**ACADEMIC PLANNER (APPLIED MATHEMATICS-XII, 2024-25)**

Month(WD)	Content	Homework & Assignment	Practical/Project Work
April **1-15 (11)**	**UNIT - 2 ALGEBRA** Matrices and Types of Matrices Equality of matrices, Transpose of a matrix, Symmetric and Skew symmetric matrix, Algebra of Matrices Determinants	Exercises of Chapter from CBSE Book/M.L Bhargava	
April **16-30 (11)**	**UNIT - 2 ALGEBRA** Inverse of a Matrix, Solving system of simultaneous equations using matrix method and Cramer's rule **UNIT-1 NUMBERS, QUANTIFICATION AND NUMERICAL APPLICATIONS** Modulo Arithmetic, Congruence Modulo	Exercises of Chapter from CBSE Book/M.L Bhargava Exercises of Chapter from CBSE Book/M.L Bhargava	**Matrix multiplication and the inverse of a matrix using Spreadsheet**
May **1-15 (12)**	**UNIT-1 NUMBERS, QUANTIFICATION AND NUMERICAL APPLICATIONS** Alligation and Mixture Numerical Problems: Boats and Streams (upstream and downstream)	Exercises of Chapter from CBSE Book/M.L Bhargava	**Project on any one topic from the List of Projects suggested by CBSE - HHW**
July **1-15 (12)** **16-31 (13)**	**UNIT-1 NUMBERS, QUANTIFICATION AND NUMERICAL APPLICATIONS** Numerical Problems: Pipes and Cisterns Races and Games, Numerical Inequalities **UNIT - 3 CALCULUS** Higher Order Derivatives, Application of Derivatives, Marginal Cost and Marginal Revenue using derivatives Increasing /Decreasing Functions, Maxima and Minima	Exercises of Chapter from CBSE Book/M.L Bhargava Exercises of Chapter from CBSE Book/M.L Bhargava	**Plot the graphs of functions on excel and study the graph to find out the point of maxima/minima**
August **1-15 (11)** **16-31 (12)**	**UNIT- 3 CALCULUS** **Integration and its Applications** Integration, Indefinite Integrals as family of curves **UNIT- 3 CALCULUS** Definite Integrals as area under the curve Application of Integration **Differential Equations and Modeling** Differential Equations, Application of Differential Equations	Exercises of Chapter from CBSE Book/M.L Bhargava Exercises of Chapter from CBSE Book/M.L Bhargava Exercises of Chapter from CBSE Book/M.L Bhargava	

September **1-15(11)**	**UNIT - 8 LINEAR PROGRAMMING** Introduction and related terminology, Mathematical formulation of Linear Programming Problem, Different types of Linear Programming Problems Graphical method of solution for problems in two variables Feasible and Infeasible Regions, Feasible and Infeasible solutions, optimal feasible solution	Exercises of Chapter from CBSE Book/M.L Bhargava	
16-30 (12)	**HALF YEARLY EXAMINATIONS**		
October **1-15 (9)**	**UNIT- 4 PROBABILITY DISTRIBUTIONS** Probability Distribution, Mathematical Expectation Variance	Exercises of Chapter from CBSE Book/M.L Bhargava	
16-31 (12)	**UNIT- 4 PROBABILITY DISTRIBUTIONS** Binomial Distribution, Poison Distribution, Normal Distribution	Exercises of Chapter from CBSE Book/M.L Bhargava	
	UNIT – 6 INDEX NUMBERS AND TIME BASED DATA Time Series, Components of Time Series, Time Series analysis for univariate data Secular Trend, Methods of Measuring trend	Exercises of Chapter from CBSE Book/M.L Bhargava	**Collect data from newspapers on traffic, sports activities and market trends and use excel to study future trends**
November **1-15 (10)**	**UNIT - 5 INFERENTIAL STATISTICS** Population and Sample, Parameter and Statistics and Statistical Interferences t-Test (one sample t-test and two independent groups t-test)	Exercises of Chapter from CBSE Book/M.L Bhargava	**Collect the data on weather, price, inflation, and pollution analyze the data and make meaningful inferences**
16-30 (13)	**UNIT - 7 FINANCIAL MATHEMATICS** Perpetuity, Sinking Funds, Valuation of Bonds, Calculation of EMI Calculation of Returns, Nominal Rate of Return, Compound Annual Growth Rate, Linear method of Depreciation	Exercises of Chapter from CBSE Book/M.L Bhargava	**Stock Market data sheet on excel**
December **1-15 (11)** **16-31 (13)**	**Pre-Board Examination**		

TERMWISE SYLLABUS	
UT 1 (July)	**UNIT-1 NUMBERS, QUANTIFICATION AND NUMERICAL APPLICATIONS, UNIT-2 ALGEBRA**
Half Yearly/Term 1 (September)	**UNIT- 1, 2, 3,8 (NUMBERS, QUANTIFICATION AND NUMERICAL APPLICATIONS, ALGEBRA, CALCULUS, LINEAR PROGRAMMING)**
Pre-Board (December)	**Complete Syllabus**