NEW ERA SENIOR SECONDARY SCHOOL, NIZAMPURA, VADODARA.
MATHS SYLLABUS 2025-26 CLASS-XII

MONTH	No. OF DAYS	CHAPTER
April + May	22 + **3**	**# # <u>Relation & Function (1)</u>** ***** Types of Relation * Types of Function * Composition of Functions & Invertible Function **# <u>INVERSE TRIGONOMETRIC FUNCTION</u>(2)** ***** Introduction * Basic Concepts * Properties of Inverse trigonometric function **# <u>MATRICES and DETERMINANTS (3 & 4)</u>** * Introduction of matrix * Types of Matrices * Operation on Matrices * Transpose of a Matrix * Symmetric & Sew symmetric Matrices * Elementary Operation of a Matrix * Invertible Matrices * Introduction of determinants * Properties of determinants * Area of a triangle * Minors, Cofactors and Adjoint & inverse of a Matrix * Application of Determinants & Matrices
JUNE	**18**	**# <u>MATRICES and DETERMINANTS (Cont)</u>** # **<u>Continuity and Differentiability</u>(5)** ***** Revision of continuity & Differentiability * Exponential and Logarithmic Functions * Logarithmic Differentiation * Derivative of Functions in Parametric Form * Second Order Derivative * Mean Value Theorem
JULY	**26**	**# <u>Application of Derivatives</u>** * Rate of Change of Quantities * Increasing and decreasing Function * Tangent and Normal * Approximations * Maxima and Minima **#<u>Integrals</u>** * Integration as inverse process of differentiation * Integration of different function * Integration by substitution * Integration by partial fraction and by parts * Integration of the specific types * Definite integrals as a limit of a sum * Basic properties of definite integrals & evaluation of definite integrals

AUGUST	**22**	**#Integrals (cont)** **# Applications of integrals (8)** ***** Applications in finding the area under simple curves, especially lines * Areas of Circles, Parabolas, Ellipses * Area between the two above said curves
SEPTEMBER	**23**	**# Differential equations (9)** * Introduction, order and degree of a differential equation * Formation of differential equation * Solution of differential equation (i) variable separable form (ii) Homogeneous equations (iii) linear differential equns **Vector algebra** * Vectors and Scalars * Magnitude and directions of vectors * Direction cosines/ ratios of vectors * Types of vectors * Position vector of point, components of vectors * Addition, multiplication of a vector by a scalar * Scalar (dot) product, projection of vector on a line * Vector (cross) product of vectors
OCTOBER	**11**	**# Three-dimensional geometry** * Direction cosines/ratios of line joining two points * Cartesian & vector equation of a line * Coplanar and skew lines * Distance of a point from a plane * Shortest distance between (i) two lines, (ii) two planes (iii) a line and a plane **# Probability** ***** Multiplication theorem on probability * Conditional probability * Independent events * Baye's theorem * Random variable and its probability distribution * Mean and variance of haphazard variable
NOVEMBER	**21**	**# Probability (cont)** **# Linear Programming (L.P.P.)** * Introduction * Definition of Constraints, Objective Functions, Optimization, * Different types of L. P. & Mathematical formulation of L.P * Graphical method of solution for Problems in two variable * Feasible & Infeasible solution, Feasible Region #
DECEMBER	**23**	**Revision and Exam**