Seat No. _____

HQ-1603120202020200

M. Sc. (Sem.-II) (CBCS) Examination

April - 2023

Biochemistry

IBC-2 : Bioinformatics and Biostatistics

Time : $2\frac{1}{2}$ Hours / Total Marks : **70**

1 Answer briefly any **seven** of the following questions **14**

(A) EBI.

(B) Fingerprint.

(C) Genome.

(D) Hardware & software.

(E) Literature database.

(F) Molecular modeling

(G) Sequence alignment.

(H) Systems biology.

(I) Write note on normal distribution curve.

(J) Define level of significance.

2 Answer any **two** of the following questions. **14**

(A) Briefly explain carbohydrate structure databases.

(B) Write notes on GenBank.

(C) Explain each of the following term with suitable example (1) Null hypothesis (2) Alternate hypothesis (3) Type-I error (4) Type-II error.

3 (A) Explain contribution of Margaret Dayhoff in the field of bioinformatics. **7**

(B) What is regression and correlation analysis? Explain with suitable analysis. **7**

OR

3 (A) Write in brief on generalized nucleotide sequence databases. **7**

(B) What is central tendency and its type? Explain each with suitable example. **7**

4 Answer the following questions. **14**

(A) Explain Protein-protein and other molecular interactions databases.

(B) What are the various methods available for gene prediction?

5 Answer the following questions : (Any **Two**) **14**

(A) What are the 3D structure databases available? Briefly explain each.

(B) Write notes on ENA.

(C) Write short notes on SCOP and CATH.

(D) Write note on ANOVA.

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