

DRM100	RESEARCH METHODOLOGY	3	1	0	4
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**Unit – I Concepts and Types of Research & Research Problem 12**

Meaning – Objectives – Motivation – Types – Approaches – Significance – Research Methods versus Methodology – Research and Scientific Method – Importance of Research – Research Process – Criteria of Good Research – Problem Encountered by Researchers.

Sources – Formulation – Criteria – Research Questions – Importance – Survey – Use of Library and Journals – Internet – Reprints of Research Articles Research Design – Meaning – Need – Features – Important Concepts – Different Research Designs – Ex-Post Facto Research – Explanatory Research – Exploratory Research.

**Unit - II Sampling Techniques & Data Collection 12**

Census and Sample Survey – Implications of a Sample Design – Steps in Sampling Design – Criteria of Sampling – Characteristics of Good Sample Design – Randomisation – Simple Random – Stratified Random Sampling – Systematic Sampling – Cluster Sampling – Multistage Sampling – Convenience Sampling – Purposive Sampling – Quota Sampling – Advantages and Disadvantages of Sampling.

Primary and Secondary Data – Meaning – Importance - Characteristics – Quantitative and Qualitative Data – Interview – Questionnaire – Schedules – Survey – Experimentation.

**Unit – III Hypothesis Testing 12**

Meaning – Importance – Sources – Types – Characteristics – Formulation – Generalization – Hypothesis Testing of Means – Hypothesis Testing for Differences between means - – Hypothesis Testing for comparing Two Related Samples – Hypothesis Testing of proportions - – Hypothesis Testing for Differences between Proportions - – Hypothesis Testing for Comparing Variance - – Hypothesis Testing for Correlations – Limitation of Hypothesis Testing.

**Unit – IV Analysis of Data & Interpretation and Report Writing 12**

Measures of Central Tendency – Measures of Dispersion – Correlations – Chi – Square – Test Analysis of Variance – Regression – Multivariate Analysis – Sign Test – Wilcoxon's Signed Rank Test – Wald Wolfowitz runs Test – Freedman Test – Mann Whitney U Test.

Meaning – Techniques – Precautions of Interpretation – Report writing – Structure of Report – Contents – Steps in Drafting – Layout – Types – Styles – Editing – Final Report – Evaluation.

**Unit – V Computer Applications 12**

Computer and Computer Technology – Computer System – Important Characteristics – The Primary Number System – Computer Applications – Computers and Researchers – Tables – Graphs Languages.

**Text Books:**

1. John W. Best and James V. Kahn – ‘Research in Education’. – Prentice Hall of India Private Limited, New Delhi – 2006.
2. C.R. Kothari – ‘Research Methodology – Methods and Techniques ‘ – New Age International Publishers, New Delhi, 2004.

**References:**

1. Donald H. Mc. Burney – ‘Research Methods’ – Thomson Asia Pvt. Ltd., Singapore 2002.
2. Ranjit Kumar – ‘Research Methodology ‘- Sage Publication, New Delhi 1999.
3. Meenakshi Raman and Sangeeta Sharma – ‘Technical Communications – Principles & Practice’ – Oxford University Press, London.
4. Uma Sekaran - ‘Research Methods for Business’ – John Wiley and Sons Inc., New York 2002.