

PROGRAM	Bachelors Of Commerce / Bachelors Of Commerce (Hons)
SEMESTER	II
COURSE TITLE	Business Mathematics
COURSE CODE	04BC0222
COURSE CREDITS	4
COURSE DURATION	48

COURSE OUTCOMES:

- Understand dimensions of Business Mathematics.
- Formulate different functions and apply them in business problems.
- Integrate and Apply knowledge on Permutation and Combination.
- Formulate different applications of sequence and series and apply them in business problems.
- Designing the framework of Matrix and Determinants and its usefulness for solving business problems.

Teaching and Examination Scheme

Teaching Scheme (Hours)			Credits	Internal Marks (50%)		End-Semester Examination (50%)			Total Marks
Theory	Tutorial	Practical		IA	CSE	Theory	Practical/Viva	Term Work (TW)	
3	1	0	4	30	20	50	0	0	100

COURSE CONTENTS:

Unit No	Unit / Sub Unit	Sessions
I	Introduction to Business Mathematics: Scope and Importance, Steps in Quantitative Analysis Approach of Problem Solution, Number System Basics of Algebra: Algebraic Identity, Equalities and Inequalities, Factorization, Linear and Quadratic Equations, Solution Of Simultaneous Linear Equations, Solution (roots) of quadratic equations, Laws of Indices (Without Proof)	10
II	Functions and Their Applications: Definition, Types of Functions, Demand Function, Cost Function, Revenue Function, Profit Function, Break Even Point, Applications to Business Problems. Use of MS Excel to Plot Straight Line	08
III	Permutation and Combination: Fundamental Rule of counting, Factorial, Permutation, Restricted Permutation, Circular Permutation, Combination, Restricted Combination, Division into Groups. Use of MS Excel to Calculate Permutation and Combination	10

IV	Sequence and Series: Different Types of Sequence, Arithmetic and Geometric Sequence, Arithmetic Progression (AP), Geometric Progression (GP), Arithmetic and Geometric means, Harmonic Progression (HP).	10
V	Determinant, Matrices and Applications: Introduction, Definition, Types of Matrices, Operations on Matrices, Conversion of Business Problems into a Linear System of Equations (LSE) (Max 3X3) Determinant of a Matrix, Properties of Determinant, Matrix Equation, Solution of System of Linear Equations using inverse of coefficient matrix (Max 3) Use of MS Excel to Calculate Determinant and Inverse of Matrix	10

SUGGESTED READINGS:
Text Books:

Sr. No	Author/s	Name of the Book	Publisher	Edition and Year
T-01	P. Mariappan	Business Mathematics	Pearson Education	2 nd edition, 2012
T-02	P. Hazarika	A Textbook of Business Mathematics	S. Chand Publication	3 rd edition, 2014
T-03	D C Sancheti and V K Kapoor	Business Mathematics	Sultan Chand and Sons	3 rd edition, 2010

Reference Books:

Sr. No	Author/s	Name of the Book	Publisher	Edition and Year
R-01	A. Dikshit and J. Jain	Business Mathematics	Himalaya Publishing House	2 nd edition, 2014
R-02	Zamarudeen and Qazi	Business Mathematics	Vikas Publishing	3 rd edition, 2015
R-03	Trivedi Kashyap	Business Mathematics	Pearson Education	2 nd edition, 2016