

M.Sc. (Micro) Semester - 4 (CBCS) Examination**April/May-2023 (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** What is research problem? Explain its components, aim and objectives with suitable example. **(14)****OR****Q. 1 Answer the following.** **(14)**

1. What is role of plagiarism in research? explain in detail.
2. Discuss the graphical data analysis

Q. 2 Explain at least one case study on IPs in biotechnology. **(14)****OR****Q. 2 Answer the following.** **(14)**

1. Write note on copyright law.
2. Write note on geographical indication.

Q.3 Answer the following. (any seven out of **eight**) **(07)**

1. Explain the outline of review paper.
2. Justify: why hypothesis should be rejected in research?
3. Define tools utilized for identified the plagiarism.
4. What is function of WIPO?
5. Explain the responsibility of mentee-mentor in research.
6. Write brief about types of patents.
7. What is multivariate analysis?
8. Write about provisional patent.

Section-II**Q.1** Describe the national and international funding agency in R&D and explain its role in countries economy. **(14)****OR****Q. 1 Answer the following.** **(14)**

1. Write note on types of scientific research.
2. Explain the types of national research scheme in detail.

Q. 2 What is biosafety? Explain the BSL 2 and 3 in detail. **(14)****OR****Q. 2 Answer the following.** **(14)**

1. Explain role of institutional biosafety committee in the research and development.
2. Write note on risk assessment.

Q.3 Answer the following. (any seven out of **eight**) **(07)**

1. Explain the Biosafety level 4 features.
2. Explain the suitable BSL recommended for the *Mycobacterium tuberculosis*.
3. What is RCGM? define its role?
4. Mention the application of GMO in agriculture.
5. Explain risk management in brief.
6. Enlist the national funding agency.
7. Differentiate the review paper and research paper.
8. Mention the two name of international funding agency.
