	5	2
11	What is trademarks?	1	5	2
12	What are precautions in writing research paper?	1	4	1
13	Define mini-review.	1	4	1
14	Structure and organization of any research article.	1	4	5
15	Types of plagiarism.	1	4	2

SECTION B

Short Type Question. (Attempt any five out of six)

5 x 5 = 25 marks

Q.No.	Question	Marks	CO	BTL
1	What are the different elements in a scientific method?	5	2	1
2	Differentiate between Idealism and Realism.	5	1	3
3	How do you identify and formulate a research problem.	5	3	4
4	How error occurs in measurement?	5	3	5
5	Mention the characteristics of scientific communication.	5	4	2
6	Define scientific writing. Explain how to improve scientific writings.	5	4	3

SECTION C

Long type Question (Attempt any two out of three)

2 x 10 = 20 marks

Q.No.	Question	Marks	CO	BTL
1	Discuss logic and logical reasoning. Explain its different methods and use scientific research.	10	1	3
2	Define research and list the various types of research.	10	3	1
3	What is sponsored research? Highlight the significant contribution of different Indian Government funding Bodies, agencies, departments, councils.	10	5	2

****End of Question Paper****