

Effective from Batch 2020

Course Code: 01

Term End Exam: 100

Min. Pass Marks: 40 %

**UNIT I**

Sources of knowledge, The Research Process, Applied and Basic Research, Inductive and Deductive Research, Qualitative and Quantitative Research, Research Question, Hypothesis, Constructs, Variables, Theory, Model, Model building, Research design- Exploratory, Descriptive, Experimental Research Design; Data Sources-Primary and Secondary, Review of literature.

**UNIT II**

Measurement Scales and Data Types Nominal Ordinal Interval and Ratio; Sources of error in Measurement; Validity and Reliability of Measurement scales; Comparative and Non-Comparative Scales; Questionnaire Designing; Sampling Process; Probabilistic and non-probabilistic sampling; sampling distribution, Sample Size-Accuracy, Precision and Confidence issues; central limit theorem.

**UNIT III**

Descriptive statistics, Measures of central tendency, dispersion and shape - mean, median, mode, standard deviation; Time series, growth rate, cross tabulation, Hypothesis Testing- Parametric Tests- z-test and t-test, ANOVA one way two way; Application of- Factor Analysis, Cluster Analysis, Discriminant Analysis, Structural Equation Modeling, Application of SPSS Package;

**UNIT IV**

Correlation and Regression, Non-Parametric Tests- Chi-square test for independence of attributes and goodness of fit, Application of- Wilcoxon matched-pairs signed-ranks test, Kolmogorov-Smirnov test, McNemar test, Mann-Whitney U test and Kruskal Wallis test, Application of SPSS Package; Report writing- purpose, Integral parts of a report.

**Unit V**

Introduction to philosophy: definition, nature and scope, concept, branches; Ethics: definition, moral philosophy, nature of moral judgments and reactions; Scientific Conduct: Ethics with respect to science and research; Intellectual honesty and research integrity/Scientific misconduct: falsification, fabrication, and plagiarism (FFP); Redundant Publications: duplicate and overlapping publications, salami slicing; Selective reporting and misrepresentation of data; Publication Ethics: definition, introduction and importance; Best practices/standards setting initiatives and guidelines: COPE, WAME, etc.; Conflict of interest; Publication misconduct: definition, concept, problems that lead to unethical behavior and vice versa, types; Violation of publication ethics, authorship and contributorship; Identification of publication misconduct, complaints and appeals; Predatory publishers and journals./

**Unit VI**

Open access publications and initiatives; SHERPA/RoMEO online resource to check publisher copyright & self-archiving policies; Software tool to identify predatory publications developed by SPPU; Journal finder/journal suggestion tools viz. JANE, Elsevier journal finder, springer journal suggester, etc./Publication misconduct: Complaints and appeals- examples and fraud from India abroad; Use of Plagiarism software like Turnitin, Urkund and other open source software tools; Databases: Indexing databases, Citation databases: Web of Science, Scopus, etc.; Research Metrics: Impact of journal as per journal citation report, SNIP, SJR, IPP, Cite Score; h-index, g index, i10 index, altmetrics /

**Suggested Readings:**

1. Donald R. Cooper and Ramela S. Schindler, Business Research Methods, Tata McGraw Hill Publishing Company Limited, New Delhi.
2. Uma Sekaran, Research Methods for Business, John Wiley and Sons Inc., New York.
3. Donald H. McBurney, Research Methods, Thomson Asia Pvt. Ltd. Singapore.
4. William G. Zikmund, Business Research Methods, Cengage Learning 2008.
5. Ranjit Kumar, Research Methodology, Sage Publications, London, New Delhi.
6. Naresh K. Malhotra, Satyabhusan Dash, Marketing Research, Pearson.
7. Richard I. Levin, David S. Rubin, Statistics for Management, Pearson.

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