Reg. No. : ....

Code No. : 30256 E   Sub. Code : SMZO 63

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Sixth Semester

Zoology

BIOSTATISTICS, COMPUTER APPLICATIONS AND
BIOINFORMATICS

(For those who joined in July 2017 onwards)

Time : Three hours   Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. What is data?

    (a) facts or figures

    (b) information already available

    (c) collection of information

    (d) all the above

2. A pie chart, sometimes called a ————— , is a way of summarizing a set of nominal data.

    (a) histogram   (b) circle chart

    (c) bar diagram   (d) all the above

3. The variance is a measure of —————. It is calculated by taking the average of squared deviations from the mean.

    (a) variability   (b) maximum limit

    (c) lower limit   (d) all the above

4. A ————— exists when two variables move in the same direction as one another.

    (a) positive correlation

    (b) negative correlation

    (c) no correlation

    (d) all of the above

5. What is the CPU?

    (a) Central Producing Unit

    (b) Central Processing Unit

    (c) Center Processing Unit

    (d) All the above

6. Simple formatting includes, ————— font color, and, font style.

    (a) fonts   (b) font size

    (c) text alignment (d) all the above

7. Bioinformatics tools aid in the comparison of genetic and

    (a) genomic data   (b) chemical data

    (c) physical data   (d) all the above

8. A biological sequence is a single, continuous molecule of nucleic acid or

    (a) carbohydrate   (b) protein

    (c) glucose   (d) all the above

9. SWISS-MODEL is a structural bioinformatics web-server dedicated to homology modeling of

    (a) 3D protein structures

    (b) 2D protein structures

    (c) 1D protein structures

    (d) none of the above

10. FASTA is pronounced "fast A", and stands for

    (a) "FAST-All",

    (b) "FEST-All"

    (c) "FIRST-All"

    (d) All the above

PART B — (5 × 5 = 25 marks)

Answer ALL questions choosing either (a) or (b).
Each answer should not exceed 250 words.

11. (a) Describe the methods of sampling from a population.

    Or

    (b) Explain the main parts of a table.

12. (a) Calculate mode value for the following data :

    x: 10 11 12 13 14 15 16

    f: 8   4   12 24 26 7   11

    Or

    (b) Describe the various applications of chi squared.

13. (a) Explain the primary and secondary memory with examples.

    Or

    (b) Describe the various uses for Microsoft Word.

14. (a) What is the important application of bioinformatics?

    Or

    (b) Explain the main goal of bioinformatics in the field of biology.

[P.T.O.]

15. (a) Write about the main features of GenBank?

Or

(b) Define the term PDB viewer and their functions.

PART C — (5 × 8 = 40 marks)

Answer ALL questions choosing either (a) or (b).
Each answer should not exceed 600 words.

16. (a) Calculate the median value of the following data :

x: 10-20 20-30 30-40 40-50 50-60

f: 15   17   16   19   13

Or

(b) What are frequency polygon curve and a frequency curve?

17. (a) Find out correlation coefficient for the following data :

Length in cm :   5 3 4 7 6 8 5 3 9 8

Weight in grams : 10 4 6 18 15 21 9 5 22 20

Or

(b) What is correlation, types and its application?

18. (a) Explain the MS Office and its types.

Or

(b) What are the uses of email and Internet?

19. (a) Write about the biological sequence in bioinformatics.

Or

(b) Give an account of scope and applications of bioinformatics.

20. (a) How do you find the protein sequence in BLAST?

Or

(b) What is Entrez database and its function?

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