

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2019
(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 (10x2 = 20)

- 1 What is WWW?
- 2 List the web browsers used.
- 3 What is PubMed?
- 4 What is the goal of bioinformatics?
- 5 Define the term biological database.
- 6 What is sequin?
- 7 List the statistical tools used for sequence alignment.
- 8 What tools are used for performing MSA?
- 9 Name the tool used in Ramachandran plot construction.
- 10 What is RasMol?

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 HTML.
- 12 a Give a brief account on NCBI.
OR
b How will you access and save files using PubMed?
- 13 a Give a brief note on data retrieval systems.
OR
b Give an account on Swiss-port.
- 14 a Describe Fast A.
OR
b Brief on packages used for construction of phylogenetic trees.
- 15 a Write a brief note on structure-based drug designing.
OR
b Write a note on Ramachandran plot.

SECTION - C (30 Marks)

Answer any **THREE** Questions

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

- 16 Give an account on modem based and Wi-Fi based connection.
- 17 Write a note on principles, challenges and uses of bioinformatics.
- 18 Give an account on DNA sequence database.
- 19 Elaborate on Global and Local sequence alignment.
- 20 Describe the 3D structure databases and their uses.