

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2023

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 :

- Select the name of the pictorial representation of data _____
(a) pictogram (b) pie diagram
(c) line (d) none

- Select the variable which occurs most frequently _____
(a) mean (b) mode
(c) median (d) none
- The standard deviation is also known as _____
(a) standard error (b) mean square error
(c) mean (d) average
- When both the variables are moving in the same direction, that correlation is said to be _____
(a) negative correlation
(b) positive correlation
(c) simple correlation
(d) partial correlation
- Input device of the computer is _____
(a) keyboard (b) mouse
(c) joysticks (d) all of these
- The main storage unit in computer system is _____
(a) Memory (b) Output unit
(c) Central unit (d) Input unit

- Recall the branch which deals with the application of tools of computation and interpretation of biological data.
(a) biostatistics
(b) computer science
(c) bioinformatics
(d) cybersecurity
- _____ is used to find regions of local similarity between sequences.
(a) BLAST
(b) SWISS PROT
(c) NCBI
(d) ELISA
- The PDB viewer is used to prepare, initiate and evaluate the _____ modeling process.
(a) Alignment (b) Pub med
(c) Homology (d) None of these
- Select the tool which is used for visualizing the proteins and nucleic acids
(a) Ras mol
(b) Pub med
(c) Spread sheet
(d) None of these

PART B — (5 × 5 = 25 marks)

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

- (a) Identify the pie diagram.
Or
(b) State the types of variables.
- (a) Explain the range.
Or
(b) Discuss the chi square test.
- (a) Write a note on World Wide Web.
Or
(b) Write short note on generations of computers.
- (a) Orderly arrange the scope and applications of bioinformatics.
Or
(b) Explain the input devices of computer.
- (a) Explain the protein sequence data base.
Or
(b) Summarize the Locus link.

PART C — (5 × 8 = 40 marks)

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

16. (a) Enumerate the diagrammatic representation of data.

Or

- (b) Identify the different sampling methods.

17. (a) Discuss Karl Pearson correlation coefficient.

Or

- (b) Calculate the standard deviation for the given data.

x	10	20	30	40	50	60
f	8	12	20	10	7	3

18. (a) Write the uses of internet in biology.

Or

- (b) Write a note on role of MS power point in biology.

19. (a) Explain in detail about multiple sequence alignment.

Or

- (b) Explain pair wise sequence comparison.

20. (a) Explain the following (i) ENTREZ (ii) Nucleic acid sequence database.

Or

- (b) Summarize : SWISS-PROT.
-