

GOVT COLLEGE BHERIAN, SESSION 2023-24

Lesson Plan: (from Feb. to May)

Name of Assistant/Associate Professor: Ms. Savita Dahiya

Class and Section: B.Sc 2nd Semester

Subject: Algebra and Number Theory (B23-MAT-201)

Dates	Lesson Plan
WEEK-1	UNIT-1 Symmetric, Skew symmetric, Hermitian and skew symmetric matrices
WEEK-2	Elementary operation on matrices, Rank of a matrix, Inverse of a matrix
WEEK-3	Linear dependence and independence of rows and columns of matrix, Row rank and column rank of a matrix
WEEK-4	Eigen values, Eigen vectors and characteristic equation of a matrix, Minimal polynomial of a matrix, Cayley- Hamilton theorem and its use in finding the inverse of a matrices
WEEK -5	Unitary and orthogonal matrices Revision unit-1
WEEK-6	HOLI VACATION
WEEK -7	UNIT-2 Relations between the roots and coefficients of an equation in one variable
WEEK-8	Solution of polynomial equations having conditions on roots, Common roots and multiple roots
WEEK-9	Transformation of equation, nature of roots of an equation, Descarte's rule of signs Revision unit-2
WEEK 10	UNIT-3 Solution of cubic equations (Cardon's Method), Biquadratic equations and their solutions
WEEK-11	Divisibility, Greatest common divisor(gcd), Least common multiple(lcm)
WEEK-12	Prime numbers, Fundamental theorem of arithmetic Revision unit-3 Linear Congruences, Fermat's theorem, Euler's theorem
WEEK 13	UNIT-4 Wilson's theorem and its converse, Chinese Remainder theorem, Linear Diophantine equations in two variables
WEEK 14	REVISION


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Assistant Professor

Department of Mathematics

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Lesson Plan: (from Feb. to May)

Name of Assistant/Associate Professor: Ms. Savita Dahiya

Class and Section: B. Com 2nd Semester Subject: Business Mathematics (B23-COM-204)

Dates	Lesson Plan
WEEK 1	UNIT-1
	Differentiation: derivative of simple functions and other functions (excluding trigonometric functions) having applications in business studies
WEEK-2	Differentiation: derivative of simple functions and other functions (excluding trigonometric functions) having applications in business studies
WEEK-3	Applications of Differentiation (Maxima and Minima)
WEEK-4	Applications of Differentiation (Maxima and Minima) Revision unit-1
WEEK -5	UNIT-2
	Integration (Definite and Indefinite (simple functions excluding trigonometric functions), basic rules of integration, application of integration in commercial and business problems
WEEK-6	HOLI VACATION
WEEK -7	Integration (Definite and Indefinite (simple functions excluding trigonometric functions), basic rules of integration, application of integration in commercial and business problems
WEEK-8	Integration (Definite and Indefinite (simple functions excluding trigonometric functions), basic rules of integration, application of integration in commercial and business problems Revision unit-2
WEEK- 9	UNIT-3
	Permutations and Combinations
WEEK 10	Permutations and Combinations
WEEK-11	Binomial Theorem
WEEK-12	Binomial Theorem
WEEK 13	UNIT-4
	Linear Programming: Formulation of linear programming and their solution by graphical and simplex methods, Applications of Linear programming in solving problems related to business and commerce
WEEK 14	REVISION


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Lesson Plan: (from Feb. to May)

Name of Assistant/Associate Professor: Ms. Savita Dahiya

Class and Section: MDC 2nd Semester Subject: Mathematics for Commerce and Social Sciences (B23-MAT-204)

Dates	Lesson Plan
WEEK 1	UNIT-1 Matrices and Determinants: Definition of a matrix, Order, Equality, Types of matrices, Operations on matrices: multiplication and multiplication with a scalar and their simple properties
WEEK-2	Minors, Co-factors
WEEK-3	Determinant, Properties of determinant and its applications of determinants in finding the area of a triangle
WEEK-4	Adjoint and inverse of a square matrix
WEEK -5	Solutions of simultaneous linear equations Revision unit-1
WEEK-6	HOLI VACATION
WEEK -7	UNIT-2 Differentiation, Derivatives of simple functions and other functions having applications in business and social studies
WEEK-8	Maxima and minima of a function and their applications of Revenue, Cost, Demand, Production, Profit functions and other functions related to commercial and social problems
WEEK-9	Integration of simple functions, application of integration in commercial and business problems Revision unit-2
WEEK 10	UNIT-3 Simple interest and compound interest, Annuities: Types of annuities, Present value and amount of an annuity (including the case of continuous compounding)
WEEK-11	Valuation of simple loans and debentures, Problems related to sinking funds Revision unit-3
WEEK-12	UNIT-4 Linear Programming: Formulation of linear programming and their solution by graphical and simplex methods, Applications of Linear programming in solving problems related to business and commerce
WEEK 13	UNIT-4 Linear Programming: Formulation of linear programming and their solution by graphical and simplex methods, Applications of Linear programming in solving problems related to business and commerce
WEEK 14	REVISION


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Lesson Plan: (from Feb. to May)

Name of Assistant/Associate Professor: Ms. Savita Dahiya

Class and Section: SEC 2nd Semester

Subject: Calculation Skills with Vedic Mathematics (B23-SEC-303)

Dates	Lesson Plan
WEEK 1	UNIT-1
	Multiplication (Quadratic expressions of single variable)
WEEK-2	Urdhwatirygbhyaam Method, Combined Operations
WEEK-3	Division (Divisor Linear Expression of single variable)
WEEK-4	Factorization(Quadratic and cubic polynomial of two variables , Factorization of quadratic polynomial containing more than two variables
WEEK -5	LCM and HCF of polynomials Revision unit-1
WEEK-6	HOLI VACATION
WEEK -7	UNIT-2
	Solution of simple equation, solution of linear equation in one variable
WEEK-8	Solution of linear equation in two variable, solution of quadratic equations, Solution of simultaneous equations Revision unit-2
WEEK-9	UNIT-3
	Determinant, Inverse of a matrix
WEEK 10	Derivative, Integration Revision unit-3
WEEK-11	UNIT-4
	Concept of Baudhayana Number (BN), BN of an angle, Multiplication of a constant in a BN, BN of a complementary angles
WEEK-12	BN of sum and difference of an angle, BN of half angle, Pythagorean triple, Trigonometric relation for half, twice, and thrice of angle, sum difference of angle using triples
WEEK 13	Vedic Geometry: Angle between two lines, Perpendicular Distance of line from a point Revision unit-4
WEEK 14	REVISION

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