

APRIL/MAY 2019

**MAM23 — BIOINFORMATICS AND  
BIOSTATISTICS**

Time : Three hours

Maximum : 75 marks

SECTION A — (5 × 6 = 30 marks)

Answer ALL questions.

1. (a) Comment on web browser and add a note on some commonly used web browsers.

Or

- (b) Outline the classification of biological databases.

2. (a) Enumerate the key steps in building a multiple sequence alignment.

Or

- (b) Write a short note on

(i) BLAST

(ii) FASTA

3. (a) Explain the methods to study proteomics.

Or

- (b) Comment on biochemical pathway databases.

4. (a) Give an account on molecular visualization of protein structure.

Or

- (b) Write a brief note on protein modelling.

5. (a) Write an account on  $\chi^2$  test and its applications in biology.

Or

- (b) Find out the coefficient of correlation from the following data.

Age of fish in days (X)

5	10	15	20	25	30	35
---	----	----	----	----	----	----

Weight in grams (Y)

3	7	12	15	20	25	30
---	---	----	----	----	----	----

SECTION B — (3 × 15 = 45 marks)

Answer any THREE questions.

6. Write an elaborate note on generation of computers.
7. Explain the primary methods of producing pairwise sequence alignment.

8. Enumerate the points of difference between structural and functional genome annotation.

9. Write an essay on the methods available for predicting the protein structure.

10. Give a detailed account on measures of central tendency