

Course No-102- Business Mathematics and Statistics

Maximum marks	100
Term end	80
Cont. Assessment	20

Course objectives: -

The aim of the paper is to expose the students to the application of Mathematics and Statistics in Business decisions. In addition, the students will also be exposed to the use of Mathematic and Statistical models as an input for Business efficiency.

Unit -I

Sets: Concept and operation, Cartesian product of sets - Concept of relations

Complex Number- in Cartesian and polar forms algebra of complex numbers.

Quadratic equations- and its solution by factorization and formulate methods

Arithmetical progression- Geometrical progression their means and sum to n terms

Trigonometric formulae- Basic formulae and simple applications.

Unit-II

Functions: Concept and types

Derivative of a function Derivative as marginal function Different co-efficient of x, loges and trigonometric functions (simple cases)

Concept of integration indefinite integral and its formulae

Integraion by substitution, integration by parts. Find area under curve by using integration

Determinant and matrices Properties of determinates (without proof) simple applications Add & Multiplication of matrices solution of equations with the help of determinants and matrices

Unit- III

- Statistics a conceptual frame work, statistical enquiry collection of data, designing of a questionnaire
- Diagrammatic and graphic presentation of data (Bar diagram, Histogram, frequency polygon, ogive and pie diagram)
- Sampling and its techniques, classification, seriation and tabulation of data
- Measures of central tendency – Mean, Median, Mode, Geometric mean and Harmonic mean
- Measures of dispersion – Range, mean deviation, quartile deviation, standard deviation and coefficient of variation

Unit- IV

- Measures of skewness – Karl parsons and Bowleys methods
- Kurtosis – Meaning and its use
- Correlation – Scatter diagram, Karl pearson's and spearman's methods
- Regression Analysis – meaning and uses Lines of regression, regression equations and regression coefficients.