



**VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM**

**(Deemed to be University under Section 3 of the UGC Act, 1956)**

**Pre – Ph.D. Written Examination – January – 2023**

**Bioinformatics**

**Paper I: Research Methodology**

Time: 2 Hours

Marks: 50

**PART –A**

**(5\*2M= 10M)**

**Write Brief notes about the following**

Answer all questions

All questions carry equal marks

1. What is Bibliography?
2. Expand SCOP and CATH.
3. Define PAM and BLOSUM.
4. What is Hypothesis?
5. What is Plagiarism?

**PART – B**

**(5\*4M=20M)**

**Write Short answers to the following**

Answer all questions choosing either a or b

All questions carry equal marks

1. a. Write a brief note on the index and Bibliography.  
**Or**  
b. Write a note on the review of the literature.
2. a. Describe the sequence motifs databases.  
**Or**  
b. Explain Ramachandran's plot and its significance.
3. a. Write a note on protein structure analysis.  
**Or**  
b. Write a difference between pairwise alignments and multiple sequence alignments.



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4. a. Write about Multiple Correlation.

**Or**

b. Explain the application of Poisson distribution.

5. a. Define Philosophy and its scope.

**Or**

b. Write a note on Conflicts of interest.

**PART – C**

**(2\*10M=20M)**

Answer any two essay type questions

All questions carry equal marks

1. Explain the types of scientific Communication.
2. Elongate Sequence motifs Databases.
3. Explain the Protein structure analysis.
4. Explain the types and methods of samplings.
5. Explain Intellectual honesty and research integrity.

