

**FACULTY OF SCIENCE**  
B.Sc. (CBCS) II-Year (IV-Semester) Regular & Backlog Examinations, June/July-2023  
Biotechnology-IV  
(Bioinformatics and Biostatistics)

Time: 3 Hours

Max Marks: 80

**SECTION-A**

(4x5=20 Marks)

Answer any Four questions from the following

1. Swissprot.
2. Gap and gap penalties.
3. Mean and Median.
4. Alternative Hypothesis.
5. Standard error.
6. Frequency Polygon.

**SECTION-B**

(4x15=60 Marks)

Answer all the following questions

7. (a) Describe the different nucleotide databases and their management.  
(OR)  
(b) Discuss the bioinformatics web portals role in the analysis of biological data.
8. (a) What are Scoring matrices?  
(OR)  
(b) What are the types and features of Phylogenetic trees?
9. (a) Explain the five measures of dispersion.  
(OR)  
(b) Write an essay on basic concepts of probability.
10. (a) Write about Chi-square test and its applications.  
(OR)  
(b) Write down the application of Biostatistic in Medical Field.