QP Code: P25B029

Reg. No : .....

Name : .....

ST MARY'S COLLEGE (AUTONOMOUS), THRISSUR-20

II SEMESTER (CBCSS-PG) DEGREE EXAMINATION, MARCH 2025

M Sc Biotechnology

GBT2C04 : BIOSTATISTICS AND BIOINFORMATICS

2024 Admission Onwards

Time:3 Hours **Maximum Weightage:30**

Part A

*Short answer type questions: Answer **any four** questions. Weightage **2** for each question.*
(4x2 = 8 Weightage)

1. Discuss about population and sample. [BTL2]
2. Analyse the regression coefficient. Mention a short formula. [BTL4]
3. Describe chi-square test . [BTL2]
4. Compare and contrast the various types of windows in SPSS, analyzing their specific functions and applications. [BTL4]
5. Define a stack and list two operations performed on it. [BTL1]
6. Explain the use of statistical functions in MS Excel for computing the mean. [BTL3]
7. Describe the importance of the Internet for literature searching in academia. [BTL2]

Part B

*Short essay-type questions: Answer **any four** questions. Weightage **3** for each question.*
(4x3 = 12 Weightage)

8. Explain clearly the term variance, and coefficient of variation. [BTL2]
9. Analyze the procedure typically followed in hypothesis testing and examine the key steps involved in drawing valid conclusions from statistical data. [BTL4]
10. What are data model? Explain with examples. [BTL2]
11. Assume a file-processing system contains information on student records. Explain how transitioning to a DBMS would solve the issues related to data redundancy and inconsistency. [BTL3]
12. Evaluate the key tools used in data management, statistical analysis, and data processing, and assess their effectiveness with relevant examples. [BTL5]
13. Explain various features and functions of MS Word in data processing. [BTL2]
14. Explain some protein databases and bibliographic databases, and describe their applications. [BTL2]

Turn Over

Part C

*Essay-type questions: Answer **any two** questions. Weightage **5** for each question.*
(2x5 = 10 Weightage)

15. Discuss the concept of mode, demonstrate how it is obtained using the formula, and analyze its merits and demerits in different data contexts. [BTL5]

16. Analyse the accuracy and reliability of statistical computations performed using computer-oriented techniques. [BTL4]

17. Analyse with a suitable example, the steps to perform Oneway ANOVA in SPSS. [BTL4]

18. Define protein modeling and its relevance in bioinformatics. [BTL2]

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