Prak Shastri – First Year (Class 12th)
Subject- Mathematics
4rd Semester

Text Book: - NCERT (NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING)

S. No	Unit Name	Unit Topics	Periods (64)	Credits (4)
1.	Integrals	Introduction, Integration as an Inverse Process of Differentiation, Method of Integration, Integrals of some Particular Functions, Integration by Partial Functions, Integration by Parts, Definite Integral, Fundamental Theorem of Calculus, Evaluation of Definite Integral by Substitution, Some Properties of Definite Integrals.	12	1
	Application of Integrals	Introduction, Area under Curves, Area between Two Curves.	04	
2.	Differential Equations	Introduction, Basic Concepts, General and Particular Solutions of a Differential Equation, Formation of a Differential Equation whose General Solution is given, Methods of Solution First order, First Degree Differential.	16	1
3.	Vectors Algebra	Introduction, Some Basic Concept, Type of Vectors, Addition of Vectors, Multiplication of a Vectors by a scalar, Product of Two Vectors.	08	1
	Three Dimensional Geometry	Introduction, Direction Ratios of a Line, Equation of a Line in Space, Angle between Two Lines, Shortest Distance between Two Lines Planes, Angle between a Line and a plane. Planes, Co planarity of Two Lines, Angle between Two Planes, Distance of a Point from a plane, Angle between a Line and a Plane.	08	
4.	Linear Programming	Introductions, Linear Programming Programming Problems and its Mathematical Formulation, Different Types of Linear Programming Problems.	16	1
	Probability	Introduction, Conditional Probability, Multiplication Theorem on Probability, Independent Events, Byes ' Theorem, Random Variables and its Probability Distributions, Bernoulli Trials and Binomials Distribution.		1

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