ACADEMIC PLANNER (APPLIED MATHEMATICS-XI, 2025-26)							
Month (WD)	Content	Learning outcomes	Assignment/ H.W	Practical/ Project work/ Mode of Assessment	Teaching Pedagogy	INTERDISCIPLI NARY ASPECT	21ST CENTURY SKILLS/ SDG
May	UNIT – 2 ALGEBRA	 Defines set as well-defined collection of objects Understands different types of sets and their notations Applies set operations in real-world problems 	Exercises of Chapter from CBSE Book/M.L Bhargava	Project on any one topic from the List of Projects suggested by CBSE - venn Diagrams	Discussion, Real- life examples, Hands on (Venn Diagrams), Inquiry-based learning	Data Science (Set Theory in AI), Statistics (data representation), Computer Science (database queries), Economics (Market research)	Analytical Skills, Creative Thinking, Logical
1-15 (11)	Sets						
	Introduction to sets – definition, Representation of sets, Types of sets and their notations, Subsets, Intervals, Venn diagrams, Operations on sets						
16-25 (8)	Relations	 Explains the significance of specific arrangement of elements in a pair Expresses relation as a subset of Cartesian product Finds domain and range of a relation 	Exercises of Chapter from CBSE Book/M.L Bhargava		Story telling Based	Data Science	Problem solving Skills
	Ordered pairs, Cartesian product of two sets, Relations						
July	UNIT- 6 DESCRIPTIVE STATISTICS						
1-15 (12)	Data Interpretation: Measure of Dispersion, Range, Quartile deviation, mean deviation, standard deviation	 Differentiates between measures of dispersion Calculates measures of dispersion Calculates and interpret Percentile rank of scores in a given ungrouped data set Calculates Spearman's rank correlation for ungrouped data 	Exercises of Chapter from CBSE Book/M.L Bhargava	creating pictographs, drawing pie chart, bar graphs uaing MS Excel	Data collection , Data analysis, Presentation	Business Studies (Sales Analysis)	Data literacy, Evidence-based thinking
16-31 (14)	Percentile rank, Correlation						

August	UNIT – 2 ALGEBRA	 Analyzes arithmetic/geometric progressions Applies AP & GP in financial and real-life contexts 	Exercises of Chapter from CBSE Book/M.L Bhargava	Assignment /HW	Growth patterns in nature, EMI & Depreciation	Economics (Inflation & Investments), Business Studies (Growth rates)	Analytical Thinking, Financial Literacy, Pattern recognition Pattern recognition SDG 8 Economic Growth
1-15 (11)	Sequence and Series Sequence and Series, Arithmetic Progression, Geometric Progression, Applications of AP and GP						
16-31 (12)	UNIT – 1 NUMBERS, QUANTIFICATION AND NUMERICAL APPLICATIONS Numbers & Quantification Binary Numbers, Indices, Logarithm and Antilogarithm, Laws and properties of logarithms, Simple applications of logarithm and antilogarithm	 Understands binary numbers, indices, logarithms, and their applications Applies concepts of time, work, distance, seating arrangements 	Exercises of Chapter from CBSE Book/M.L Bhargava	Collect the data on weather, price, inflation, and pollution. Sketch different types of graphs and analyze the results Calculating average Using Excel	Interactive Lectures, Problem- Solving Sessions, Demonstrations	Computer Science (binary numbers), Physics (indices in scientific notation)	Critical Thinking, Problem Solving, Digital Literacy SDG 9: Industry, Innovation, and Infrastructure
September	UNIT – 1 NUMBERS, QUANTIFICATION AND NUMERICAL APPLICATIONS						
1-15(11)	Numerical Applications						
	Clock, Calendar, Time, Work and Distance, Seating arrangement						
16-30 (12)		HALF Y	EARLY EXA	MINATIONS		-	
October	UNIT -3 MATHEMATICAL REASONING	• Solves logical problems involving odd man out, syllogism, blood relation and coding decoding	Exercises of Chapter from CBSE Book/M.L Bhargava	Case Studies, Quiz	Puzzle-based learning, Group discussions	Law (Legal Reasoning)	Critical thinking, Logical reasoning
1-15 (8)	Logical reasoning - •Odd man out •Syllogism •Blood relations •Coding Decoding						
16-31 (10)	UNIT – 2 ALGEBRA	1	Exercises of Chapter from CBSE Book/M.L Bhargava	Assignment /HW	Hands-on activities with examples	Computer Science (Sorting algorithms)	Creativity, Logical Reasoning SDG 9: Industry, Innovation & Infrastructure
	Permutations and Combinations						
	Factorial, Fundamental Principle of Counting, Permutations, Combinations						

