

SYLLABUS

Panjab University, Chandigarh

Business Mathematics and Statistics

Course Code: BCM 304

B.Com.-II, Semester-III

Time Allowed: 3 Hours

Maximum Marks: 100

[Theory: 80 Marks

Internal Assessment: 20 Marks]

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

INSTRUCTIONS FOR THE PAPER SETTERS

Note: The question paper covering the entire course shall be divided into three sections:

Section A: This section will have 6 short answer questions from the entire syllabus. Students are required to attempt 4 questions from this section. Each question will carry 5 marks; the total weightage being 20 marks. (20 Marks)

Section B: This section will consist of essay type/numerical questions from Unit-I of the syllabus. The candidate will be required to attempt two questions out of four questions. Each question will carry 15 marks; the total weightage being 30 marks. (30 Marks)

Section C: This section will consist of essay type/numerical questions from Unit-II of the syllabus. The candidate will be required to attempt two questions out of four questions. Each question will carry 15 marks; the total weightage being 30 marks. (30 Marks)

Important Note: In all numerical papers the paper setter is required to set numerical question as follows:

Section A: Four numerical questions out of six questions.

Section B and C: Two numerical questions out of three questions.

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, Adjoint 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 of Uses: Methods of Constructing Price and Quality 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.