

SYLLABUS BREAKUP (2023-24)

SUBJECT: MATHEMATICS

CLASS-XII

FIRST WRITTEN TEST (MAY 15, 2023 ONWARDS)

HALF-YEARLY EXAM: SEPTEMBER 11, 2023 ONWARDS

FIRST PRE- BOARD EXAM. : NOVEMBER 17, 2023 ONWARDS

SECOND PRE- BOARD EXAM. : DECEMBER 16, 2023 ONWARDS

MONTH	TOPICS	No. of Periods
APRIL NO.OF DAYS = 18 No. of Periods (app) = 22	MATRICES & DETERMINANTS	
	Introduction and Types of Matrices	2
	Operation on Matrices	2
	Transpose of a Matrix, Symmetric & Skew Symmetric Matrices.	2
	Elementary Operations, Invertible Matrices	3
	Determinants (Minors & Co- factors)	2
	Adjoint and inverse of a Matrix	2
	Problems on Determinants and Matrices	3
	RELATIONS & FUNCTIONS	
	Revision of Domain and range of Relation	1
	Types of relations	2
	Equivalence Relation	3
MAY NO. OF DAYS = 21 No. of Periods (app) = 28	RELATIONS & FUNCTIONS (CONTD.)	
	Revision of Functions	2
	Types of functions with problems	3
	* Problem Discussion	2
	INVERSE TRIGONOMETRIC FUNCTIONS	
	Definition and Principal Values	3
	Graphical representation	3
	Problem Discussion	1
	CONTINUITY AND DIFFERENTIABILITY	
	Continuity	2
	Differentiability	1
	Differentiation by chain rule	2
	Differentiation of implicit functions	1
	Logarithmic Functions & Exponential Functions	1
	Inverse Trigonometric Functions	3
	Parametric Functions	2
	Higher Derivatives	2
JUNE & JULY NO. OF DAYS = 26 No. of Periods (app) = 35	APPLICATION OF DERIVATIVES	
	Rate of change	3
	Increasing and Decreasing Function	4
	Maxima & Minima	3
	Problem Discussion	2
	INTEGRALS	
	Introduction, formulae, Basic Direct Problem	1
	Integration by substitution	2
	Problem of $\int \tan x dx$, $\int \sec x dx$ etc.	3
	Different types in Integration	4
	Integration by part	2
	Partial Fractions	2
	Properties of definite integral	2
	Problem Discussion	3

	APPLICATION OF INTEGRATION	
	Area under the curve	4
AUGUST NO. OF DAYS = 21 No. of Periods (app) = 28	DIFFERENTIAL EQUATIONS	
	Definition, order and degree	2
	General and particular solution of a differential equation.	2
	Solution of differential equation by separation of variables	2
	Homogenous Differential equation	3
	Linear Differential Equations	3
	VECTOR ALGEBRA	2
	Definition and types of vectors	3
	Addition of vectors and their problems	3
	Scalar Product	3
	Vector Product	3
	THREE DIMENSIONAL GEOMETRY	
	Co-ordinate System in 3-D	2
SEPTEMBER NO. OF DAYS = 8 No. of Periods (app) = 10	THREE DIMENSIONAL GEOMETRY (contd.)	
	Direction Ratios & Direction Cosines	2
	Cartesian equation and vector equation of a line	2
	Skew lines, shortest distance between two lines.	3
	Angle between two lines. Straight Line	2
	Problem Discussion	1
OCTOBER NO. OF DAYS = 17 No. of Periods (app) = 21	LINEAR PROGRAMMING	
	Introduction, related terminology such as constraints, objective function, optimization, graphical method of solution for problems in two variables, feasible and infeasible regions (bounded or unbounded), feasible and infeasible solutions, optimal feasible solutions (up to three non-trivial constraints)	4
	PROBABILITY	
	Conditional Probability	2
	Multiplication Theorem	2
	Total Probability	3
	Independent Events	2
	Baye's Theorem	3
	Random Variable and its Probability Distribution	2
	Mean of random variable	1
	REVISION	2