

Reg. No. : .....

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

CBCS) DEGREE EXAMINATION, APRIL 2022

Sixth Semester

Zoology — Core

STATISTICS, COMPUTER APPLICATIONS AND BIOINFORMATICS

For those who joined in July 2017 onwards)

Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

What is primary data?

- a) Facts or figures
- b) Information from journal
- c) First hand information
- d) All the above

A variable may also be called as \_\_\_\_\_

- a) data item (b) raw data
- c) age (d) all the above

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

SWISS-PORT contains the information about the name and origin of the \_\_\_\_\_

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

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.

- (a) Describe the classification of data.

Or

- (b) Explains the main parts of a table.

- 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 variables
- (c) four variables (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

Page 2 Code No. : 10629 E

- 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.

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?