

**M.Sc. (Botany) Semester - 1 (CBCS) Examination****Nov/Dec-2023 (SYLLABUS YEAR JUNE-2018)****BIOSTATISTICS AND BIOINFORMATICS(MULTI/INTER DESCIPLINARY)****Time: 2:30 Hours****Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

**Q.1 Answer the followings: (Any Seven)****14**

1. What is data and its types?
2. Give the formula of standard deviation.
3. What is the significance of unpaired t-test?
4. What is regression and its types?
5. Enlist the type of graphs in statistics.
6. Define bioinformatic.
7. Give any two applications of bioinformatics in medicine.
8. What is uses of sequence alignment in bioinformatics?
9. What are the tools of gene prediction?
10. State the steps of phylogeny tree.

**Q.2 Answer the followings: (Any two)****14**

1. Write a note on coefficient of variation.
2. Explain frequency distribution and graphics.
3. Describe confidence limit and confidence interval

**Q.3 Answer the followings**

1. Write a note on paired t-test in detail.
2. Discuss the correlation analysis.
3. Describe in brief regression.

**05****05****04****OR****Q.3 Answer the followings**

1. Describe in details Analysis of Variance.
2. Explain the chi-square test.

**07****07****Q.4 (a) Write Any two out of three questions.****10**

1. What are the applications of bioinformatics in agriculture.
2. Describe the secondary biological databases.
3. What are the nucleotide database.

**Q.4 (b) Write Any one out of two questions.****04**

1. What are the aim and objectives of the bioinformatics?
2. Explain various terminology of bioinformatics.

**Q.5 Answer the followings: (Any two out of four)****14**

1. Discuss the pairwise and multiple sequence alignment.
2. Write a note on drug discoveries.
3. Explain the analysis of phylogeny.
4. Describe the BLAST.

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