



K23P 3071

Reg. No. :

Name :

**I Semester M.Sc. Degree (C.B.C.S.S. – OBE – Regular)
Examination, October 2023
(2023 Admission)
BOTANY**

MSBOT01C04 – Research Methodology, Instrumentation and Biostatistics

Time : 3 Hours

Max. Marks : 60

PART – A

Answer **any five** questions. **Each** question carries **3** marks.

1. Explain the terms null hypothesis, alternative hypothesis and degree of freedom.
2. Write the principle and application of X-ray diffraction.
3. Give the difference between TEM and SEM.
4. Describe different procedures of data collection.
5. Explain the importance of bioreactor.
6. Define the coefficient of variability, skewness and kurtosis.

PART – B

Answer **any three** questions. **Each** question carries **6** marks.

7. Explain the principle and applications of DNA sequencer.
8. Briefly describe IPR and patenting.
9. Give an account on statistical software.
10. Write an overview on the types of research.
11. Give a brief description on the diagrammatic and graphical representation of the data.

P.T.O.



PART – C

Answer **any three** questions. **Each** question carries **9** marks.

12. Write an essay on different types of electrophoresis.
13. Write a detailed description on the research plan and its components.
14. Briefly explain the various types of chromatographic techniques.
15. Give a critical analysis of the ethical and legal issues in research.
16. Write an overview of experimental designs.

