SARDAR PATEL UNIVERSITY
B.Com. Semester: I
Syllabus with Effect From:June-2019

Paper Code:UB01CCOM53	Total Credit:3
Title Of Paper: Business Mathematics & Statistics - I	

Objective: 1. To enhance analytical ability in students for processing data
2. To Familiarize students with applications of Statistical techniques in business decision making.

Unit	Description of Detail	Weighting(%)
I	**Set Theory, Determinants** Set Theory: Sets, Subsets, equality of two sets, null set, universal set, power set, complements of a set, union and intersection of sets, difference of two sets. Venn Diagram (Concept only), Laws of algebra of sets, De'Morgan laws and Cartesian Product of two sets. Determinants: Meaning, Determinants and their basic properties of determinant (without Proof, without examples), Cramer's Method (For two equations)	25%
II	**Matrix** Types of matrices: Square, null, identity, transpose of Matrices, Symmetric, skew symmetric, Singular, Non Singular, inverse, adjoin of matrix. Matrices –scalar multiplication, Addition, Subtraction, Multiplication. Solution of a system of two and three linear equations using matrix.	25%
III	**Mathematics in Finance** Compound interest, nominal and effective rates of interest, continuous compounding, Concept of Present value and amount of a sum, Annuity (only for a fixed period of time), present value of annuity, sinking funds (with equal payments and equal time intervals)	25%
IV	**Interpolation and Extrapolation** Meaning of interpolation ad Extrapolation, Assumptions, Imporatnce and uses of interpolation and Extrapolation, Operators $\triangle$, E and D (without proof), methods of interpolation and extrapolation; 1. Newton's Method 2. Binomial expansion method 2. Lagrange's method, Simple examples on these methods.	25%

Basic Text & Reference Books:-

- Sancheti&Kapoor: Statistics: Theory, Methods and Applications, Sultan Chand & sons, New Delhi
- Kapoor, V.K.:Business Mathematics, sultan Chand and Sons, New Delhi
- Soni, R.S.: Business Mathematics, Pitamber Publishing Ho