Applied Mathematics - III (4th Semester for all Branches of Engineering)

Module-I

Complex Analysis:
Analytic function, Cauchy-Riemann equations, Complex integration: Line integral in the complex plane, Cauchy’s integral theorem, Cauchy’s integral formula, Derivatives of analytic functions, Taylor’s series, Maclaurin’s series, Laurent’s series, Singularities and zeros.

Module-II

Complex Analysis:
Residue integration method, evaluation of real integrals

Numerical Methods:
Errors of numerical results, error propagation, Lagrange Interpolation, Newton divided difference interpolation, Newton’s forward and backward interpolation, Spline interpolation.

Module-III

Numerical Methods:

Module-IV


Text books:

Reference books: