



Karmaveer Bhaurao Patil University, Satara
(A State Public University Est. u/s 3(6) of MPUA 2016)
Faculty of Commerce and Management

Dhananjayrao Gadgil College of Commerce, Satara

Board of Studies in Statistics & Mathematics

Programme: B.Com I

Semester - II

Type : OE

Marks: 50

Credits : 2

From: A. Y. 2025-26

Name of the Course: Mathematics Paper –II

Course Objectives:

- 1) To explain the concepts of statement of fundamental principal counting, permutation, combination and real life problem based on it.
- 2) To introduce matrix techniques to solve problems in various field.

Course Outcomes:

- 1) Knowledge of real life business application of Arithmetic Progression and Geometric Progression.
- 2) Knowledge of expressing and discussing problems which arise from real life business problem by using matrices.

Module	Title and Contents	Hrs
Module -1:	<p>Module -1: Permutation Combination And Progressions</p> <p>1.1 Meaning of Factorial of a number</p> <p>1.2 Definition of Permutation and Combination, Relation Between Permutation and Combination</p> <p>1.3 Statement of Fundamental Principle of Counting, Definition of Arithmetic Progression and Geometric Progression</p> <p>1.4 Formulae of Arithmetic Progression and Geometric Progression, Formulae to Calculate Sum of n^{th} term of Arithmetic Progression and Geometric Progression.</p> <p>1.5 Simple Examples.</p>	15
Module -2:	<p>Module -2: MATRICES AND DETERMINANTS</p> <p>2.1 Meaning of a matrix, Order of matrix.</p> <p>2.2 Types of matrices</p> <p>2.3 Algebra of Matrices : Addition and Subtraction of matrices, Scalar Multiplication of matrix, Multiplication of matrices.</p> <p>2.4 Definition of Determinants of order 2 & 3 and their evaluation, Properties of Determinants (Without proof), Singular and Non-Singular Matrix.</p> <p>2.5 Simple examples.</p>	15

Reference Books:-

1. Padmalochan Hazarika – A Textbook of Business Mathematics s chand publication 2016
2. Veena G.R.-Business Mathematics (New age international publishers, New Delhi) 2006
3. J. K Sharma – Business Mathematics Theory and Applications Ane books India 2007
4. J.P Singh – For BBA Business Mathematics Lakshi Publisher 2014
5. B. M Aggarwal - Business Mathematics and Statistic, Ane books Pvt. Ltd.

- 6. Kumbhojkar G.V-Business Mathematics (PhadakePrakashan, Kolhapur.)
- 7. J.P Singh –Business Mathematics For BBA

Note: Use of nonprogrammable calculator is allowed.

Evaluation Pattern:

Total Marks: 50

Internal Continuous Evaluation: 20 Marks

- Home Assignment/Tutorial - 10 marks
- Unit test/Seminar – 10 marks

End Semester Examination: 30 Marks

Each question for 10 Marks

- Question -1 MCQ 5 Out of 6 of 2 marks each
- Question -2 Long answer question with example
or
- Question -2 Long answer question with example
- Question -3 Long answer question with example
or
- Question -3 Long answer question with example