



KE-511

Seat No. _____

B. Sc. (Sem. V) Examination

October / November - 2017

Microbiology : MI-505

(Bioinformatics)

(Subject Elective)

Time : 2 Hours]

[Total Marks : 50

PART - A

Answer the following MCQ :

10

(1) FASTA and BLAST find similarity between

- (A) DNA sequences
- (B) Protein sequences
- (C) Both (A) and (B)
- (D) None of the above

(2) Which of the following tasks can be solve by Bioinformatics ?

- (A) Gene finding
- (B) DNA/Protein sequence alignment
- (C) Protein structure prediction
- (D) All of the above

(3) Bioinformatics deals with

- (A) Algorithms
- (B) Databases
- (C) Artificial intelligence
- (D) All of the above

- (4) Find out the mismatch
- (A) NCBI- National Institutes of Health, USA
 - (B) EMBL - European Bioinformatics Institute, UK
 - (C) DDBJ- the National Institute of Genetics, Japan
 - (D) INSD - International Nucleotide Sequence Database- India
- (5) Protein Data Bank (PDB) is reservoir of
- (A) Protein sequences
 - (B) Protein -protein interaction data
 - (C) Protein 3D structure
 - (D) None of the above

PART - B

Answer any five from the following in very short : 10
(Any five)

- (1) What is gene bank?
- (2) Give the full form : OMIM, BLAST
- (3) Define the terms: Similarity, Homology
- (4) How does 'Human genome project' is useful to us ?
- (5) What is Bioinformatics?
- (6) What kind of research can be carried out using bioinformatics?
- (7) What mean by 'Genome annotation' ?

PART - C

Write short notes on any two : 12

- (1) Historical highlight of development of bioinformatics
- (2) NCBI
- (3) Sequence alignment methods
- (4) Write about 'Search engine'

PART - D

Explain any two from the following in detail : 18

- (1) Aim, objective and scope of Bioinformatics.
 - (2) Application of Bioinformatics in diagnostic and healthcare sector.
 - (3) How does internet become excellent resource for Bioinformatics studies.
 - (4) Types and classification of databases.
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