14MBP22A

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2019
(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 EMBL.
OR
b Explain the features of db-tables.

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

3 a Explain the construction process of phylogenetic analysis by using UPGMA.
OR
b Write the short account on the rooted and uprooted trees.

4 a Give the outline on molecular databases.
OR
b Differentiate the dry and wet experiments.

5 a Give the short account on the primary structure prediction of protein.
OR
b Write short notes on (i) Transcriptomics and (ii) Systematic biology.

SECTION -B (45 Marks)
Answer any **THREE** questions
ALL questions carry **EQUAL** Marks (3 x 1 5 = 45)

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

     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 whole genome elements.

10   Write the brief notes on the RNA structure prediction.

Z-Z-Z   END