

(6 Pages)

Reg. No. :

Code No. : 10629 E Sub. Code : SMZO 63

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

Sixth Semester

Zoology — Core

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 primary data?
(a) Facts or figures
(b) Information from journal
(c) First hand information
(d) All the above
2. A variable may also be called as _____
(a) data item (b) raw data
(c) age (d) all the above

3. The range is determined by only two _____
(a) missing value
(b) extreme data values
(c) lower limit
(d) all the above
4. A correlation of zero means there is no relationship between the _____
(a) two variables (b) three valuable
(c) four variable (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. MS-Word Window elements includes
(a) Title bar (b) Menu bar
(c) Toolbars (d) All the above
7. Bioinformatics is defined as the application of tools of computation and analysis to the capture and interpretation of _____
(a) biological data (b) chemical data
(c) physical data (d) all the above

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8. Today, _____ is used in large number of fields such as microbial genome applications, biotechnology, waste cleanup, gene therapy.

- (a) Bioinformatics (b) Biotransformation
(c) Biostatistics (d) All the above

9. SWISS-PORT contains the information about the name and origin of the

- (a) Protein (b) Protoplasam
(c) Cytoplasm (d) Nucleoplasm

10. Swiss-PdbViewer is an application that provides a user friendly interface allowing to analyze several proteins at the _____

- (a) different hours (b) same time
(c) same protein (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 classification of data.

Or

(b) Explains the main parts of a table.

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12. (a) How do you calculate the standard deviation?

Or

(b) Describe the various application of chi squared.

13. (a) Explain differences between primary memory and secondary memory.

Or

(b) Describe the various features of Microsoft Word.

14. (a) Write a short note on the benefits to learning bioinformatics.

Or

(b) What is the main role of a bioinformatics in present biological research?

15. (a) What is EMBL format and its uses?

Or

(b) Define the term ENTREZ database and their functions.

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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 mean value of the following data.

X	6	7	8	9	10	11
f	15	17	20	16	19	13

Or

- (b) What are frequency polygon curve and a frequency curve?
17. (a) What are the three types of correlation? Write an example of a positive correlation.

Or

- (b) Find Karl Pearson's correlation coefficient for the following data.

X	3	2	1	5	4
Y	8	4	10	2	6

18. (a) Explain the different functions in Excel.

Or

- (b) What are the uses of email and internet?

19. (a) Explain the different components and concept of bioinformatics.

Or

- (b) Write about biological sequence alignment? Which model is used for biological sequence analysis?

20. (a) Write an essay on SWISS-PORT protein sequence database.

Or

- (b) Which is the protein structure visualization tool and software mention the used?

