



LORD MAHAVIRA SCHOOL

Sector-29, Noida, 201303

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LESSON PLAN

CLASS: XI

SUBJECT: APPLIED MATHEMATICS (241)

(BOOK- CBSE TEXTBOOK / REFERENCE BOOK BY M.L. AGRAWAL)

S.NO	MONTH	NAME OF CHAPTERS	SUB TOPICS	PROJECT/ ACTIVITY
1.	JULY	NUMBER, QUANTIFICATION AND NUMERICAL APPLICATIONS	➤ Binary Number, logarithm, Average, Clock, calendar, Time, work and distance, Mensuration Seating arrangement	Create a budget of income and spending
2.	AUGUST	ALGEBRA SETS & RELATIONS	➤ Introduction, Representation of sets, Type of sets and their notations, Subsets, Intervals, Venn diagrams, Operations on sets, Ordered pairs Cartesian product of two sets, Sequence and series AP, GM, Applications of AP and GP	PROJECT
3.	SEPTEMBER		REVISION AND TERM -1 EXAM	
4.	OCTOBER	CALCULUS	➤ Functions, Domain and Range of a function, types of Functions, graphical representation of function, Limit, continuity of a function, Differentiation as a process of finding derivatives, Derivatives of algebraic functions using Chain rule.	Create and compare sheet of price and features to buy a product
5.	NOVEMBER	PROBABILITY	➤ Introduction, Random experiment and sample space, Event, Conditional probability, Total probability, Bayes' theorem	Smart purchasing during sale season using spread sheet
6.	DECEMBER	DESCRIPTIVE STATISTICS	➤ Measure of dispersion, Skewness and Kurtosis, percentile rank and quartile rank, Correlation	Prepare a report card using scores of the last four exam and compare the performance
7.	JANUARY	FINANCIAL MATHEMATICS COORDINATE GEOMETRY	➤ Interest & interest rates, Accumulation with simple and compound interest, Present value, Annuity and applications	To verify distributive law for three given non-empty sets A, B and C, that is, $A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$

		MATHEMATICAL REASONING	<ul style="list-style-type: none">➤ Straight line, Circle, Parabola➤ Odd man out, syllogism, Blood relations, Coding Decoding	
8.	FEBRUARY		REVISION FOR TERM 2	To write the sample space, when a die is rolled once, twice, etc.
9.	MARCH		TERM 2 EXAM	



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LESSON PLAN

CLASS: XII

SUBJECT: APPLIED MATHEMATICS (241)

(BOOK- CBSE TEXTBOOK / REFERENCE BOOK BY M.L. AGRAWAL)

S.NO	MONTH	NAME OF CHAPTERS	SUB TOPICS	PROJECTS/ACTIVITY
1.	APRIL	NUMBERS, NOTIFICATIONS AND NUMARICAL APPLICATIONS 2. MATRICES 3. NUMERICAL INEQUALITIES	<ul style="list-style-type: none">➤ Modulo Arithmetic, allegation & mixture, Numerical inequalities,➤ Boat n stream, Pipes n cisterns, Race n games.➤ Define matrix, entries of row n columns, addition, subtraction and multiplication of matrices, Transpose,	To understand the concept of maxima and minima geometrically with its applications.
2.	MAY	DETERMINANTS DIFFERENTIATION	<ul style="list-style-type: none">➤ find determinant of square matrix, use elementary properties Of determinants. singular/non-singular matrix, ad joint of a matrix, inverse of a matrices, invertible square matrices➤ Solving the system of simultaneous equations using a)Cramer's rule b) inverse of coefficient matrix	To understand The concept of decreasing and increasing function.
3.	JULY	APPLICATIONS OF DERIVATIVES TIME BASED DATA	<ul style="list-style-type: none">➤ Determine second & higher order derivatives rate of change of various quantities. Tangent and normal to a curve at a given point.➤ Marginal cost and marginal revenue using<ul style="list-style-type: none">• Derivatives• Increasing/ decreasing function• Maxima and minima	Project

4.	AUGUST	<ul style="list-style-type: none"> • PROBABILITY • LINEAR PROGRAMMING 	<ul style="list-style-type: none"> ➤ Probability distribution, ➤ Mathematical Expectation, variance, Binomial distribution, Poisson distribution, normal distribution ➤ Introduction and related terminology, Mathematical formulation of LLP Different type of LLP, ➤ Graphical method of solution for problem in two variables, feasible and infeasible regions, ➤ Feasible and infeasible solution optional feasible solution 	To collect the data from newspaper on traffic, sports activities ,market trends and to study their future trends using Spread sheet.
5.	SEPTEMBER		➤ REVISION AND TERM -1 EXAM	
6.	OCTOBER	<ul style="list-style-type: none"> • INTEGRALS • DIFFERENTIAL EQUATIONS 	<ul style="list-style-type: none"> ➤ Infinite integration by substitution method,Partial fraction and by parts method, ➤ Definite integral as area under the curve ➤ Applications of integration ➤ Differential equations ,formulating and solving differential equations, applications 	To understand probability by dice roll simulation using Microsoft Excel
7.	NOVEMBER	INFERENTIAL STATISTICS RETURN,GROWTH AND DEPRECIATION	<ul style="list-style-type: none"> ➤ Population and sample ➤ Parameter and statistical interferences, t-Test (one sample t-Test and two independent groups t-Test) ➤ Calculation of returns, nominal rate of return compound annual growth rate, linear method of depreciation 	To multiply two matrices and find out the inverse of a matrix using Microsoft Excel
	DECEMBER	.PERPETUITY,SINKING FUNDS &EMI	➤ Calculate perpetuity, sinking fund, difference between sinking and saving account, Calculate EMI using various method	To find the ratio in which two or more ingredients at given prices must be mixed to produce a mixture at a desired price.
9.	JANUARY		REVISION AND PRE-BOARD EXAM	

10.	FEBRUARY		REVISION / REMEDIAL CLASSES	PRACTICALS
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SCHEME OF EVALUATION

S.NO.	AREA AND WEIGHTAGE	ASSESSMENT AREA	MARKS ALLOCATED
1.	PROJECT WORK (10 MARKS)	PROJECT WORK AND RECORD	5 MARKS
		YEAR END PRESENTATION	
		VIVA OF THE PROJECT	5 MARKS
2.	PRACTICAL WORK (10 MARKS)	PERFORMANCE OF PRACTICAL AND RECORD	5 MARKS
		YEAR END TEST OF ANY ONE PRACTICAL	5 MARKS
		TOTAL	20 MARKS