

**K-551**

Total Pages : 3

Roll No. ....

**MSCZO-603**

**BIOINFORMATICS, BIOSTATISTICS & COMPUTER  
APPLICATION**

M.Sc. Zoology (MSCZO)

3rd Semester Examination, 2023 (Dec.)

**Time : 2 Hours]**

**Max. Marks : 70**

**Note :** This paper is of Seventy (70) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein. Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

**SECTION–A**

**(Long Answer Type Questions)**

**Note :** Section 'A' contains Five (05) long answer type questions of Nineteen (19) marks each. Learners are required to answer any Two (02) questions only.

(2×19=38)

1. What do you understand by data base? Explain primary, secondary and composite database.
2. What is molecular phylogeny? Explain the consistency of molecular phylogenetic prediction.
3. Discuss in detail the process of collection, organization and representation of data.
4. What do you understand by bioinformatics? Elaborate the modern application of bioinformatics.
5. What is correlation? Discuss its types and methods of study.

## **SECTION-B**

### **(Short Answer Type Questions)**

**Note :** Section 'B' contains Eight (08) short answer type questions of Eight (08) marks each. Learners are required to answer any Four (04) questions only. (4×8=32)

1. Explain the term gene expression database and structural database.
2. Write a detailed note on National Center for Biotechnology Information (NCBI).

3. What is Swiss-prot in Bioinformatics?
  4. What do you understand by Multiple Sequence Alignment (MSA)?
  5. Discuss the role of statistics in biological research.
  6. Explain Variance and coefficient of variation.
  7. What are the methods and use of regression analysis?
  8. What do you understand by Mean and Mode? Define their types.
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