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Sl. No.

21BTH3C9L

M.Sc. III Semester Degree Examination, April/May - 2023

BIOTECHNOLOGY

Biostatistics and Bioinformatics

Time : 3 Hours

Maximum Marks : 70

Note : (i) Answer **any five** of the following questions with question No. 1 (Q1) compulsory, each question carries **equal** marks.
(ii) Draw **neat** diagrams wherever **necessary**.

1. (a) Discuss in brief correlation and probability. **7x2=14**
(b) Explain in one way ANOVA with a suitable example.
2. (a) Explain use of Box-&- Whisker Plot, Bubble Plot and Growth chart in data representation. **7x2=14**
(b) Give an account on Z Statistics for two Independent samples.
3. (a) Give an account on PFAM and PROSITE. **7x2=14**
(b) Give an account on SCOP and CATH.
4. (a) Describe the nucleotide sequence submission in NCBI using BANKIT and SEQUIN. **7x2=14**
(b) Explain Molecular viewers - Rasmol and Chime.
5. (a) Write a note on BLAST and FASTA. **7x2=14**
(b) Discuss in brief pairwise and multiple sequence alignment.
6. Write a detailed note on primary and secondary protein databases. **14**
7. Explain in detail substitution matrices and scoring matrices. **14**
8. (a) Write a note on INSDC. **5**
(b) Give an account on sequence retrieval system. **5**
(c) Write a note on Needleman Wunsch Algorithm. **4**

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