


CLASS: XI

MONTH	CHAPTER	EXPECTED LEARNING OUTCOMES	PEDAGOGICAL APPROACH (TEACHING METHODS/ STRATEGIES)	ASSESSMENT TOOLS	RUBRICS	ART INTEGRATION	ICT INTEGRATION
April	Sets	Sets & their representation, types of sets, power set, Venn diagrams, operations on a set , Practical applications,	Constructive , Inquiry based, Integrative	Lab Activity	Concept Presentation Application		Video for venn diagram
	Relations & Functions	Cartesian product of two sets, Definition of relation, its domain and range, Functions , domain & range of real valued functions	Constructive , Inquiry based, Integrative	Class test	Accuracy, Relevant		
July	Trigonometric Functions	Measuring angles in radians & degree, different trigonometric identities & their proves.	Constructive , Inquiry based, Integrative	class test Lab Activity	Concept Presentation Application	Prepare a chart of trigonometric formulae	
	Complex Number & Quadratic Equations	Introduction of iota, algebraic properties of complex numbers, , argand plane , polar representation, square root of complex number, solution of quadratic equations with complex roots.	Constructivist, inquiry , Reflective	Class Test Quizzes	Accuracy, Topic relevant		Video for complex number
	Revision for Pre midterm Exam						
Pre mid term exam							
AUGUST	Statistics	Mean Deviation , variance & standard deviation of ungrouped & grouped data Random experiment, outcomes, sample spaces, mutually	Inductive – Deductive, Inquiry based, Integrated	Project Based Assignment Lab activity	Concept Presentation Application	Activity based on election 2024	

	Probability	exclusive, exhaustive events, Probability of an event, probability of 'not ', 'and' and 'or' events.				Game based on probability	
SEPTEMBER	Linear Inequalities	Algebraic and graphical solutions of linear equations	Inquiry based	Problem solving	Approach Steps Accuracy	Role play (let's seak)	
	Permutations & combinations	Fundamental principle of counting , factorial , permutation & combination, simple applications	Constructivist	Team work / Games			Quzziz
	Binomial Theorem	Statement & proof for positive integral indices, Pascal's triangle , General and middle term in binomial expansion, simple applications	Deductive	Lab Activity Assignment	Concept Presentation Application		
	Revision for Mid term Exam						
Mid term Exam							
OCTOBER	Sequences & Series	Arithmetic and geometric progressions, their general terms, sum to n terms , their means	Constructivist, Reflective	Lab Activity	Concept Presentation Application		Module on special series
NOVEMBER	Straight Lines	Slope of a line, angle b/w two lines, various forms of equation of a straight line, distance of a point from a line	Lecture, Classroom Discussion	Worksheet		Draw fractals with lines	
	Conic Sections	Conic sections- introduction Standard equations and properties of parabola , ellipse and hyperbola	Constructivist approach	Lab Activity	Concept Presentation Application		Module on conic section

	Post mid term exam						
DECEMBER	3D Geometry	Coordinate axes and coordinate planes in three dimensions, coordinates of a point , distance b/w two points and section formula	Integrative(computer assisted)	Lab Activity worksheet	Concept Presentation Application		Module on 3D geometry
JANUARY	Limit & Derivative	Fundamental of limit, limit of rational, trigonometric function, Algebra of derivative, Derivative of trigonometric function and Derivative by first principle	Constructivist, Reflective	Class test Extra Question	Accuracy, Relevant to topic		Video for derivation
FEBRUARY	Revision for Annual Exam						
	Annual Examination						

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APRIL	Relations and Functions	Types of relations, equivalence relation, bijective function, composition of functions, inverse of a function, Binary Operation	Inquiry based, Classroom discussion Real life simulations	Concept mapping Class test Lab Activity	Content- relevant concepts Logic & understanding- linkages Presentation- neat, legible, easy to follow	Sketch concept map	PPT
	Inverse Trigonometric Functions	Definition , range , domain, principal value branch, Graphs of ITF, elementary properties of ITF	Constructive, Inquiry based, Integrative	Lab activity Role Play	Content Coordination Presentation	Role Play (LET'S SPEAK	PPT
	Matrices	Order, types of matrices, operations on matrices, transpose , symmetric and skew symmetric, elementary transformation	Inductive – Deductive	Home Assignment			
	Determinants	Determination of a square matrix, properties of a determinant, minors & cofactors, adjoint & inverse, application of determinants in finding area of a triangle, solving system of linear equations	Constructive, Inquiry based	Problem solving	Approach Steps/ performance Accuracy		Module for finding inverse

JULY	Continuity & Differentiability	Continuity & differentiability, derivative of composite functions, chain rule, derivative of ITF, implicit functions, parametric functions, logarithmic differentiation, second order derivative	Inquiry based, Lecture, Inductive	Worksheet Class Test		Role Play	
	Applications of Derivate	Rate of change, increasing decreasing functions, maxima & minima		Worksheet	Content Research Analysis Presentation		
	Linear Programming	Formulation of different types of linear programming problems and their graphical solutions		Project based			
PRE- MID TERM EXAMINATION							
AUGUST	Integrals	Indefinite integration by substitution, partial fractions, by parts, Evaluation of integrals in the standard forms Definite integrals as a limit of the sums, basic properties of definite integrals and evaluation of definite integrals	Classroom discussion, Lecture	Worksheet Lab activity	Concept Presentation Application	Prepare a chart of formulae of Integrals	
	Applications of the integrals	Finding the area under simple curves, area between two curves	Classroom Discussion, Inquiry based	Assignment			Module on area under curves
	Differential Equations	Order & degree, formation of differential equations whose general solution is	Lecture	Worksheet	Content	Sketch concept map	

SEPTEMBER		given, solutions of differential equations by separation of variables, soln. of homogeneous and linear diff. equations.		Concept Map	Logic & understanding-linkages Presentation		
OCTOBER	MID -TERM EXAMINATION						
	Probability	Conditional probability, multiplication theorem, independent events, total probability, Bayes' theorem, Random variable & probability distribution	Constructivist, Lecture	Home Assignment Lab activity	Concept Presentation Application		
NOVEMBER	Vectors	Direction cosine, direction ratios of a vector, types of vectors, addition, subtraction of vectors, multiplication by a scalar, dot product, cross product, scalar triple product	Inquiry based	Flipped classroom Pen and Paper Test			Module on vectors
	3D Geometry	d. ratios & d. cosines of a line joining two points, Cartesian & vector equation of a line, coplanar & skew lines, shortest distance b/w two lines.	Lecture, Drill & Practice	Concept Mapping	Content Logic & understanding-linkages Presentation	Sketch the concept map	
DECEMBER + JANUARY	REVISION PRE -BOARD EXAMINATION			Sample Papers			
FEBRUARY	Revision		Drill & practice		Sample papers		

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