

RU – DET Syllabus

RESEARCH METHODOLOGY

Introduction to Research: Concept, Nature, Types and Characteristics of research, Philosophical and Sociological foundations of research, Prerequisites of research, types of research: Fundamental or Pure research, applied research and action Research.

Research Problem: Meaning of research problem, Characteristics of a good research problem, Formulation of research problem statement, developing objectives and hypothesis.

Sampling: Basic concepts of Sampling, Techniques of sampling, Characteristics of a good sample

Tools of Data Collection: Observation, Interview, Questionnaire, Rating scales, Attitude scales, Schedules, Characteristics of good research tools.

Descriptive Statistics: Tabulation, Organization, and Graphical Representation of quantitative data
Measures of Central Tendencies: Mean, Median, Mode.

Measures of Variability: Range, Quartile Deviation, Standard Deviation and Coefficient of variation.

Normal Probability Distribution: Properties of normal probability curve, Applications of Normality.
Divergence from Normality: Skewness and Kurtosis

Statistical Estimation and Testing: Point and interval estimation of population mean, proportion, and variance; Statistical testing of hypothesis and errors; Large and small sampling tests - Z, t and F tests. Non—Parametric Tests: Chi-square tests; Sign tests; Correlation and Regression Analysis: Two variables case.

Report Writing and Evaluation: Writing of research proposal, Report and Research paper; Writing and presentation of preliminary, Main body and Reference section of report.