14MBP22A

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2018
(Fourth Semester)

Branch – APPLIED MICROBIOLOGY

CORE ELECTIVE-II -
INTRODUCTION TO BIOINFORMATICS – GENOMICS & PROTEOMICS

Time: Three Hours   Maximum: 75 Marks

SECTION -A (30 Marks)
Answer ALL questions
ALL questions carry EQUAL Marks   (5 x 6 = 30)

1   a   Write short account on the features and application of DDBJ.
                        OR
    b   Explain the features of flat file format.

2   a   Discuss shortly about the global sequence alignment method.
                        OR
    b   How the substitution matrix system is useful for sequence alignment?

3   a   Explain the construction process of phylogenetic analysis.
                        OR
    b   Write the short account on the pathway bioinformatics.

4   a   Give the basic outline for the various strategies for annotation of whole genome.
                        OR
    b   Distinguish the reductionist approach and integrative approach.

5   a   Give the short account on the secondary and tertiary structure prediction of RNA.
                        OR
    b   Write short notes on (i) Genomics and (ii) Proteomics.

SECTION -B (45 Marks)
Answer any THREE questions
ALL questions carry EQUAL Marks   (3 x 15 = 45)

6   Give the brief account on the salient features, file format and applications of PDB.

7   Explain the various approaches of multiple sequence alignment.

8   Discuss briefly about the various approaches for phylogenetic tree construction.

9   Write the brief account on the identification of protein coding genes and repeat elements.

10   Write the brief notes on the protein structure prediction.

Z-Z-Z   END