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Reg. No. :

Code No. : 30849 E Sub. Code : SEMI 5 A

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2021.

Fifth Semester

Microbiology — Main

Major Elective — 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 :

1. FTP stands for _____.
 - (a) File Text Protocol
 - (b) File Transfer Protocol
 - (c) Firm Transfer Protocol
 - (d) File Transplant Protocol

2. A tag similar to that of the italic tag _____.
- (a) (b) <cite>
(c) <code> (d) <i>
3. The procedure of Aligning two sequences by searching for patterns that is in the same order in the sequences _____.
- (a) sequence alignment
(b) pairwise alignment
(c) global alignment
(d) all of these
4. All are sequence alignment tool except _____.
- (a) Rasmol (b) BLAST
(c) FASTA (d) Clustal W
5. What is the expansion of PAM?
- (a) Point Accepted Matrix
(b) Point Accepted Mutation
(c) Permanent Accepted Matrix
(d) None of the above

6. _____ series of blocks aminoacid substitution matrix.
- (a) BLOSUM (b) PAM
(c) FASTA (d) BLAST
7. _____ having nucleus which are covered by nuclear membrane.
- (a) Eukaryote (b) Prokaryote
(c) Bacteria (d) E-Coli
8. _____ is the expansion of TOF.
- (a) Trick of fame (b) Time off flies
(c) Time of flight (d) None of the above
9. _____ is made up of aminoacids.
- (a) Protein (b) Carbohydrate
(c) Fats (d) Lipids
10. Which of the common structural motifs are described wrongly?
- (a) β -hairpin-adjacent antiparallel strands
(b) Greek key-4 adjacent antiparallel strand
(c) $\beta-\alpha-\beta-2$ parallel stand connected by helix
(d) $\beta-\alpha-\beta-2$ antiparallel stands connected by helix

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) How does RDBMS Work?

Or

(b) Write short notes on mode of data transfer.

12. (a) Describe nucleic acid databases.

Or

(b) Discuss about PDB.

13. (a) Write short notes on scoring matrices.

Or

(b) Give a notes on pairwise alignment.

14. (a) Describe about prokaryotic genomes.

Or

(b) Give a short note on 2D-gel electrophoresis.

15. (a) Discuss about Drug discovery.

Or

(b) Comment on Motifs.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Write a detailed notes on FASTA.

Or

- (b) Discuss about database of metabolic pathway.

17. (a) Discuss in detail of TCP.

Or

- (b) Explain about relational databases.

18. (a) Describe about sequence alignment.

Or

- (b) Which is PAM and BLOSUM?

19. (a) Discuss about prokaryotic genome with the example of E.Coli.

Or

- (b) Explain in detail of MALDI-TOF spectrometry.

20. (a) Write in detail notes on protein modelling.

Or

(b) Explain in detail of Homology Modelling.
