

MA 104T BASIC MATHEMATICS (Science)										
Teaching Scheme					Examination Scheme					
L	T	P	C	Hrs./Week	Theory			Practical		Total Marks
					MS	ES	IA	LW	LE/Viva	
3	1	---	7	4	30	60	10	---	---	100
<p>UNIT I: Functions of Several Real Variables 10 Introduction, Function of two variables, Limits & Continuity, Partial Derivative of some standard functions, Partial Derivatives of higher order: Homogenous function, Maximum and Minimum values of functions, Explicit and Implicit functions.</p> <p>UNIT II: Matrices 10 Determinants, Expansion by Minors, Determinant by using diagonals - Area Formula, Cramer's Rule - Systems of two and three Linear Equations, Identity matrix, Inverse of a Matrix, Using Matrices to solve linear systems of equations.</p> <p>UNIT II: Operation Research 08 Introduction to Linear Programming - Application in Management Problems – Mathematical Models, Objective Function Formulation - Constraints - Sign Restriction, Basic Assumptions - Feasible Region and Optimal Solution, Formulation of LPP, Graphical Solution of Two - Variable LPP, Feasible Region – Problems, Optimal Solution – Problems, Graphical Solution - Minimization Problems.</p> <p>UNIT IV: Vector Algebra 11 Scalars and vectors, Addition and subtraction of vectors, Multiplication by a scalar, Basis vectors and components, Magnitude of a vector, Multiplication of vectors, Scalar product; vector product; scalar triple product; vector triple product, Equations of line, plane and spheres, Using vectors to find distances- Point to line; point to plane; line to line; line to plane.</p> <p style="text-align: right;">APPROXIMATE TOTAL 39 Hours</p>										
Texts and References										
<ol style="list-style-type: none"> 1. P. Rama Murthy, Operation Research, 2nd Ed., New Age International Publishers (). 2. K. Srinivasan, Higher Secondary Mathematics, Tamil Nadu Text Book Corporations, Chennai (). 3. R. K. Jain & S. R. K. Iyengar, Higher Engineering Mathematics, 3rd Ed., Narosa (2007). 4. L. Choudhury, An Introduction to Statistics, Vol. I & II, 5. E. Kreyszig, Advanced Engineering Mathematics, 8th Ed., John Wiley (1999). 6. Michael D. Greenberg, Advanced Engineering Mathematics, 2nd Ed., Pearson (1998). 										