

GOVERNMENT COLLEGE BIROHAR (JHAJJAR)

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

Name of Assistant Professor: Nisha Rani

Class & Sem.: B.Sc I

Subject: Mathematics (SEC)

Months	Topics/Chapters to be covered
Jan 2026	Child Care Leave
Feb 2026	
March 2026	finite differences operators & their relations, finding the missing terms & effect of error in a difference tabular values, Interpolation with equal intervals: Newton's forward & backward interpolation. Interpolation with unequal intervals: Newton's divided difference, Lagrange's Interpolation formulae, Hermite formula. Central differences: Gauss forward & backward interpolation formulae, Steepling, Bessel formula, Numerical differentiation: Derivative of a fn using Interpolation formulae. Eigen value Problems.
April 2026	Numerical Integration: Newton-Cotes's Quadrature formulae Trapezoidal rule, Simpson's one-third & three-eighths rule, Chebyshev's formula, Gauss Quadrature formulae. Numerical solution of ordinary differential equations: Single step methods - Picard's method, Taylor's Series method, Euler's method, Runge-Kutta methods. Multiple step methods. Predictor-Corrector method, Modified Euler's Method, Milne-Simpson's Method

Nisha Rani
Signature of Assistant Professor

GOVERNMENT COLLEGE BIROHAR (JHAJJAR)

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

Name of Assistant Professor: Nisha Rani

Class & Sem.: B.SCI (Phy. Sci) II^{Sem} Subject: Mathematics (Calculus)

Months	Topics/Chapters to be covered
Jan 2026	
Feb 2026	
March 2026	Limit & Continuity (ϵ - δ) def), Discontinuity & its types, Diff. of functions, Successive diff. Leibnitz theorem & its applications, L'Hospital's rule; Indeterminate forms. Taylor's theorem with Lagrange's & Cauchy's form of remainders, Maclaurin's & Taylor's Series expansion. Tangents & Normals, Asymptotes of curves in Cartesian & polar Co-ordinates, Curvature Assignment - I & Test
April 2026	Tracing of Curves in Cartesian, parametric & polar Co-ordinates of standard curves, functions of several variables, Limits & Continuity, Partial differentiation & Euler's theorem on homogeneous functions, chain rule, Directional derivatives, Gradient vector & Tangent plane. Assignment - II & Test

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GOVERNMENT COLLEGE BIROHAR (JHAJJAR)

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

Name of Assistant Professor: Nisha Rani

Class & Sem.: B.Sc III (6th Sem) Subject: Mathematics (Dynamics)

Months	Topics/Chapters to be covered
Jan 2026	
Feb 2026	
March 2026	velocity & acceleration along radial, transverse tangential & Normal directions. Relative velocity & acceleration. Simple harmonic motion, elastic string. Mass, momentum & force. Newton's Laws of motion Work, power & energy. Definition of Conservative forces & impulsive forces. Assignment - I & test
April 2026	Motion on smooth & rough plane curves, projectile motion of a particle in a plane, vector angular velocity General motion of a rigid body; Central orbits, Kepler's laws of motion, Motion of a particle in three dimensions. Acceleration in terms of different Co-ordinate systems Assignment - II & test

Nisha
Signature of Assistant Professor