II B.C.A. – III SEMESTER – ALLIED; COMPUTER ORIENTED STATISTICAL METHODS

UNIT I

Statistics: Introduction - Nature and Scope of Statistical Methods and Limitations - Probability - Classical Definitions – Addition Theorem - Multiplication Theorem - Axiomatic Approach of Probability – Conditional Probability - Baye's Theorem.

UNIT II

Binomial Distribution: Mean and Standard Deviation – Mode. **Poission Distribution:** Mean and Variance. **Normal Distribution:** Conditions of Normality – Probability Density Functions – Normal Probability Curve.

UNIT III

Sampling: Sampling Distribution - Standard Error- Types of Sampling – Test of Significance – Critical Level. **Hypothesis Testing:** Concept – Characteristics - Types of Hypothesis. **Large Samples:** z-test - Test for Specified Sample Mean - Difference Between Two Sample Mean - Specified Proportion and Difference Between Two Proportions.

UNIT IV

Small Samples: t-test - Test for Specified Mean - Difference between two-Sample means - Paired set of Observations - Confidence Interval for Large and Small Samples. F- test for Testing the Significance of the Difference between Sample Variance. Bivariate Analysis - Chi-Square Test.

UNIT V

Univariate Analysis: Correlation – Regression - Analysis of Variance (ANOVA) - Types of ANOVA.

REFERENCE BOOKS:

1. Statistical and Numerical Methods - P.R.VITTAL - MARGHAM Publications.
2. Statistical Methods – S.P. GUPTHA - MARGHAM Publications.

II B.C.A. – III SEMESTER – COMPUTER ORIENTED STATISTICAL METHODS LAB

1. Baye's Theorem.

2. Binomial Distribution.

3. Poission Distribution.

4. Normal Distribution.

5. Hypothesis Testing.

6. Chi-square Test.

7. Correlation.

8. Regression.

9. One way - Analysis of Variance.

10. Two way - Analysis of Variance.