



SDGI GLOBAL UNIVERSITY (SGU)

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SYLLABUS FOR Ph.D. ENTRANCE EXAMINATION 2024-25 Research Methodology and Aptitude

1. Research Methodology & Research Aptitude- Meaning and Characteristics of Scientific Research, Positivism and Post-positivistic approach to research, Phases/Stages of Research; Types of Research- Descriptive, Analytical, Applied, Fundamental, Quantitative, Qualitative, Conceptual, Empirical; Research Approaches, Ethical Problems in Research; Constructs and Variables- Concept and Nature, Types of Variables- Continuous and Categorical, Direct and Indirect, Application of ICT in research.

2. Hypothesis Formulation & Report Writing- Hypothesis- Meaning and Characteristics of Good Hypothesis, Types of Hypotheses, Formulation of a Hypothesis, Ways of stating a Hypothesis; Testing experimental hypotheses- Standard Error, Test of Significance, Level of Significance, Degrees of Freedom, Errors in Hypothesis- Type-I, Type-II.

Report Writing- Meaning and Significance of Report Writing, Types of Reports, Steps in Writing Report, Layout of the Research Report, Precaution in Writing Research Report, Developing Thesis, Formatting, Various Citations formats, References and Bibliography, Steps for Writing Synopsis/Research Proposal.

3. Literature Review & Problem Identification- Purpose of the Review, Sources of the Review, writing Literature Review, Research Gaps Identification, Meaning and Characteristics of a Research Problem, Types of Problems, Generality and Specificity of the Problem, and Objectives Formulation.

4. Research and Sampling Design- Meaning and Purpose of Research Design, Types of Research Designs, Criteria of Good Research Design, Concepts of Research Design, Basic Principles of Experimental Design. Meaning and Types of Sampling; Probability and Non-probability Sampling, Methods of Drawing Samples, Characteristics of a Good Sampling Design, Sample Size, Sampling Error, Sampling Distribution, Sampling Schemes and Sample Size.

5. Methods and Techniques of Data Collection- Methods of Data Collection - Primary Data, Secondary Data; Primary Data Collection Methods- Observation Method, Interview Method, Questionnaire, Guidelines for Constructing Questionnaires, Secondary Data Collection Methods- Selection of appropriate method of Data Collection; Coding, Editing and Tabulation of Data, Charts and Diagrams used in Data Analysis, Bar and Pie Diagrams and their Significance.