

GOVERNMENT COLLEGE BIROHAR (JHAJJAR)

Summary of Lesson Plans of College Faculty for Academic Session 2025-26

Name of Assistant Professor: _____

Dr. MONIKA

Class & Sem.: B.Sc III 5th sem Subject: Groups & Rings

Months	Topics/Chapters to be covered
August 2025	Defn of a group with example and simple properties of group. Subgroups & Subgroup Criteria. Generation of groups, cyclic groups, Cosets, left & right cosets, Index of a Subgroup Coset. de composition, Lagrange's thm & its consequences, normal subgroups, Quotient group.
September 2025	Homomorphisms, isomorphisms, automorphisms & inner automorphisms of a group. Automorphisms of cyclic groups. Permutation group. Even & odd permutations, Alternating groups, Cayley's thm, Centre of a group & derived group of a group.
October 2025	Introduction to rings. Subrings, integral Domains & fields. Characteristics of a ring, Ring homomorphisms, Ideals & Quotient rings. field of Quotients of an integral Domain.
November 2025	Euclidean rings, polynomial rings, polynomials over the rational field. The Eisenstein's Criterion of irreducibility. polynomial rings over commutative rings, Unique factorization Domain R implies so is $R[x_1, x_2, \dots, x_n]$.

Signature of Assistant Professor

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Summary of Lesson Plans of College Faculty for Academic Session 2025-26

Name of Assistant Professor: Dr. MONIKA

Class & Sem.: B.A. 1st (MINOR) Subject: Basic Mathematics

Months	Topics/Chapters to be covered
August 2025	Differentiation: Partial derivatives up to second order, Homogeneity of y^n & Euler's th ^m total Diff, Differentiation of implicit f_u^n with the help of total Diff ⁿ . Maxima & minima, Cases of one variables involving second or higher order derivatives.
September 2025	Cases of two variables involving not more than one constraint. Integration: integration as anti-derivative process, standard forms, Methods of integration by substitution, by parts & by use of partial fractions,
October 2025	Definite integration finding area in simple cases, Consumers & producer surplus, Nature of commodities Learning Curve Leontiff input-output method. Def ⁿ of matrix, types of matrices Algebra of matrices,
November 2025	Properties of determinants calculation of values of determinants up to third order, Adjoint of a matrix through Adjoint & elementary row or column operations. Sol ⁿ of system of linear eq ⁿ having unique sol ⁿ & involving not more than three variables.

Signature of Assistant Professor

GOVERNMENT COLLEGE BIROHAR (JHAJJAR)

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Name of Assistant Professor: _____

Dr. MONIKA

Class & Sem.: _____

B.Sc.Pst (SEC)

Subject: _____

Programming in C / Numerical

Months	Topics/Chapters to be covered
August 2025	Programmer's model of Computer, Algorithms flow charts. Data types operators & expressions input/output fun. decisions Control structure. Decision statements, logical & Conditional statements Implementation of loops, Switch statement & case Control structures. fun preprocessors & Arrays
September 2025	Strings: Character data type, Standard String handling fun Arithmetic operations on characters Structures, Def ⁿ using structures use of structures in arrays & Arrays in structures. Pointers: pointers data type, pointers & arrays pointers & fun.
October 2025	Sol ⁿ of algebraic & transcendental Eq ⁿ . Bisection method, Regula-Falsi method, Secant method, Newton-Raphson's method, Newton's Iterative method for finding bth root of a number order of Convergence of above method.
November 2025	Simultaneous linear algebraic Eq ⁿ : Gauss-elimination method, Gauss-Jordan method, triangularization method, Crout's method, Cholesky decomposition method, Iterative method, Jacobi method Gauss-Seidel's method, Relaxation method

Signature of Assistant Professor