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Reg. No. : .....

Code No.: 10037 E Sub. Code: CMZO 63

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

Choose the correct answer:

1. Collected information by an investigator is called  
(a) Data  
(b) Median  
(c) Variable  
(d) Population

2. The middle value of an arranged data  
(a) Mean (b) Median  
(c) Mode (d) Range
3. Square of the standard deviation is  
(a) Variance  
(b) Standard error  
(c) Mean deviation  
(d) Range
4. The value of perfect positive correlation is  
(a) 0 (b) +1  
(c) -1 (d) 2
5. Which one of the following is not an input device of a computer  
(a) Keyboard (b) Mouse  
(c) Monitor (d) Scanner
6. The software used to create quality presentations  
(a) MS-Power point (b) MS-Excel  
(c) MS-Word (d) Internet

7. Matching the residues of two sequences across their entire length is called
- (a) Global alignment
  - (b) Local alignment
  - (c) Pairwise alignment
  - (d) Multiple sequence alignment
8. Which one of the following is a DNA sequence database?
- (a) Swiss Prot
  - (b) Gen Bank
  - (c) Uni Prot
  - (d) Med Line
9. The tool used to find regions of local similarity between sequences
- (a) BLAST
  - (b) NCBI
  - (c) Pub Med
  - (d) Ras Mol
10. The tool used for visualising protein and nucleic acids
- (a) Ras Mol
  - (b) Pub Med
  - (c) BLAST
  - (d) FASTA

PART B — (5 × 5 = 25 marks)

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

11. (a) Describe the structure of a table.
- Or
- (b) Explain the construction of a histogram with example.
12. (a) Write an account on standard deviation and standard error
- Or
- (b) What is a correlation? Describe the types of correlation.
13. (a) Describe the construction of graphs and charts using MS- Excel.
- Or
- (b) Write an account on CPU.
14. (a) Describe pairwise sequence analysis.
- Or
- (b) Describe the properties of databases.

15. (a) Write a brief account on Gen bank.

Or

(b) Describe Rasmol as a protein visualization tool.

PART C — (5 × 8 = 40 marks)

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

16. (a) Write an account on diagrammatic representation of Data.

Or

(b) Calculate mean and median for the following data :

X	7	10	14	17	23	27	32
Y	14	20	28	30	21	17	8

17. (a) Discuss Chi square as the test of significance.

Or

(b) Calculate Karl Pearsons correlation coefficient.

X	10	20	30	40	50	60	70
Y	8	14	23	30	38	45	50

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18. (a) Elaborate the output devices of a computer.

Or

(b) Write a note on the role of Ms - Power point in biology.

19. (a) Discuss the applications of Bioinformatics.

Or

(b) Write an account on nucleic acid sequence databases.

20. (a) Write an account on BLAST.

Or

(b) Discuss the database retrieval tools.

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