

**ARMY PUBLIC SCHOOL, BANGALORE**  
**CURRICULUM (MONTHWISE) 2025-26**

**CLASS - XII**  
**SUBJECT- MATHEMATICS**

SL. NO.	MONTH	CONTENT
1.	APRIL	<p><b>RELATIONS AND FUNCTIONS:</b> Relations-Types of relations: reflexive, symmetric, transitive, equivalence relations, and equivalence class. Functions-One-to-one and onto functions.</p> <p><b>INVERSE TRIGONOMETRIC FUNCTIONS:</b> Definition, range, domain, principal value branch of inverse trigonometric functions and their graphs.</p> <p><b>MATRICES:</b> Concept, notation, order, equality, types of matrices, Transpose of a matrix, Symmetric and Skew symmetric matrices. Operations on matrices, Simple properties of addition, multiplication and scalar multiplication, Invertible matrices and proof of the uniqueness of inverse.</p> <p><b>CONTINUITY AND DIFFERENTIABILITY:</b> Continuity and differentiability, Chain rule, derivatives of inverse trigonometric, implicit functions, Concept of exponential and logarithmic functions, Derivatives of logarithmic and exponential functions, Logarithmic differentiation, Parametric differentiation, and Second order derivatives.</p>
2.	JUNE	<p><b>DETERMINANTS:</b> 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.</p> <p><b>APPLICATION OF DIFFERENTIATION:</b> Rate of change of quantities, increasing/decreasing functions, maxima and minima, simple problems.</p> <p><b>INTEGRATION:</b> Integration as the inverse process of differentiation, Integration using the method of substitution, partial fractions, and by parts, Fundamental Theorem of Calculus (without proof). Basic properties of definite integrals and</p>

		<p>evaluation of definite integrals.</p> <p><b>APPLICATION OF INTEGRATION:</b> Applications in finding the area under simple curves, especially lines, circles/ parabolas/ellipses.</p>
3.	<b>JULY</b>	<p><b>DETERMINANTS: (CONT.)</b> Consistency, inconsistency and number of solutions of system of linear equations and Matrix method.</p> <p><b>DIFFERENTIAL EQUATIONS:</b> Definition, order, and degree, general and particular solutions of a differential equation. Solution of differential equations: Variable separable method, solutions of homogeneous differential equations and linear differential equations.</p> <p><b>REVISION FOR PERIODIC TEST – I</b></p> <p><b>VECTORS:</b> Magnitude and direction of a vector. Direction cosines and direction ratios of a vector. Types of vectors, operations on vectors: Addition, Subtraction and Multiplication by a scalar. Product of vectors (Scalar and Vector): Definition, Geometrical Interpretation, properties and applications.</p>
4.	<b>AUG</b>	<p><b>THREE-DIMENSIONAL GEOMETRY:</b> Direction cosines and direction ratios of a line joining two points. Cartesian equation and vector equation of a line, skew lines, shortest distance between two lines. The angle between two lines.</p> <p><b>LINEAR PROGRAMMING PROBLEM:</b> 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).</p> <p><b>PROBABILITY:</b> Conditional probability, multiplication theorem on probability, independent events, total probability, Bayes' theorem.</p>
5.	<b>SEPT</b>	<b>REVISION FOR HALF YEARLY</b>

6.	<b>OCT</b>	<b>REVISION FOR HALF YEARLY</b>
7.	<b>NOV</b>	<b>REVISION FOR PRE BOARD I</b>
8.	<b>DEC</b>	<b>REVISION FOR PRE BOARD II</b>
9.	<b>JAN</b>	<b>REVISION FOR BOARD EXAMINATION</b>
10.	<b>FEB</b>	<b>BOARD EXAMINATION</b>
11.	<b>MARCH</b>	<b>BOARD EXAMINATION</b>

**BOOKS: NCERT TEXBOOK PART I AND PART II**

**NCERT EXEMPLAR TEXBOOK**

**REFERENCE: R D SHARMA, DHANPAT RAI PUBLICATIONS.**

**M L AGGARWAL, APC BOOKS.**