

SARDAR PATEL UNIVERSITY
Programme: BCA
Semester: I
Syllabus with effect from: JUNE 2011

Paper Code: US01FBCA02	Total Credit: 2
Title Of Paper: Mathematics - I	

Unit	Description in detail	Weighting (%)
I	Sets Set operations, algebra of sets, finite sets, power set, mathematical induction, symmetric difference, functions, composition of functions, one to one, onto and invertible functions, recursively defined functions, polynomial functions.	25%
II	Algebraic Systems Binary operations, semi groups, groups, homomorphism, rings, integral domains, fields.	25%
III	Matrices Vectors in \mathbb{V}^n , dot product and norm on \mathbb{V}^n , matrix addition, matrix multiplication, scalar multiplication, transpose of a matrix, symmetric and skew symmetric matrices, upper and lower triangular matrices, determinant of matrices up to order 3.	25%
IV	Elementary Data Analysis Discrete frequency distribution, cumulative frequency distribution, graphical representation, histograms and pi charts, measures of central tendency: mean, median, mode, geometric and harmonic means.	25%

Basic Text & Reference Books :-

- S. Lipschutz and M. I. Lipson, Discrete Mathematics, Schaum's Series (International Edition 1992).
- S. C Gupta, Fundamentals of Statistics, Himalaya Publishing House 2004.
- S. P Gupta, Statistical Methods, Sultan Chan and sons, 2004.

