

SYLLABUS

PANJAB UNIVERSITY

B.COM. (3RD SEMESTER)

BCM 304: BUSINESS MATHEMATICS AND STATISTICS

OBJECTIVE : *The objective of this paper is to help the students in understanding mathematical and statistical tools in business decisions.*

Unit – I

Matrices and Determinants : Definition of a Matrix. Types of Matrices; Algebra of Matrices; Properties of Determinants; Calculation of Values of Determinants upto Third Order, Ad-Joint of a Matrix, Elementary Row or Column Operations; Inverse of a Matrix. Solution of a System of Linear Equations having Unique Solution and Involving not More Than Three Variables. Differentiation-Idea of Simple Derivative of different Functions (excluding trigonometric function).

Maxima and Minima of Functions of One Variable only

Unit – II

Introduction: Statistics as a Subject; Statistical Data: Meaning and Types, Collection and Rounding of Data, Classification and Presentation of Data.

Analysis of Univariate Data : Construction of a Frequency distribution; Concept of Central Tendency and Dispersion-and Their Measures; Measures of Skewness; Concept of Kurtosis. Time Series: Meaning, Components, Models, Fitting Linear and Quadratic Trend Index Number: Meaning, Types, and Uses: Methods of Constructing Price and Quantity Indices (Simple and Aggregate); Tests of Adequacy; Chain-Base Index Numbers; Base Shifting, Splicing, and Deflecting; Problems in Constructing Index Numbers; Consumer Price Index.

Practical work: Collection, Classification and Presentation of data using Microsoft Excel