

(6 Pages)

**Reg. No. :** .....

**Code No. : 10706 E      Sub. Code : JMZO 63/  
SMZO 63**

B.Sc. (CBCS) DEGREE EXAMINATION,  
APRIL 2020.

Sixth Semester

Zoology — Main

**BIOSTATISTICS, COMPUTER APPLICATIONS AND  
BIOINFORMATICS**

(For those who joined in July 2016 only)

Time : Three hours

Maximum : 75 marks

PART A — ( $10 \times 1 = 10$  marks)

Answer ALL questions.

Choose the correct answer:

1. When data are classified on the basis of characteristics such as sex, it is known as
  - (a) Geographical classification
  - (b) Quantitative classification
  - (c) Qualitative classification
  - (d) Chronological classification

2. Middle value is related to
- (a) Mean                      (b) Median
- (c) Mode                      (d) Harmonic mean
3. The difference between highest and lowest values of a variable is
- (a) Range
- (b) Standard deviation
- (c) Quartile deviation
- (d) Standard error
4. In this type of correlation, two variables move in the same direction
- (a) negative                      (b) positive
- (c) non-linear                      (d) multiple
5. Data in this memory disappear when the power is lost
- (a) ROM                      (b) PROM
- (c) EPROM                      (d) RAM

6. The numbers are arranged in ascending/descending manner is regulated by the order in menu
- (a) replace
  - (b) alignment
  - (c) sort
  - (d) bullet and numbering
7. A single piece of information in a database is called as
- (a) Record                      (b) Field
  - (c) Dataset                      (d) File
8. This is sequence alignment tool
- (a) PROSITE                      (b) BLAST
  - (c) SWISSPROT                      (d) PIR
9. This is a protein primary structure database
- (a) Pubchem                      (b) ChEMBL
  - (c) PDB                      (d) SCOP
10. This program can rapidly identify shared regions in two sequences
- (a) FASTA                      (b) SWISS
  - (c) PROSITE                      (d) EMBL

PART B — ( $5 \times 5 = 25$  marks)

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

Each answer should not exceed 250 words.

11. (a) Give an account of collection of secondary data.

Or

- (b) What is histogram? How do you construct it?

12. (a) The following are the weights of seven fishes (in gm). Find out the standard deviation

Weight of    5       7       8       6       4       7       5

fish (g)

Or

- (b) What are the applications of Chi-square test?

13. (a) Write short notes on bullet and numbering.

Or

- (b) Enlist the salient features of Email.

14. (a) What is the role of Bioinformatics in life science?

Or

- (b) Give a brief note on biological sequence analysis.

15. (a) Write down the salient features of nucleic acid sequence database.

Or

- (b) Illustrate the functions of SWISS-PROT.

PART C — ( $5 \times 8 = 40$  marks)

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

Each answer should not exceed 600 words.

16. (a) Explain in detail about various methods of sampling.

Or

- (b) Differentiate between frequency polygon and frequency poly curve.

17. (a) Write an elaborate account on measure of dispersion.

Or

- (b) The following are the heights of father and son. Compute Karl Pearson's coefficient of correlation.

Height of father   65   66   67   67   68   69   70   72  
(in inches)

Height of son   67   68   65   68   72   72   69   71  
(in inches)

18. (a) Describe the various input devices of a computer.

Or

- (b) Give a detailed account on internet and its applications.

19. (a) Write the scope and applications of Bioinformatics.

Or

- (b) Discuss in detail about the multiple sequence alignment.

20. (a) What is BLAST? Enlist the salient features of BLAST.

Or

- (b) Write an essay on protein structure prediction.
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