

BAGARIA BAL VIDYA NIKETAN

LAXMANGARH SIKAR

SYLLABUS & LESSON PLANNER - 2024-2025

Class	XII-SCI.
Subject	MATHEMATICS
Teacher Name:-	PRAVEEN

syllabus

Ch. No.	NAME OF BOOKS	Name of Chapter	Working Day	Period	Topic	Month	Week
Unit 1 Relations and Functions	NCERT	Relation & Function	23	30	Types of Relations, reflexive, symmetric, transitive and equivalence relations one to one and onto function	April	1,2
		Inverse Trigonometric Functions			Definition, range, domain, principle value branch, graphs of inverse trigonometric functions		3,4
Unit 2 Algebra		Matrices	13	17	concepts, notation, order, equality, types of matrices, zero and identity matrices, transpose of a matrix, symmetric and skew symmetric matrices . Operations on matrices: addition and multiplication and multiplication with a scalar . Invertible matrices and proof of the uniqueness of inverse.	may	1,2
		Determinantes	11	14	Determinant of a square matrix , minors, co-factors and applications of determinants in finding the area of a triangle, adjoint and inverse of a square matrix . Consistency, inconsistency and number of solutions of system of linear equations by examples, solving system of linear equations in two or three variables using inverse of a matrix.	June	1,2

Unit 3 Calculus	Continuity and Differentiability	26	34	Continuity and Differentiability, Chain rule, Derivative of inverse trigonometric functions, Concept of exponential and logarithmic functions, Logarithmic differentiation, derivative of functions, Expressed in parametric forms. Second order derivatives.	July	1, 2, 3, 4	
				Applications of Derivatives			Rate of change of quantities, increasing\ decreasing functions, maxima and minima and second derivative test given as a provable tools, simple problems.
	Integrals	24	32	Integration as inverse process of differentiation, variety of functions by substitution, by partial fractions and by parts, Fundamental theorem of Calculus, Basic properties of definite integrals and evaluation, of definite integrals.	August	1,2,3,4	
				Application of the integrals			Finding the area under simple curves, espacially lines, circles/parabolas/ ellipses.
				Differential Equations			Order and degree, general and particular solutions of a differential equation, Method of separation of variables, solutions of homogeneous differential equations of first order and second degree. Solutions of linear differential of the type.
Unit 4 Vectors and Three-Dimensional Geometry	Vectors	23	30	vectors and scalars, magnitude and direction of a vector.direction cosines and direction ratios of a vectors, types of vectors , position	September	1,2	
	3-D geometry			direction cosines and direction ratios of a line joining two points , Cartisian equation and vector equation of a line , skew lines , shortest distance between two lines. Angle between two lines		3,4	

syllabus break due to exam period and holidays in the month of october

Unit 5 Linear Programming		Linear Programming	23	30	Introduction, Related terminology such as constraints, objective Function, Graphical method of solution for problems in two variables, feasible and infeasible regions.	November	1,2
Unit 6 Probability		Probability			Conditional Probability, Multiplication theorem on probability, Independent events, total probability, Bayes' theorem, Random variable and its probability distribution, mean of random variable.		3,4