

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2018
(Fifth Semester)

Branch- **BIOCHEMISTRY**

COMPUTATIONAL TECHNIQUES IN BIOINFORMATICS

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks!)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (10 x 2 = 20)

- 1 What is WWW?
- 2 What is meant by Wi-Fi based connection?
- 3 What is PubMed?
- 4 What is Webin?
- 5 Define the term biological database.
- 6 List out the protein databases.
- 7 What are motifs?
- 8 What is Dotplot?
- 9 How will you compare the 3D structure of protein?
- 10 What is the tool used for Ramachandran plot?

SECTION - B (25 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

- 11 a Brief on Web browsers and URL's.
- OR
b Write a note on how to enable local area connection.
- 12 a Write short note on principles and application of bioinformatics.
OR
b How will you access and save files using PubMed.
- 13 a Give a brief note on primary protein database.
OR
b Give an account on sequence retrieval from NCBI.
- 14 a Describe the methods used for sequence alignment.
OR
b Brief on packages used for construction of phylogenetic trees.
- 15 a Write a note on 3D structure databases and their uses.
OR
b How will you visualize a protein structure? Add a note on it.

SECTION - C (30 Marks!)

Answer any **THREE** Questions

ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

- 16 Give an account on connecting to internet.
- 17 Give a detailed account on NCBI formats and tools.
- 18 Write a note on DNA sequence databases.
- 19 Describe about tool used for database searching in sequence comparison.
- 20 Describe the method secondary structure prediction using protein