

(6 pages)

Reg. No. :

Code No. : 30389 E Sub. Code : CMZO 63

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2025.

Sixth Semester

Zoology – Core

BIostatistics, COMPUTER APPLICATIONS AND
BIOINFORMATICS

(For those who joined in July 2021 and 2022 only)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choosing the correct answer :

1. If a data is arranged in ascending (or) descending order the central data is called as?
- (a) Deviation (b) Mode
(c) Mean (d) Median

2. The bar diagram is divisible into _____ types?
- (a) 2 (b) 4
(c) 6 (d) 8
3. The square root of the arithmetic mean of the squares of the deviation from the arithmetic mean is called?
- (a) Range
(b) Standard error
(c) Standard deviation
(d) Mode
4. What is χ^2 ?
- (a) $\sum \frac{(X - \bar{X})^2}{E}$ (b) $\frac{\sum X}{E}$
(c) $\frac{\sum \bar{X}}{N}$ (d) $\frac{d^2}{N}$
5. CPU is composed of
- (a) Control Unit
(b) Arithmetic and Logic Unit
(c) Memory Unit
(d) All the above

6. Monitor is an
(a) Output device (b) Mouse
(c) Input device (d) Keyboard
7. Matching the residues of two sequence across their entire length is called
(a) Global alignment
(b) Local alignment
(c) Peripheral alignment
(d) Central alignment
8. The unknown square is called as
(a) Query sequence
(b) Reference sequence
(c) Pair sequence
(d) All of these
9. Expansion of NCBI
(a) National Central Biotechnology Institute
(b) National Center for Biotechnology Information
(c) National Center for Bioinformatics Institute
(d) National Center for Bioinformatics Information

Page 3 Code No. : 30389 E

10. The programme RASMOL was developed by
(a) Rocker (b) Roger Sayle
(c) Richard (d) Brownly

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Comment on primary and secondary data.
Or
(b) Find the mean and median for the following data
Length of fishes (cm) – 14, 23, 17, 31, 28, 19, 22, 26, 27.
12. (a) Write a brief account on range.
Or
(b) Write short notes on students “t” test.
13. (a) Briefly discuss the RAM Memory Unit of a computer.
Or
(b) Give an account of E-mail.

Page 4 Code No. : 30389 E
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14. (a) Explain various types of sequences used in bioinformatics.

Or

(b) Write a short note on Bioinformatics in life science.

15. (a) Describe about the Swiss-PROT database.

Or

(b) Explain briefly about "Locus Link".

PART C — (5 × 8 = 40 Marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) What is tabulation? Explain the types, and essential features of a good table and its applications.

Or

(b) Calculate the mean and median for the following data on the weight of fish in gram.

Weight in grams : 30-35 35-40 40-45 45-50 50-55 55-60

No. of fishes : 13 17 21 25 18 12

Page 5 Code No. : 30389 E

17. (a) Find the standard deviation for the following height of 10 students (cm)?

145, 154, 163, 171, 168, 158, 161, 149, 180, 158.

Or

(b) Explain the various types of correlation.

18. (a) Classify and explain the various types of devices used for input in a computer.

Or

(b) Write an account on the internet and its applications.

19. (a) Give an account of the scope and application of bioinformatics.

Or

(b) Explain the various types of sequence alignment used in bioinformatics.

20. (a) Describe the type of protein sequence database.

Or

(b) Write an account on database similarity search tools in bioinformatics.

Page 6 Code No. : 30389 E