



VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM

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

Pre – Ph.D. Written Examination – August – 2024

Civil Engineering

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. Define Research. List the significant Objectives of Research.
2. Mention the method to select the research problem as a Researcher.
3. Differentiate between Census method and Sampling method.
4. Mention the significance of Report writing.
5. Define Research Ethics & list its significance.

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. Elaborate on the criteria for good Research.
Or
b. Describe the different types of Research. Distinguish between Research and survey.
2. a. Knowing what data are available often serves to narrow down the problem itself as well as the technique that might be used". Explain the underlying idea in this statement in the context of defining a Research problem.
Or
b. Explain the meaning of the following in contest of Research design.
 - i. Extraneous variables
 - ii. Research hypothesis
 - iii. Experimental and Control groups.



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3. a. Examine the merits and limitations of the observation method in collecting material. Illustrate your answer with suitable example.
Or
b. Discuss the different types of Sampling techniques.
4. a. Describe writing Technical reports in brief.
Or
b. Discuss and details about importance of communicating your research study to others?
5. a. Elaborate on Open access publications initiatives.
Or
b. Discuss and details Fabrication, Falsification, and Plagiarism?

PART – C

(2*10M=20M)

Answer any two essay type questions

All questions carry equal marks

1. Elaborate on the various steps involved in Research process with suitable examples.
2. Basic principles of Experimental design. Also, discuss about important Experimental design.
3. Describe the Data Analysis methods for Sigma STAT, SPSS for student t-test, ANOVA.
4. Briefly explain the following:
 - a. i10 Index
 - b. h Index
 - c. Science Indexed Citation Index Expanded
 - d. Scimago Journal & Country Rank
 - e. Citations
5. Briefly explain the following:
 - a. Citation databases
 - b. Software tools
 - c. Journal suggestion tools

