

## PAPER-V RESEARCH METHODOLOGY

**UNIT - I Research Methodology :** Meaning of Research; Objectives of research; Types of research; Research approaches, Significance of research; Research methods vs. Methodology; Research and scientific method; Research process; Criteria of good research; Problems encountered by researchers in India.

**Defining the Research Problem :** Selecting the Problem; Necessity of defining the problem; Technique involved in defining a problem; Selection and Setting objectives in business studies.

**UNIT - II Research Design :** Meaning of research design, features of good design, Important concepts relating to research design, Different research designs, Basic principles of experimental design.

**Sampling Design :** Census and sample survey - implications of sample design; Steps in sampling design; Criteria for selection of a sample procedure; characteristics for a good sample design; Different types of sample designs; Random sample from an Indicate Universe; complex random sampling design.

**UNIT - III Measurement and scaling techniques :** Measurement in research; Measurement scales; sources of Error in Measurement; Tests of sound measurement; Technique of developing measurement tools; scaling; meaning of scaling; Scale classification bases; Important scaling techniques; Scales construction techniques.

**Methods of data collection :** Collection of primary data. Collection of data through questionnaire and schedules; some other methods of data collection; Collection of secondary data; Selection of appropriate method for data collection; Case study method.

**Processing and analysis of data :** Processing operations : Problems in Processing; Elements/types of analysis; Significance of the statistical tools in research.

**UNIT - IV Sampling :** Need for sampling : Fundamental definitions; Important sampling distributions; Determination of sample size through the approach based on precision rate and confidence level; Determination of sample size through the approach based on bayesian statistics.

**Hypotheses concept :** Basic concepts concerning testing of hypotheses; Procedure for hypothesis testing; Flow diagram for hypothesis testing; Measuring the power of a hypothesis test; Tools of hypotheses; Important parametric tests;

Hypothesis testing of mean; hypothesis testing for differences between means; Hypothesis testing for comparing two related samples limitations of the tests of hypotheses.

**Chi-square test** : Chi-square as a test for comparing variance; Chi-square as a non-parametric test; Conditions for the application of  $\chi^2$  test; Steps and caution chi-square test.

**Analysis of variance (ANOVA)** : Concept and the Basic Principles of ANOVA

**UNIT - V Interpretation and report writing** : Meaning of interpretation; Why interpretation? Technique of interpretation; Precaution in interpretation; Significance of report writing; Different steps in writing report, layout of the research report; Types of reports; Oral presentation; Mechanics of writing a research report; Precautions for writing research reports.

**The Computer** : Its role in research : Computer and computer technology : The basics of computer system.