



K22U 3776

Reg. No. :

Name :

**Third Semester B.Sc. Degree (CBCSS – OBE – Regular/Supplementary/
Improvement) Examination, November 2022
(2020 Admission Onwards)**

**General Awareness Course in Life Sciences (Zoology) and Computational
Biology**

3A12ZCB : ALGORITHMS AND STATISTICAL METHODS IN BIOINFORMATICS

Time : 3 Hours

Max. Marks : 40

PART – A

Answer **all** the questions. **Each** question carries **1** mark.

1. Expand BioPERL.
2. Define Python.
3. What is an array ?
4. What is the R language ?
5. Define probability.
6. Expand ANOVA.

(6×1=6)

PART – B

Answer **any 6** questions. **Each** question carries **2** marks.

7. PrimarySeq.
8. Operators in Python.

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9. NCBI Toolkit.
10. MatLab.
11. Bioinformatics ToolBox.
12. F distribution.
13. Dispersion.
14. Descriptive statistics.

(6×2=12)

PART – C

Answer **any 4** questions. **Each** question carries **3** marks.

15. Discuss the major objects in BioPerl.
16. Examine the need of BioPython in Computational Biology.
17. Discuss the major types of central tendency.
18. Discuss the role of correlation analysis in computational biology.
19. Discuss the significance of t-test for the testing of hypothesis.
20. What is ANOVA ? Discuss.

(4×3=12)

PART – D

Answer **any 2** questions. **Each** question carries **5** marks.

21. Discuss the major types of algorithms commonly employed in computational biology.
22. What do you mean by sampling ? What are the major types of sampling ?
23. What are the major methods used for the representation of data ?
24. Discuss the importance of simple and linear regression analysis in Computational biology with suitable examples.

(2×5=10)
