

**Unit I Introduction, Measures of Central Tendency and Dispersion**

Introduction to Statistics and its Applications in Agriculture. Graphical Representation of Data, Measures of Central Tendency & Dispersion

**Unit II Probability and Distribution**

Definition of Probability, Addition and Multiplication Theorem (without proof). Simple Problems Based on Probability. Normal Distribution

**Unit III Correlation and Regression**

Definition of Correlation, Scatter Diagram. Karl Pearson's Coefficient of Correlation. Linear Regression Equations

**Unit IV Test of significance**

Introduction to Test of Significance, One sample & two sample test t for Means, Large sample test (Z test), Chi-Square Test of Independence of Attributes in  $2 \times 2$  Contingency Table.

**Unit V Experimental Design and Sampling**

Introduction to Analysis of Variance, Principle of experimental designs, Analysis of One Way Classification (CRD and RBD). Introduction to Sampling Methods, Sampling versus Complete Enumeration, Simple Random Sampling with and without replacement, Use of Random Number Tables for selection of Simple Random Sample.

**Practical(s):**

Graphical Representation of Data. Measures of Central Tendency (Ungrouped data) with Calculation of Quartiles, Deciles & Percentiles. Measures of Central Tendency (Grouped data) with Calculation of Quartiles, Deciles & Percentiles. Measures of Dispersion (Ungrouped Data). Measures of Dispersion (Grouped Data). Moments, Measures of Skewness & Kurtosis (Ungrouped Data). Moments, Measures of Skewness & Kurtosis (Grouped Data). Correlation & Regression Analysis. Application of One Sample t-test. Application of Two Sample Fisher's t-test. Chi-Square test of Goodness of Fit. Chi-Square test of Independence of Attributes for  $2 \times 2$  contingency table. Analysis of Variance One Way Classification. Selection of random sample using Simple Random Sampling.