

2.5 – B. BUSINESS MATHEMATICS - II

Lecture per Week: 4 hours

Max Marks: 80 (End Sem.) + 20 (IA) = 100

Exam Duration: 3 Hours

Objectives:

1. The methods based on business mathematics are used suitably according to the needs of social sciences they prove to be compact, consistent and powerful tools in the field of commerce

Unit	Topics	No of Periods
I	Determinants and Matrices: Evaluation of second and third order determinants. Properties of determinants with proof problems. Cramer's rule for solving simultaneous equation. Matrix Definition Examples Equality of Matrices. Types of Matrices. Operations on Matrices- Algebra of matrices, Minor and Co-factor of an element. Adjoint of matrix solution of simultaneous equations in two and three unknowns by Matrix method. Application problems to Commerce	10
II	Integral Calculus: Concept of Integration, Integration by method of substitution, parts and using partial fractions. Definite Integrals. Application of integration to business problems.	10
III	Theory of Equations: Linear equation, Quadratic equation, Solution of linear and quadratic equation. Discriminate of quadratic equation, nature of roots, and relationship between roots and coefficient formation of quadratic equation whose roots are given.	10
IV	Partial fractions: Proper and improper fractions. Reducing to partial fractions of non-repeated linear, repeated linear and non-repeated quadratic	10
V	Linear Programming: Definition of LPP, Objective function – constraints – non-negativity condition. Feasible region. Feasible solution. Basic solution. Optimal solution. Formulation of LLP. Solution of LPP by graphical method problems.	10

SUGGESTED REFERENCE:

1. Sancheti and Kapoor, Business Mathematics, Sultanchand and Sons New Delhi
2. G.K. Rangnath and T.V. Narsimhrao Basic Mathematics Volume II
3. N.K. Nag Business Mathematics Kalyani Publishers New Delhi
4. Zameeruddin Business Mathematics. Vikas Publishing House, New Delhi.
5. P.N.Arora and S Arora, Mathematics S. Chand & Company Ltd. New Delhi