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

**Code No. : 30706 E      Sub. Code : JMZO 63/  
SMZO 63**

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2021.

Sixth Semester

Zoology — Main

**BIOSTATISTICS, COMPUTER APPLICATIONS AND  
BIOINFORMATICS**

(For those who joined in July 2016 onwards)

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 according to districts?
  - (a) Geographical classification
  - (b) Qualitative classification
  - (c) Chronological classification
  - (d) Quantitative classification

2. The positional average is
- (a) Central value      (b) Central tendency  
(c) True average      (d) All of these
3. Standard deviation is the square of
- (a) Mode      (b) Regression  
(c) Variance      (d) Standard error
4. The simplest method to find out the nature of correlation between two variables is
- (a) Karl Pearson's method  
(b) Spearman's method  
(c) Scatter diagram  
(d) Chi-square test
5. The device which is used to input images into the computer is?
- (a) Mouse      (b) Joystick  
(c) Scanner      (d) Trackball

6. The shortcut key for Cut command is
- (a) Ctrl + P                      (b) Alt + C  
(c) Ctrl + X                      (d) Ctrl + C
7. The term Bioinformatics was coined by
- (a) Frederick Sanger    (b) Pauline Hogeweg  
(c) James Watson        (d) Francis Crick
8. Analysing or comparing entire genome of a species is called as
- (a) Genomics                      (b) Pharmacogenomics  
(c) Proteomics                      (d) Bioinformatics
9. All are primary database except
- (a) DDBJ                      (b) PDB  
(c) EMBL                      (d) UniProt
10. This is a database for the three-dimensional structure of large biological molecules
- (a) SWISSPROT                      (b) EMBL  
(c) OMIM                      (d) PDB

PART B — ( $5 \times 5 = 25$  marks)

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

Answer should not exceed 250 words.

11. (a) Give an account of classification of data.

Or

- (b) Calculate the median for the following data :

Weight of fish in a tank (g)	1–2	3–4	5–6	7–8	9–10
Number of fishes	2	8	11	6	3

12. (a) What are the merits and demerits of Range?

Or

- (b) Explain the different types of correlation.

13. (a) Elucidate the uses of different output devices.

Or

- (b) Write the applications of the Internet.

14. (a) Explain the importance of Bioinformatics.

Or

- (b) Write an account on multiple sequence alignment.

15. (a) Give an account on EMBL.

Or

- (b) Write a short note on BLAST.

PART C — ( $5 \times 8 = 40$  marks)

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

Answer should not exceed 600 words.

16. (a) Explain in detail about tabulation of data.

Or

- (b) Describe the uses and construction of histogram.

17. (a) Calculate standard deviation for the following data :

Length in c.m.	3	5	7	9	1	2	5	4
No. of leaves	1	2	6	8	3	5	7	9

Or

- (b) What is Student's *t*-test? Explain its use in biological study with an example.

18. (a) List out the input devices of a computer.

Or

- (b) Explain the role of MS-Power point in slide preparation.

19. (a) Discuss the role of Bioinformatics in life science.

Or

- (b) Explain in detail about biological sequence analysis.

20. (a) Write an essay on Genbank.

Or

- (b) Give a detailed account on Pub Med.
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