

D.A.V. PUBLIC SCHOOL, RANCHI ZONE**SYLLABUS (2016-17)****Subject: - Math****Class -XI**

S.No	Chapter	Period/Month
1.	TRIGONOMETRY:- 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.	20/ JUNE
2.	COMPLEX NUMBERS AND QUADRATIC EQUATIONS:- Imaginary numbers, Algebra of complex numbers, square roots, modulus ,conjugate, Additive inverse, multiplicative inverse, Argand plane and polar representation of complex numbers, Solution of quadratic equations in the Complex number system	8/ JULY
3.	SEQUENCE AND SERIES:- 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	10/ JULY
4.	SETS:- 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.	05/JULY
5.	LINEAR INEQUALITY :- Algebraic solution of linear inequalities in one variable and their representation of number line. Graphical solution of linear inequalities in two variables.	06/ AUGUST
6.	PRINCIPLE OF MATHEMATICAL INDUCTION:-Process of proof by induction, motivating the application of method by looking at natural numbers	8/ AUGUST
7.	Limits and derivatives :- 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. Revision SA-I will be start in 2 nd week of September 2015	8/ AUGUST
8.	RELATIONS AND FUNCTIONS:- Orderd pairs ,Cartesian product of sets ,Definition of relation ,domain ,range and co- domain of relation. Definition of function, types of function, domain, range .co- domain of the functions, graph of functions, Sum, difference ,product and quotient of two functions	8/ OCTOBER
9.	PERMUTAION AND COMBINATION:- Fundamental principle of counting ,Factorial notation, Different types of permutations and combinations, properties of combinations, simple applications ,word problem based on permutations and combinations	10/ OCTOBER
10.	BINOMIAL THEOREM:- 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.	5/ NOVEMBER
11.	STRAIGHT LINE :- 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 from, 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.	12/ NOVEMBER
12.	CONIC SECTION :- Standard form of equation of circle ,parabola, ellipse, hyperbola and application of conic section.	08/ DECEMBER
13.	INTRODUCTION TO THREE DIMENTIONAL GEOMETRY :- Cordinate axes and co-ordinate planes in three dimensions, Coordinate of a point, distance between two points, section formula.	04/ DECEMBER
14.	PROBABILITY :- Random variable ,Sample space, Events, Types of Events, Axiomatic(set theoretic) approach to probability, Prob. of not, or complementary events.	04/ JANUARY

15.	STATISTICS:- Measure of dispersion: mean deviation ,variance, standard deviation of grouped/ungrouped data, Analysis of frequency distribution with equal means but different variance.	04/ JANUARY
16.	MATHEMATICAL REASONING :-Mathematically acceptable statement, Connecting words/phrases- 'if and only if', 'implies', and/or ,Quantifiers, inclusive or and exclusive or, validating the statements involving the connecting word, contradiction, converse and contra positive.	02/ JANUARY

Blue Print of Marks of SA-1

CHAPTER	1 MARK (VSA)	4 MARKS (SA)	6 MARKS (LA)	TOTAL MARKS
Trigonometry	1	4	2	29
Complex numbers and quadratic equations	1	2	-	09
Linear Inequalities	1	1	1	11
Sequence and series and sum of special series	2	3	1	20
Principle of mathematical induction	-	1	1	10
Limits and derivatives	1	1	1	11
Set Theory	-	1	1	10
Total Questions	6	13	07	100

Blue Print of Marks of SA-2

S No.	Topics	VSA (1MARK)	SA{4 MARKS)	LA (6 MARKS)	TOTAL
1	Sets	-	8(2)	-	8(2)
2.	Relations and Functions	-	4(1)	-	4(1)
3	Trigonometric Functions	-	8(2)*	6(1)	14(3)
4	Principle of Mathematical Induction	-	-	6(1)*	6(1)
5	Complex Number	1(1)	4(1)*	-	5(2)
6	Linear inequalities	1(1)	4(1)	-	5(2)
7	Pemutations & Combinations	-	-	6(1)	6(1)
8	Binomial theorem	-	-	6(1)	6(1)
9	Sequences and Series	-	4(1)*	6(1)	10(2)
10	Straight Lines	1(1)	-	6(1)*	7(2)
11	Conic sections	1(1)	4(1)*	-	5(2)
12	Introduction to 3D Geometry	-	4(1)	-	4(1)
13	Limits and Derivatives	-	8(2)	-	8(2)
14	Mathematical Reasoning	2(2)	-	-	2(2)
15	Statistics	-	-	6(1)	6(1)
16	Probability	-	4(1)	-	4(1)
	Total	6(6)	52(13)	42(7)	100(26)