

B. Com: Semester - II
Paper – IDC2: BASIC MATHEMATICS

Objectives: The objective of this paper is to familiarize the students with the basic mathematical tools, with an emphasis on applications to business and economic situations.

Unit 1: Matrices and Determinants

Algebra of matrices, inverse of a matrix, matrix Operation – business application, Solution of system of linear equations (having unique solution and involving not more than three variables) using matrix inversion method and Cramer's Rule.

Unit 2: Calculus

Concept and rules of differentiation; Partial Differentiation: partial derivatives up to second order; Total differentials, Differentiation of implicit functions with the help of total differentials; Maxima and Minima: Cases of two variables involving not more than one constraint including the use of the Lagrangian multiplier; Integration: standard forms, methods of integration – by substitution, by parts, and by use of partial fractions, definite integration, finding areas in simple cases, application of integration to marginal analysis. Consumer's and Producer's Surplus.

Unit 3: Mathematics of Finance

Compounding and discounting of a sum using different types of rates; Types of annuities, like ordinary, due, deferred, continuous, perpetual, and their future and present values using different types of rates of interest; Depreciation of Assets.

Suggested Readings:

1. Mizrahi and Sullivan. *Mathematics for Business and Social Sciences*. Wiley and Sons.
2. Budnick, P. *Applied Mathematics*. McGraw Hill Education.
3. R.G.D. Allen, *Mathematical Analysis for Economists*
4. Ayres, Frank Jr. *Schaum's Outlines Series: Theory and Problems of Mathematics of Finance*. McGraw Hill Education.
5. Dowling, E.T., *Mathematics for Economics*, Schaum's Outlines Series. McGraw Hill Education.
6. Wikes, F.M., *Mathematics for Business, Finance and Economics*. Thomson Learning.
7. Thukral, J.K., *Mathematics for Business Studies*.
8. Vohra, N.D., *Quantitative Techniques in Management*. McGraw Hill Education.
9. Soni, R.S., *Business Mathematics*. Ane Books, New Delhi.
10. Singh J. K., *Business Mathematics*. Himalaya Publishing House.

B. Com: Semester - IV

Paper – IDC3: PUBLIC ADMINISTRATION

Objective: The objective of this paper is to familiarize the students with the nitty-gritty of Indian public administration.

Unit 1: Introduction

Meaning, Scope and significance of public administration, Evolution of public administration as a field of study, public administration-Chief executive, types of chief executives; politics and administration, theories of administration. Independent regulatory Commissions-Boards and Commissions - Field vs Head Quarters.

Unit 2: Control over public administration:

Legislative, executive, and judicial control, professional ethics, Lokpal and Lokayukta, Civil Services in developed and developing countries, Recruitment - methods of recruitment, and agencies, training, promotion, service conditions.

Unit 3: Financial administration:

Concept of budget, formulation and execution of budget, Budget as tool of administration, accounts and audit.

Suggested Readings:

1. Thagi. A.R: Principles of Public Administration.
2. A.Avasthi and S.R.Maheswari: Public Administration, Agra, Lakshmi, Narayan.
3. M.P.Sharma and B L Sadana: Public Administration Theory and Practice.Kitab Mahal.
4. LD.White: Introduction to the study of Publication
5. Bhattacharya, Mohit: Public Administration, Kolkata, World Press.
6. Vishnoo Bhagwan and Vidya Bhushan: A Text Book of Public Administration, New Delhi, S.Chand.