

(6 pages)

Reg. No. :

Code No. : 5455

Sub. Code : ZZOM 41

M.Sc. (CBCS) DEGREE EXAMINATION,
APRIL 2024

Fourth Semester

Zoology – Core

BIostatistics and Bioinformatics

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

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Tell the another name of Pie diagram is _____
(a) angular diagram (b) pictogram
(c) histogram (d) cardogram
2. Match the following with the survey method of data collection
(a) Primary data (b) Secondary data
(c) Tertiary data (d) None of them

3. Name the Simplest measures of dispersion.
(a) Mode (b) S.D
(c) Standard error (d) Range
4. Select the following which helps to study the shape of the distribution
(a) Skewness (b) Lorenz curve
(c) Kurtosis (d) Line diagram
5. Which is the distribution extensively used in biological and medical field?
(a) normal (b) binomial
(c) poisson (d) mean
6. Tell the size of the sample in a small sample.
(a) less than 90 (b) less than 60
(c) less than 30 (d) less than 20
7. Name the test which is used to test the goodness of fit.
(a) Chi square test (b) Correlation
(c) Mean (d) Regression
8. Who proposed ANOVA?
(a) De Viris (b) Darwin
(c) Haeckel (d) Fisher

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9. Match the BLAST with the following
- (a) Basic Alignment Search Tool
 - (b) Local Alignment Search Tool
 - (c) Alignment Search Tool
 - (d) Basic Local Alignment Search Tool
10. Identify a molecular graphic program which is indented for visualization of proteins and nucleic acids
- (a) Phylogenetics analysis tool
 - (b) RasMol
 - (c) MRI
 - (d) Gamma rays

PART B — (5 × 5 = 25 marks)

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

11. (a) Explain the, various sources of Secondary data.

Or

- (b) Write short note on attributes of good sample.

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12. (a) Calculate the arithmetic mean for the given fish weight.

| | | | | | | |
|-----------------------|----|----|----|----|----|----|
| Weight of Mango (gms) | 20 | 30 | 40 | 50 | 60 | 70 |
| No. of fruits | 8 | 12 | 20 | 10 | 6 | 4 |

Or

- (b) Elaborate the Bowley's coefficient of skewness.

13. (a) Explain the Binomial distribution.

Or

- (b) Write a note on Students 't' test.

14. (a) Comment on The Sign test.

Or

- (b) Explain in detail about Randomized block test.

15. (a) Discuss the polygenic analysis tools.

Or

- (b) Write a note on data retrieval system.

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PART C — (5 × 8 = 40 marks)

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

16. (a) Discuss the various types of sampling.

Or

- (b) Elaborate the sources of Primary data collection.

17. (a) Explain the, types of Correlation.

Or

- (b) Calculate the Mean and Standard deviation for the given data.

| | | | | | | |
|---|----|----|----|----|----|----|
| x | 10 | 20 | 30 | 40 | 50 | 60 |
| f | 8 | 12 | 20 | 10 | 7 | 3 |

18. (a) Discuss the various theorems of probability.

Or

- (b) How will you Test of significance for large samples?

19. (a) Give an account of TWO way analysis of Variance.

Or

- (b) Explain the following :

- (i) Latin square
- (ii) The Mann Whitney U test.

20. (a) Write an essay on the applications of Bioinformatics in biology.

Or

- (b) Discuss the Protein functional Analysis tools.

