

Mathematics

CC - 6 (Common Core Course - 6): Theory - “Numerical Methods”

Block - I : Methods of Solving Equations

Unit - 1 : Algebraic and Transcendental Equations

Unit - 2 : System of Linear Equations

Unit - 3 : Inverse of a Matrix by Numerical Methods

Block - II : Interpolation - I

Unit - 4 : Finite Difference Operators

Unit - 5 : Newton’s Forward and Backward Difference Methods

Unit - 6 : Central Difference Methods

Block - III : Interpolation - II

Unit - 7 : Lagrange’s Method

Unit - 8 : Newton’s Divided Difference Method

Unit - 9 : Inverse Interpolation

Block - IV : Numerical Differentiation and Integration

Unit - 10 : Numerical Differentiation

Unit - 11 : Numerical Integration

Unit - 12 : Asymptotic Expansions

Core Course - 6 : Practical - “Numerical Methods”

Block - I : Interpolation

Unit - 1 : Finite Difference Operators

Unit - 2 : Newton’s Forward and Backward Difference Methods

Unit - 3 : Central Difference Methods

Unit - 4 : Lagrange’s Method , Newton’s Divided Difference Method
and Inverse Interpolation

Block - II : Methods of Solving Equations; Numerical Differentiation and Integration

Unit - 5 : Algebraic and Transcendental Equations

Unit - 6 : System of Linear Equations

Unit - 7 : Numerical Differentiation and Integration

Unit - 8 : Asymptotic Expansions