

RESEARCH METHODOLOGY AND STATISTICS

UNIT 1

Types of Research – Different types of research and its applications. Methods of collecting data – conducting enquiries to collect primary data – sources of secondary data – preparation of schedules – questionnaires – pre testing and pilot study – interview method of enquiry – editing and coding the data.

UNIT 2

Classification by categories and measurements – discrete and continuous variables – tabulation scheme – preparation of tabular forms – methods of securing accuracy in tabulation. Representation of Data – Graphical representation – diagrammatic representation.

UNIT 3

Sample surveys – choice of the sample – simple random samples – systematic samples – cluster samples – multistage sample and quota sample – sources of bias and methods of reducing bias. Experimentation and thesis writing – Principles and planning of experiments – presentation of data – writing reports – footnotes and bibliography citations

UNIT 4

Measures of central tendency and variation – Mean – median – mode their relative advantages and disadvantages – measures of dispersion – mean deviation – standard deviation – quartile deviation – coefficient of variation – percentiles and percentile ranks.

Correlation and regression – Correlation – coefficient of correlation and its interpretation – rank correlation – regression equations and predictions – association of attributes – contingency table.

UNIT 5

Probability – rules of probability and its applications – normal – binomial- their properties – Importance of these distributions in research studies.

Test of Significance – large and small sample, ‘t’ and f tests for independence using chi-square analysis of variance and applications.

References:

1. Sidhu K.S. Methodology of Research in Education Sterling Publishers Pvt. Ltd., New Delhi 1987.
2. Best, J.M. and Kahn, J.V., Research in Education, Prentice Hall of India Ltd., New Delhi, 1989.
3. Kothari, C.R., Research Methodology, methods and techniques, Wiley Eastern Limited, New Delhi, 1990.
4. Agarwal, Y.P., Statistical methods, Sterling Publishers Pvt. Ltd., 1990.
5. Richard, I. Wevin. et. Al., Statistics for Management, Prentice Hall of India Ltd., 1991.
6. Palanisamy.S. and Monaharan, M., Statistical Methods for Biologists, Paramount Publications, Palani, 1991.
7. Sancheti, D.C. and Kapoor, V.K., Statistics, Theory, Method and Application, Sultan Chand & Sons. New Delhi, 1993.
8. Gupta, S.P. Statistical Methods, Sultan Chand & sons, New Delhi, 1996.
9. Alice Mani, Fundamentals of Business Statistics, Supreme Publishing House, 1997