647510 MSCstalz1010 Seat No :_____

M.Sc. (Zoology) Semester - 1 (*CBCS*) Examination

Oct/Nov. -2019 - [NEW COURSE]

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.

Que.1 Answer the following (Any seven out of Ten, each of 02 marks (14)

(1) Write the merits and demerits of the median.
(2) Define the term Bioinformatics.
(3) What is the regression analysis?
(4) Enlist the types of nucleotide databases.
(5) Write the formula of standard deviation
(6) What is 'null-hypothesis'?
(7) What is the pairwise alignment?
(8) What is the range?
(9) Which tools are used in gene prediction?
(10) Give the name of the father of bioinformatics?

Que.2 Answer the following (Any two out of three, each of 07 marks) (14)

(A) What is frequency distribution and graphics? Exemplify.
(B) Write a note on central tendency.
(C) What is Confidence limit and confidence interval? Briefly describe

Que.3 Answer the following (a & b – Both are compulsory, each of 07 marks) (14)

(A) Write a detail note on Student's T-test? Discuss paired student's T-test with suitable example
(B) What is the Chi-square test? Discuss in detail.

OR

Que.3 Answer the following (a & b – Both are compulsory, each of 07 marks) (14)

(A) Write a note on correlation analysis using hypothetical data.
(B) Write a detail note on the analysis of variance.

Que.4 Answer the following (Both are compulsory – Each of 07 marks) (14)

(1) What are the applications of bioinformatics in the field of agriculture?
(2) Write a note on nucleotide database

Que.5 Answer the following (Any two out of four, each of 07 marks) (14)

(A) Write a note on pairwise alignment and multiple sequence alignment.
(B) Briefly discuss a phylogenic analysis
(C) Write a short note on BLAST.
(D) Write a note on gene prediction, and it's tools.

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