(8 pages) **Reg. No. :** .....

Code No. : 11631 E **Sub. Code : JMZO 63**

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2019.

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 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

1. Grouped data can be represented graphically by

   (a) Histogram

   (b) Frequency polygon

   (c) Frequency curve

   (d) All of these

2. Data which is collected by the investigator him/herself with specific objective

   (a) primary data

   (b) secondary data

   (c) tertiary data

   (d) quaternary data

3. The value of middle item of a given series of arranged data is

   (a) average

   (b) median

   (c) mode

   (d) all of these

4. Which one of the following is measure of central tendency?

   (a) Range

   (b) Variance

   (c) Quartile deviation

   (d) Mode

5. Collection of information from the internet web site with the help of computer is called

(a) file transfer

(b) downloading

(c) shareware

(d) freeware

6. In which menu font, bullet and numbering found

(a) file menu

(b) edit menu

(c) view menu

(d) format menu

7. Bioinformatics which of the following component is used for the large amount of data generated in molecular biology for biological investigation

(a) collection and maintenance

(b) distribution and analysis

(c) usage

(d) all of these

8. Which one of the following is very useful to analyse the DNA sequence by similarity searching?

(a) BLAST

(b) FASTA

(c) SOFTA

(d) Both (a) and (b)

9. Ras Mol the visualizing tool was developed by

(a) Janet

(b) Roger Sayle

(c) Leory Hood

(d) Smith Waterman

10. One of the following is a protein classification tool

(a) SCOP

(b) CATH

(c) PIR

(d) TIGR

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Explain the various methods of classification of data.

Or

(b) Define variable. What are the types of variable? Give example for each.

12. (a) Define and explain :

(i) Range

(ii) Standard deviation

(iii) Standard error.

Or

(b) Enlist and explain the various measures of dispersion.

13. (a) Briefly explain the three basic components of computer.

Or

(b) Write in brief about the output devices of computers.

14. (a) Briefly present the historical milestones of bioinformatics.

Or

(b) Critically analyse the applications of Bioinformatics.

15. (a) What is EMBL? Point out its characteristics and uses.

Or

(b) What is BLAST? Elucidate its salient features.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Distinguish primary and secondary data. What precaution should be taken in using secondary data?

Or

(b) What is tabulation? Explain the organization of a table.

17. (a) Explain the uses of scatter diagram and correlation graph in the study of the relationship between two variables.

Or

(b) What is chi-square test? With suitable example explain its applications in the field by biostatistics.

18. (a) State the different operation of format menu in Ms Word and explain then uses.

Or

(b) Explain the evolution of computer mentioning the salient features of computer of different generation.

19. (a) Give an elaborate account of the important types of biological databases in the context of routing protein sequence analysis.

Or

(b) Write an essay on protein structure visualizing tools.

20. (a) Explain the three primary methods of producing pairwise sequence alignment.

Or

(b) Discuss the various components of Bioinformatics.