November	UNIT – 4 CALCULUS Graphical representation of functions,	 Defines domain, range and co- domain of a given function Represents the functions graphically Solves problems based on the algebra of limits Defines continuity of a function Finds the derivative of the functions 	Exercises of Chapter from CBSE Book/M.L Bhargava	Plot the graph of functions on excel. Study the nature of function at various points, drawing lines of tangents	Graphical demonstrations, Real-world examples	Physics (Motion analysis) Computer Science (programming)	Analytical Skills, Problem Solving
1-15 (11)	Concepts of limits and continuity of a						
16-30 (12)	UNIT – 4 CALCULUS						
	derivative, Derivatives of algebraic						
December	UNIT – 5 PROBABILITY	 Recognizes and differentiate different types of events and find their probabilities Applies reasoning skills to solve problems based on conditional probability 	Exercises of Chapter from CBSE Book/M.L Bhargava	Calculating central tendency using Excel	Hands-on probability games, Real-life examples	Statistics (data analysis), Economics (risk assessment)	Decision Making * SDG 11: Sustainable Cities and Communities
1-15 (12)	Introduction, Random experiment and sample space, Event, Conditional						
16-31 (13)	UNIT – 8 COORDINATE GEOMETRY	• Understands the equations and properties of curves	Exercises of Chapter from CBSE Book/M.L Bhargava	Assignment /HW	Graph plotting, Real-world applications	Engineering (Bridge Design), Physics (Projectile Motion)	Spatial Intelligence, Creative Thinking
	Straight line, Circle, Parabola						
January 1-15 (0)	Winter Break						
16-31 (13)	UNIT – 7 FINANCIAL MATHEMATICS		Exercises of Chapter from CBSE Book/M.L Bhargava	Calculating interest (simple and compound) using Excel	Hands-on calculation tasks, Real-world case studies	Commerce (Banking, GST), Economics (Investment Decisions) Business Studies (Billing Systems)	Financial literacy, critical analysis SDG 11: (Sustainable Cities and Communities)
	Simple and compound interest, Simple and compound interest rates with equivalency, Effective rate of interest, Annuities, Calculating value of Regular Annuity, Simple applications of regular annuities (upto 3 period)	 Defines interest Calculates simple and compound interest Understands annuities Applies financial concepts in real-life scenarios Compares investment schemes Applies tax calculation in real- world scenarios Interprets and compute various utility bills 					
	applications of tax calculation in Goods						

February Revision for Final Exams	
1-15 (12) Revision for Final Exams	

	TERMWISE SYLLABUS				
UT 1 (July)	UNIT - 1 (NUMBERS, QUANTIFICATION AND NUMERICAL APPLICATIONS), UNIT - 2 (ALGEBRA-SETS, RELATIONS)				
Half Yearly/Ter m 1 (Sep.)	UNIT- 1, 2 (ALGEBRA; NUMBERS, QUANTIFICATION AND NUMERICAL APPLICATIONS)				
UT 2 (November)	UNIT - 3, 4 (MATHEMATICAL REASONING; ALGEBRA- PERMUTATIONS & COMBINATIONS)				
Annual (Feb March)	COMPLETE SYLLABUS				