

**D.A.V PUBLIC SCHOOLS, RANCHIZONE**

**SYALLABUS OF CLASS 11<sup>TH</sup> MATHS (2017-18)**

S.No	CHAPTER	NO.OF PERIOD /MONTHS
1.	<b>SETS:-</b> Sets and their representation types of sets, subsets , proper subsets Power sets, universal sets, Venn diagram union and intersection of sets . Difference of sets , compliment of a set , Demorgan's law.	<b>6/ JUNE</b>
2.	<b>RELATIONS AND FUNCTIONS :-</b> Ordered pairs ,Cartesian product of sets ,Definition of relation ,domain ,range and co- domain of relation . Definition of function , types of functions, domain, range , co-domain of the functions, graph of functions, Sum , difference ,product and quotient of two functions	<b>8/ JUN</b>
3.	<b>TRIGONOMETRY:-</b> Measurement of angles, Relation between central angle and arc of circle ,Definition of trigonometric functions with the help of unit circle, Sign of trigonometric functions, Domain and range of trigonometric functions and their graph , Trigonometric functions (compound, transformation, multiple submultiple angles) Trigonometric equations general and principal solutions solution of triangles [sine and cosine rule ] Deducing the T Identities Napier's Analogy.	<b>16/ JULY</b>
4.	<b>PRINCIPLE OF MATHEMATICAL INDUCTION:-</b> Process of proof by induction, motivating the application of method by looking at natural numbers	<b>04/ JULY</b>
5.	<b>SEQUENCE AND SERIES:-</b> Arithmetic progression, nth term , sum of n terms, Geometric Progressions, nth term ,sum of n terms, Arithmetic mean and Geometric mean ,Relation between A.M and G.M ,Sum to n terms of special series ,Sum of infinite series of G.P.	<b>8/ JUL-AUG</b>
6.	<b>LINEAR INEQUALITY :-</b> Algebraic solution of linear inequalities in one variable and their representation of number line. Graphical solution of linear inequalities in two variables.	<b>4/AUG</b>
7.	<b>SEQUENCE AND SERIES:-</b> Arithmetic progression, nth term , sum of n terms, Geometric Progressions, nth term ,sum of n terms, Arithmetic mean and Geometric mean ,Relation between A.M and G.M ,Sum to n terms of special series ,Sum of infinite series of G.P.	<b>8/AUG</b>
8.	<b>Complex Number and quadratic equation:-</b> Algebra of complex numbers ,The Modulus and conjugate of a complex Number , Square root of complex number , Argand Plane and Polar Representation , Quadratic equation .	<b>5/AUG</b>
9.	<b>Limits and derivatives :-</b> Limit of a function ,indeterminate form , existence of limit. Derivatives of function by first principle method, Derivatives of sum, difference, product and quotient of functions. Derivatives of polynomial and trigonometric functions. Derivatives of logarithmic & exponential functions .	<b>6/AUG</b>
10.	<b>Mathematical Reasoning:-</b> Statement , Negation of statement , Compound statement , contrapositive and converse , Quantifier , Implication .	<b>2/AUG</b>

	<b>PERMUTAION AND COMBINATION :-</b> Fundamental principle of counting ,Factorial notation, Different types of permutations and combinations, properties of combinations, simple applications ,word problem based on permutations and combinations	<b>10/ OCTOBER</b>
<b>11.</b>	<b>BINOMIAL THEOREM:-</b> Introduction of Binomial theorem for positive integral indices, Pascal's triangle, general and middle term ,rth term from beginning, rth term from end, coefficient of independent term in the expansion.	<b>5/ NOVEMBER</b>
<b>12.</b>	<b>STRAIGHT LINE :-</b> Introduction of 2D,Shifting of origin, Slope of a line and angle between two lines. Various form of equations of a line: parallel to axes, point-slope form, slope –intercept form, two point form, intercept and normal form, General equation of a line . Equation of family of lines passing through the point of intersection of two lines ,distance from a point to a line. Distance between two parallel lines and conditions of concurrency ,General equation of intersection of two lines.	<b>12/ NOVEMBER</b>
<b>13.</b>	<b>CONIC SECTION :-</b> Standard form of equation of circle ,parabola, ellipse, hyperbola and application of conic section.	<b>08/ DECEMBER</b>
<b>14.</b>	<b>INTRODUCTION TO THREE DIMENSIONAL GEOMETRY :-</b> Co-ordinate axes and co-ordinate planes in three dimensions, Co-ordinate of a point, distance between two points, section formula.	<b>04/ DECEMBER</b>
<b>15.</b>	<b>PROBABILITY :-</b> Random variable ,Sample space, Events, Types of Events, Axiomatic(set theoretic) approach to probability, Prob. of not , or complementary events.	<b>04/ JANUARY</b>
<b>16.</b>	<b>STASTISTICS:-</b> Measure of dispersion: mean deviation ,variance, standard deviation of grouped/ungrouped data, Analysis of frequency distribution with equal means but different variance .	<b>04/ JANUARY</b>

**BLUE PRINT OF FIRST SUMMATIVE EXAMINATION****CLASS XI - MATHEMATICS ( 2017-18)**

<b>CHAPTER</b>	<b>1 MARK</b>	<b>2 MARKS</b>	<b>4 MARKS</b>	<b>6 MARKS</b>	<b>TOTAL</b>
Set	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>13(4)</b>
Relation & Function	-	<b>1</b>	<b>1</b>	-	<b>06(2)</b>
Trigonometric function	<b>1</b>	<b>1</b>	<b>1(OR)</b>	<b>1(OR)</b>	<b>13(4)</b>
Principle of mathematical induction	-	-	<b>1</b>	<b>1</b>	<b>10(2)</b>
Complex Nos. Quadratic equation	<b>1</b>	<b>1</b>	<b>2</b>	-	<b>11(4)</b>
Linear in equalities	-	-	<b>1</b>	<b>1</b>	<b>10(2)</b>
Sequence & Series	-	<b>2</b>	<b>2(OR)</b>	<b>1(OR)</b>	<b>18(5)</b>
Mathematical Resoning	<b>1</b>	<b>1</b>	-	-	<b>03(2)</b>
Limit & Derivative	-	<b>1</b>	<b>2(OR)</b>	<b>1</b>	<b>16(4)</b>
<b>TOTAL QUESTIONS</b>	<b>04</b>	<b>08</b>	<b>11</b>	<b>6</b>	<b>100(29)</b>

