

M.Sc. (Botany) Semester - 4 (CBCS) Examination**March/April - 2024 (NEW COURSE)****Research Methodology, IPR and Biosafety (Core)****Time: 2:30 Hours****Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

SECTION – I

- Q.1 Answer the following (14)
- a. State the difference between writing a report and a research paper.
 - b. Write a note on Optimization of protocol in basic research methodology

OR

- Q.1 Write a detailed note on 'Plagiarism' and its significance in research
- Q.2 Answer the following (14)
- a. Fundamentals of patent and trademark
 - b. Copyrights and Industrial design

OR

- Q.2 Explain in detail 'International framework for protection of IP' Traditional knowledge in context to Intellectual Property.
- Q.3 Answer the following (any seven) (14)
1. What is Graphical data analysis in research?
 2. State the importance of hypothesis
 3. Which are the major responsibility of mentor and mentee in research?
 4. State different types of patent.
 5. What are the time frames of Patent.
 6. How does Geographical indications comes under IP?
 7. Which are the major requirements in international patent?
 8. Mention the advantage of GMO in agriculture.

SECTION - II

- Q.4 State different types of Research scheme and research proposal writing. (14)

OR

- Q.4 Write short notes on
- (i) National and international research funding agencies
 - (ii) Name the schemes for scientific research
- Q.5 Explain in detail 'Biosafety levels'. (14)

OR

- Q.5 Answer the following
- (i) Transgenic plant and animals
 - (ii) Risk management and communication in context to GMO
- Q.6 Answer the following (any seven) (14)
1. Write in brief major types of research?
 2. State the importance of statistics tools in research
 3. Explain the importance of 'Review of literature' in research proposal
 4. Define RCGM and LMO
 5. Explain – primary contaminant of biohazard?
 6. Which are recommended biosafety levels for infectious agents
 7. Give an overview of national regulations in context to bioethics
 8. Explain – 'biosafety cabinets'
