

201 : Mathematics – II

Unit : 1

[25%]

Differentiation:

Definition of Derivative, Rules of derivative (without proof), Derivative Of some standard function polynomials, Implicit, Exponential, Logarithmic And Trigonometric function, High order of derivative.

Integral Calculus:

Infinite integral as anti derivative as standard integral, Basic rules of Integration. (without proof), Integration by parts.

Unit : 2

[25%]

Differential Equation:

Family of curves leading to differential equation and conversely its Solution leading to a family of curve. Definition of order and degrees Of a Differential equation. Solution of first order and first degree Differential equation by

1. separable variable method
2. Homogeneous equation
3. Linear equation

Unit : 3

[25%]

Co – Ordinate Geometry:

Introduction , Quadrants and co-ordinates , distance between two Points , Section Formula , Area of a Triangle , Co linearity of three Points , Equations of a straight line , General Equation of a straightLine , Angle between two straight line (without proof).

Unit : 4

[25%]

Graph Theory and Trees:

Definition of graph, Isomorphism complete graph, Empty graph, Degree of a vertex, The first theorem of graph theory (without proof), Sub graph, complete graph, k- Regular graph, Graph operations (union (u), Intersection (G), Ring Sum E), Complement of a graph, Walk, path, Simple concept of following:- connected, components, Cycle , Trees , Binary trees.

Boolean Algebra:

Introduction , Basic Definitions , Duality ,Basic Theorem , Boolean Algebra and lattice , Representation of Theorem , Sum-of-product Form for sets , sum-of-product form for Boolean Algebra.

Text Books :-

Advanced Mathematics – Ravi Gor (Nirav Prakashan)

Reference Book :-

Discrete Mathematics - S . Lipschutz , M .Lipson

Question Paper Scheme :

Q.1	Objective Type Unit 1 & 2	(11 Marks)
Q.2	Unit – 1 OR Q.2 Unit – I	(12 Marks)
Q.3	Unit – 2 OR Q.2 Unit – 2	(12 Marks)
Q.4	Objective Type Unit 3 & 4	(11 Marks)
Q.5	Unit – 3 OR Q.5 Unit – 3	(12 Marks)
Q.6	Unit – 4 OR Q.6 Unit – 4	(12 Marks)