Turn Over

QP CODE: 25019417

| Reg No | : | |
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| Name | : | |

B.Sc DEGREE (CBCS)) REGULAR/ IMPROVEMENT/ REAPPEARANCE / MERCY CHANCE EXAMINATIONS, FEBRUARY 2025

Fourth Semester

B.Sc Microbiology Model III

Core Course - MB4CRT09 - FUNDAMENTALS OF BIOSTATISTICS, BIOINFORMATICS & RESEARCH METHODOLOGY

2017 Admission Onwards

B00B7F28

Time: 3 Hours

Max. Marks : 80

Part A

Answer any **ten** questions. Each question carries **2** marks.

- 1. What is questionnaire? Describe the merits and demerits of questionnaire.
- 2. What are the important features of frequency distribution?
- 3. What do you mean by frequency polygon? How is it drawn?
- 4. How to calculate quartile deviation?
- 5. Write short notes on various applications of normal distribution.
- 6. What is F ratio?
- 7. What is biological database?
- 8. What are the advantages of sequence similarity searches?
- 9. Give an example for any scientific experiment.
- 10. Distinguish between positive and negative correlation?
- 11. What are web pages?
- 12. What is power point?

(10×2=20)

Part B

Answer any **six** questions. Each question carries **5** marks.





- 13. What are the different types of classification?
- 14. Briefly describe the functions of statistics in biological research.
- 15. Point out the difference in the assumption made for calculating mean and median from a frequency table.
- 16. Describe any two methods of selecting a sample.
- 17. What is bioinformatics? Give its application in various fields.
- 18. Briefly explain the types of protein sequence databases.
- 19. What are the bases of scientific theory?
- 20. What are the functions of record keeping?
- 21. Write a note on the various academic search techniques.

(6×5=30)

Part C

Answer any **two** questions. Each question carries **15** marks.

- 22. Discuss the nature, scope and limitations of statistics in life sciences.
- 23. Discuss various stages in the procedure of testing the hypothesis.
- 24. Enlist the pair-wise methods used for comparing nucleotide sequences. Explain any one method.
- 25. Explain in detail, the different methods of data collection in research.

(2×15=30)