

B.Com Semester III
Paper No. CP 3.1
BUSINESS MATHEMATICS AND STATISTICS

These guidelines are to be read along with the syllabus.

PART A: BUSINESS MATHEMATICS

Unit I: Matrices and Determinants:

Total Lectures: 6

1. Elementary Row Operations method not to be discussed. Only Adjoint Method need to be considered.
2. Simple word-problems involving up-to three variables are to be covered. Input-output analysis and problems involving overhead allocation not to be discussed.
3. Problems having unique solution are to be covered.

Unit II: Calculus:

Total Lectures: 11

4. Mathematical functions to be covered excluding logarithmic and exponential functions.
5. Only conceptual problems need to be emphasized.
6. Applications of differentiation excluding problems on inventory and replacement.

Unit III: Basic Mathematics of Finance:

Total Lectures: 8

7. Only problems based on single premium are to be covered.
8. Problems based on Annuity are not to be covered.
9. Different types of rate refer only to interest rate and not to discount rates.

PART B: BUSINESS STATISTICS:

Unit I: Univariate Analysis

1. Questions based on geometric and harmonic mean to exclude problems requiring their calculation in frequency distributions.
2. Coefficients of all measures of variation are to be covered as well.
3. Mean deviation includes deviations from mean, median and mode.
4. Properties of standard deviation and variance are to be covered.

Unit II: Bivariate Analysis

5. Properties of coefficient of correlation are to be covered.
6. Interpretation of coefficient of correlation based on probable error and problems on bivariate frequency distributions are not to be covered.

7. Properties of regression coefficients and relationship between regression and correlation coefficients are to be covered.

Unit III: Index Numbers:

8. Construction of weighted index numbers would include Laspeyres', Paasche's and Fisher's methods.
9. Problems on average-of-relatives index numbers based on geometric mean are to be excluded.
10. Chain-based index numbers, splicing and base shifting are not to be covered.

Unit IV: Time Series Analysis:

11. Only fitting of linear trend is to be covered. Shifting of origin and conversion-based problems are not to be covered.

Guidelines for Structure of Question Paper:

Mathematical derivations would not be asked.

Part A: There shall be three questions with internal choice with the following marks distribution:

Unit I: Matrices and Determinants: 7.5 marks

Unit II: Calculus: 10 marks

Unit III: Basic Mathematics of Finance: 7.5 marks

Part B: There shall be four questions with the following distribution of marks:

One objective-type question involving five parts each carrying 1- mark.

Units I and II carry a weight of 30 marks with two questions of 15 marks each covering both the units. Each question would involve internal choice.

Units III and IV together carry a weight of 15 marks, with one question covering both the units and involves internal choice.