

20U521

(Pages: 2)

Name: .....

Reg.No: .....

**FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2022**

(CBCSS - UG)

(Regular/Supplementary/Improvement)

**CC19U ZOL5 B09 - METHODOLOGY IN SCIENCE BIOSTATISTICS AND BIOINFORMATICS**

(Zoology - Core Course)

(2019 Admission onwards)

Time : 2.5 Hours

Maximum : 80 Marks

Credit : 4

**Part A (Short answer questions)**

Answer *all* questions. Each question carries 2 marks.

1. What are the different types of knowledge?
2. What is corroboration and falsification in hypothesis?
3. Explain any two legislations related to biodiversity and wildlife
4. Describe systematic sampling with a note on merits and limitations
5. Explain one-dimensional diagrams.
6. What is meant by Pie diagram?
7. Sketch and differentiate between histogram and bar diagram.
8. Calculate mean for the marks obtained in Zoology by 8 students

Roll No.	1	2	3	4	5	6	7	8
Marks in Zoology	67	69	66	68	72	63	71	70

9. Explain mean deviation and Range.
10. What is meant by standard error of the mean?
11. Explain SRS search and retrieval system.
12. Explain BLAST and BLAST output.
13. Explain the significance of alignment tool FASTA.
14. Write two applications of microarray.
15. Write any two applications of Metagenomics.

**(Ceiling: 25 Marks)**

**Part B (Paragraph questions)**

Answer *all* questions. Each question carries 5 marks.

16. Define scientific proof.
17. What is the importance of units and dimensions in experimentation?
18. Elaborate the importance of open access in disseminating scientific knowledge.
19. Explain statistical terms.
20. With the help of an example explain any two tests of significance used in hypotheses testing.
21. Define the term Bioinformatics. Explain the history and scope of bioinformatics.
22. Explain the relation between evolution and phylogenetics.
23. Write a brief note on Structural Bioinformatics in Drug Discovery.

**(Ceiling: 35 Marks)**

**Part C (Essay questions)**

Answer any *two* questions. Each question carries 10 marks.

24. Explain classification and tabulation of data in Biostatistics.
25. Explain nucleotide and metabolite databases.
26. Give a detailed account on sequence alignment.
27. Differentiate between Gel based method and chromatography-based method.

**(2 × 10 = 20 Marks)**

\*\*\*\*\*