

COMPUTATIONAL MATHEMATICS – MCS-13

Theory Paper – 100 Marks

Sessional – 50 Marks

Real Analysis : Functional of several variables, continuity; partial derivatives; Taylor's theorem, applications to stationary value problems; Lagrange multipliers; directional derivatives, the operators div, curl, grad; Jacobians, Jacobian theorems; double, triple, line and surface integral; theorems of Gauss and Stokes: applications.

Algebra: n-Dvectors, vector spaces, linear dependence . Determinants and matrices of order n-Rank, eigen values, quadric forms, applications.

Basic MATLAB function and applications. Fuzzy Set Theory and application to communication problems, Fuzzy MATLAB tools.

DFT,FFT and MATLAB tools for wavelet transform.