Mathematics

CC - 2 (Common Core Course - 2): Theory - "Differential Equations"

Block – I : Integration

Unit - 1 : Methods of Integration - I
Unit - 2 : Methods of Integration - II
Unit - 3 : Applications of Integration - Areas

Block - II : Differential Equations of First Order

Unit - 4 : Introduction and Formation of Differential Equations
Unit - 5 : Differential Equations of First Order and First Degree (Variables Separable ; Homogeneous and Non - Homogeneous Equations ; Linear and Bernoulli's Equations)
Unit - 6 : Exact Differential Equations

Block - III : Differential Equations of First Order and Higher Degree

Unit - 7 : Differential Equations of First Order and of Degree Higher (Orthogonal Trajectories)
Unit - 8 : Simultaneous Equations and Total Differential Equations
Unit - 9 : Homogeneous Linear Differential Equations of Second & Higher Order with Constant Coefficients

Block -IV: Non - Homogeneous Equations of Second and Higher Order

Unit - 10 : Non - Homogeneous Linear Differential Equations of Second & Higher Order with Constant Coefficients
Unit - 11 : Linear Differential Equations with Variable Coefficients
Unit - 12 : Partial Differential Equations - Classification - Lagrange's Method of Solving

Core Course -2 : Practical - "Differential Equations"

Block - I : Integration and Differential Equations of First Order

Unit - 1 : Methods of Integration
Unit - 2 : Applications of Integration – Areas
Unit - 3 : Differential Equations of First Order and First Degree (Variables Separable ; Homogeneous and Non - Homogeneous Equations)
Unit - 4 : Linear , Bernoulli's and Exact Differential Equations

Block - II : Differential Equations of First and Higher Order

Unit - 5 : Differential Equations of First Order and of Higher Degree
Unit - 6 : Linear Differential Equations of Second and Higher Order with Constant Coefficients
Unit - 7 : Linear Differential Equations with Variable Coefficients
Unit - 8 : Partial Differential Equations - Classification - Lagrange's Method of Solving