

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2024
(Fifth Semester)

Branch – BIOCHEMISTRY

COMPUTATIONAL TECHNIQUES IN BIOINFORMATICS

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

1. URL stands for
(i) Unique resource Locator (ii) Universal resource Locator
(iii) Unique reference Locator (iv) United resource Locator
2. ----- is the primary component of PubMed.
(i) FASTA (ii) MEDLINE (iii) PDF (iv) BLAST
3. The general laboratory technique for determining the exact sequence of nucleotides or bases in a DNA molecule is -----.
(i) FASTA (ii) MEDLINE
(iii) DNA Sequence Data Base (iv) BLAST.
4. PHYLIP stands for -----.
(i) PHYLogentic Interface (ii) PHYLogentic Influence
(iii) PHYLogentic tree (iv) PHYLogeny Inference
5. Prediction of Activity Spectra for Substances (PASS) is a -----
(i) is a computer program that predicts the biological activity
(ii) is a computer hardware
(iii) is a tab
(iv) is a tool

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

6. a) Brief on Web Browser : HTML
(OR)
b) Comment on Modern Based Connections.
7. a) List out the applications of bioinformatics.
(OR)
b) What is PubMed called?
8. a) Narrate on popular protein sequence databases.
(OR)
b) Discuss about Sequence Retrieval System (SRS).
9. a) Outline on DNA and Protein Sequence Comparison.
(OR)
b) Elucidate on the importance of CLUSTAL W.
10. a) Paraphrase on Structure based Drug designing.
(OR)
b) Explain the steps involved in Downloading PDB file.

Cont...

SECTION -C (30 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks

(5 x 6 = 30)

- 11 a) File Transfer Protocol.
(OR)
b) Enabling Local Area Connections.
- 12 a) Notes on i) Principles and ii) Challenges of Bioinformatics.
(OR)
b) How will you Access and save files using PubMed.
- 13 a) Describe on Protein sequence retrieval from NCBI.
(OR)
b) Outline the Applications of Sequin and Webin .
- 14 a) Differentiate between Local and Global Sequence Alignment.
(OR)
b) Review on Next generation sequencing Merit and Demerit.
- 15 a) Interpret Secondary structure prediction using protein sequencer.
(OR)
b) State the Tools for Ramachandran plot.

Z-Z-Z END