



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

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

**Pre – Ph.D. Written Examination – November – 2021**

**MEDICINE,DENTISTRY,HOMOEOPATHY,PHARMACY**

**Paper I: Research Methodology**

Time: 1 ½ Hours

Marks: 50

**PART –A**

**(5\*1= 5)**

**Write Brief notes about the following**

Answer all questions

All questions carry equal marks

1. Ecological designs.
2. Phase problem in X-ray crystallography.
3. Inducement in clinical trial
4. Scatterplot
5. h index

**PART – B**

**(5\*3=15)**

**Write Short answers to the following**

Answer all questions choosing either a or b

All questions carry equal marks

1. a. Types of research reports.  
**Or**  
b. Literature review
2. a. Explain the PCR? And its applications.  
**Or**  
b. Explain HPLC? and its applications
3. a. Intention to treat analysis  
**Or**  
b. Bioequivalence studies



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4. a. Correlation coefficient

**Or**

b. Steps in designing a questionnaire.

5. a. Obtaining Informed consent in a vulnerable groups.

**Or**

b. Ethical guidelines followed in India.

**PART – C**

**(3\*10=30)**

Answer any three essay type questions

All questions carry equal marks

1. Describe the different types of research in detail
2. Discuss the various field applications of X-ray crystallography?
3. Describe the ethical issues associated with a clinical trial
4. Describe the Non- parametric test in detail
5. Describe the cardinal ethical principles used in research in details

