SARDARPATELUNIVERSITY
Vallabh Vidyanagar, Gujarat
(Reaccredited with 'A' Grade by NAAC (CGPA3.11)
Syllabus with effect fromtheAcademicYear2023-2024

Bachelor of Business Administration

BBA (ITM)-Semester I

Course Code	UM01IDBBI01	Title of the Course	Business Mathematics-I
Total Credits of the Course	04	Hours per Week	04

Course Objectives:	1. To understand the basic concepts of Mathematics. 2. To improve logic using Mathematics application. 3. To have a proper understanding of mathematical applications in IT, Finance, Commerce and Management. 4. The teaching of selected areas of mathematics (such as calculus) as an example of the intellectual achievements of the modern world

Course Content		
Unit	Description	Weightage* (%)
1.	**Set theory and Determinant** • **Set Theory** Concept of number system (N, Z, Q, R), sets, subsets, equality of two sets ,null set, universal set, complement of a set, union and intersection of sets, difference of two sets, Venn diagram, De Morgan's and Distributive laws(examples only) • **Determinants:** Meaning, Determinants and their basic properties of determinant (without Proof, without examples), Cramer's Method (For two equations)	25%
2.	**Limit** • Concept of Limit of a Function • Rules of Limit • Simple Examples Where f(X) is in a polynomial or Rational Function of Two Polynomials.	25%
3.	**Linear Programming Problem** • Meaning, nature, limitations of LP • Uses of LP, • Definitions: Solution, constraints, BFS, FS, Objective functions • Solution of LPP by Graphical Method (Maximization and Minimization).	25%
4.	**Matrix** • Types of matrices-Row, column, Square, null, Identity, Diagonal and scalar, Matrix Orthogonal Matrix .Transpose of a matrix. • Examples of Addition, Subtraction, multiplication of matrices and Orthogonal Matrix.	25%

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Teaching-Learning Methodology:	
(1)ICT Based Teaching Learning Approach	
(2) Blended Teaching Learning Approach for Calculation.	

Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written(AsperCBCSR.6.8.3)	15%
2.	InternalContinuousAssessmentintheformofViva(MCQ),Assignments,Attendance(AsperCBCSR.6.8.3)	15%
3.	University Examination	70%

Course Outcomes :Having completed this course ,the learner will be able to	
1.	Understand the foundations of mathematics
2.	Be able to perform basic computation in higher mathematics
3.	Develop and maintain problem-solving skills
4.	Use mathematical ideas to model real-world problems

Suggested References:	
Sr. No.	References
1.	Business Mathematics .K . Kapoor: Sultan Chand and sons, New Delhi
2.	Business Mathematics ,A .G. Patel & G .C. Patel Atul Prakashan
3.	Sharma S.D Operation Research .KedarNath RamNath & Co. Meerut

E References:
1.https://www.pdfdrive.com/lectures-in-logic-and-set-theory-volume-2-set-theory-e156797838.html
2.https://www.pdfdrive.com/set-theory-and-logic-e16230754.html
3.http://rccmindore.com/wp-content/uploads/2015/06/Operations-Research.pdf
4.https://theintactone.com/2019/03/04/qtm-u2-topic-1-mathematical-formulations-of-lp-models-for-product-mix-problems/

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