

M.Sc. (Botany) Semester - 4 (CBCS) Examination**April/May-2022 (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.
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SECTION – I

- Q.1 Answer the following (14)
- a. Write a note on how to identify a research problem and what important aspects should be taken for writing a research paper?
 - b. Explain - data validation

OR

- Q.1 Write a detailed note on optimization of protocol in research

- Q.2 Answer the following (14)
- a. Fundamentals of patent and trademark
 - b. International framework for protection of IP

OR

- Q.2 Explain in detail types of patents and its procedure

- Q.3 Answer the following (any seven) (07)
1. What do you mean by 'Self Plagiarism'?
 2. State the difference between copyright and trademark
 3. Discuss the importance of data validation in research
 4. Give a full form of WTO and TRIPS.
 5. Mention any two important responsibilities of mentor.
 6. What are the provisions for protection of Traditional Knowledge?
 7. State the significance of review of literature in any scientific research
 8. Mention the application of GMO in agriculture.

SECTION - II

- Q.4 Write a detailed note on types of scientific research. (14)

OR

- Q.4 Write short notes on
- (i) National and international funding agencies
 - (ii) Name the schemes for scientific research

- Q.5 Explain in detail 'Biological safety cabinets' with fundamentals of biosafety (14)

OR

- Q.5 Answer the following
- (i) Regulations of Biosafety
 - (ii) Environmental release of GMOs

- Q.6 Answer the following (any seven) (07)
1. What is the role of funding agencies in research?
 2. State some of the section which are important in writing research proposal
 3. Explain the importance of 'Review of literature' in research proposal
 4. Give a full form of RCGM and GEAC.
 5. What are transgenic plants?
 6. Which parameters to be considered in 'Risk assessment'
 7. Give the names of some primary contaminants
 8. Explain – 'biosafety level for specific microorganisms'
