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ARMY PUBLIC SCHOOL, BANGALORE
SPLIT UP SYLLABUS 2023-24

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CLASS -   XI
SUBJECT-   MATHEMATICS

SL.NO.	MONTH & WORKING DAYS	CONTENT
1.	JUNE, 21 Days	● **Sets** Sets and their representations, types of sets, universal set, Venn diagram, union of sets, intersection , difference of sets, Complement of a set. ● **Relations and Functions** Ordered pairs, Cartesian product of sets, Relations, domain, range, co-domain. Types of Real valued function, algebra of functions. ● **Trigonometric Functions** **Angles and their types, degree and circular measure. Graphs of trigonometric functions, compound angle formula, their simple applications**

2.	JULY, 23 Days	• **Continuation of** Trigonometric Functions Transformation and multiple angle identities and simple applications.		Be able to sketch graphs of trigonometric functions and determine their domain and range.	Activity 7		
		• **Complex Numbers and Quadratic Equations** Algebraic properties of complex numbers, Argand plane and quadratic equations.		Expressing square roots of negative numbers as multiples of imaginary numbers.algebra of complex numbers is leant. Ability to plot a complex number on the Argand plane.			
		• **Linear Inequalities** Algebraic solutions in one variable and their solutions on a number line.		Identify the regions on a graph that represent the solution to a system of inequalities.	Activity 10		

3.	AUG, 24 Days	● **Continuation of Linear Inequalities** Algebraic solutions in one variable and their solutions on a number line.		Students will be able to solve one-step inequalities that involve addition, subtraction, multiplication and division.		
		● **Permutations and Combinations** Fundamental principle of counting, factorial, permutation, combinations and simple applications.		Students should be able to apply the fundamental principle of counting to find out the total number of outcomes in a problem.		
		● **Binomial Theorem** Statement and proof of the binomial theorem, Pascal's triangle and simple applications.		Identify binomial co-efficient given the formula for a combination.	Activity 15	

4.	SEPT, 22 Days	● **Sequences and Series** Arithmetic mean, Geometric Progression, Infinite G.P, Relation Between A.M and G.M		Understand the definitions of limits and convergence in the context of sequences and series of real numbers.			
		● **Straight Lines** Slope of a line, Angle between two lines, various forms of a line, distance between a point and a line.		Use straight line graphs in practical solutions.			
5.	OCT, 16 Days	● **Conic Sections** Sections of a Cone, Ellipse, Parabola, Hyperbola and Circle their standard equations and simple properties.		Analyse and write equation using properties.	Activity 21 Activity 22		
		● **Introduction to three dimensional geometry** Co-ordinate axes, co-ordinate planes,		Analyse and write equation using properties.			

| 6. | NOV, 21 Days | ● **Continuation of Introduction to three dimensional geometry** Distance between two Points

● **Limits and Derivatives** Derivative introduced as rate of change, limits of polynomials, rational, trigonometric, logarithmic and exponential functions, derivative as slope of tangent to a curve, Algebra of Derivatives. | | How to find limits numerically and graphically. | Activity 28 | | |

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| 9. | DEC, 18 Days | ● **Statistics** Measures of dispersion Range, Mean deviation, variance and standard deviation. | | Understand ans choose the best measure of dispersion. | | | |
| 10. | JAN, 23 Days | ● **Probability** Events, Axiomatic Probability and Probability of an event. | | To use mathematical vocabulary to describe the probability of events happening. | Activity 32 | | |

11.	FEB, 24 Days,	● Pre-Board exams		● Continuous tests ● Doubt clearing classes ● MCQ & A-R will be answered.	Individual Practicing		
12.	MARCH, 21 Days,	● Board exams					

BOOKS: NCERT TEXTBOOK, NCERT EXEMPLAR & LAB MANNUAL,