SARDAR PATEL UNIVERSITY
Programme: BCA
Semester: II
Syllabus with effect from: November/December-2011

Paper Code: US02FBCA02	Total Credit: 2
Title Of Paper: Mathematics-II	

Unit	Description in detail	Weighting (%)
I	**Graph Theory** Graph and multi graphs; degree of a vertex; paths; connectedness; connected components; cut points; bridges; complete graphs; regular graphs; matrices and graphs	25%
II	**Planner Graphs and Trees** Planner graphs; maps and regions; Euler's formula (only statement); non planner graphs; colored graphs; coloring of maps; trees. spanning trees.	25%
III	**Combinatorial Analysis** Counting principle, binomial coefficients; permutations and combinations.	25%
IV	**Co-ordinates and Data Analysis** Co-ordinates in R^2 and Equation of line in the form ax +by = c. Measures of dispersions; range; quartile deviation; mean deviations, standard deviations; measure of skewness; correlation coefficients; regression : method of least square	25%

Basic Text & Reference Books:-

- ➢ S. Lipschutz and M. l. Lipson, Discrete Mathematics, Schaum's Series (International Edition 1992)
- ➢ Narsingh Deo, Graph Theory with Applications to Engineering and Computer Science (Prentice Hall Series in Automatic Computation)
- ➢ Narsingh Deo, Graph Theory
- ➢ S. C Gupta, Fundamentals of Statistics, Himalaya Publishing House 2004
- ➢ S. P Gupta, Statistical Methods, Sultan Chan and sons, 2004