

GOVERNMENT COLLEGE BIROHAR (JHAJJAR)

Summary of Lesson Plans of College Faculty for Academic Session 2024-25

Name of Assistant/Associate Professor: Dr. Monika

Class: B.Sc 2nd Subject: Partial Differential Equations

Semester: III Sem

Months	Topics/Chapters to be Covered
July 2024	Partial Diff Eq ⁿ . Formation, order & degree Linear & non-linear partial Diff Eq ⁿ of the first order: Complete Solution, Singular sol ⁿ , General sol ⁿ , Sol ⁿ of Lagrange's Linear Eq ⁿ , Charpit's general Method of Solution, Compatible systems of first order Eq ⁿ .
August 2024	Jacobi's Method, Linear partial Diff Eq ⁿ of Second and higher orders, Linear and non-linear homogeneous and non-homogeneous equations with constant coefficients, partial Differential Equation with variable coefficients reducible to equation with constant coefficients their complementary fun ⁿ and particular integrals.
September 2024	Equations reducible to linear equations with constant coefficients. Classification of linear partial diff Eq ⁿ of second order, Hyperbolic, parabolic and elliptic types, Reduction of second order linear partial differential Eq ⁿ to canonical forms and their solutions, Solution of linear hyperbolic Eq ⁿ .

October
2024

Monge's Method for partial Diff Eqⁿ of
Second order. Cauchy's problem for Second
order partial Diff Eqⁿ. Characteristic eqⁿ and
Characteristic curves of Second order partial Diff
Eqⁿ, Method of separation of variables:
Solution of Laplace's Equation, Wave Eqⁿ

November
2024

Revision + Test
Diffusion (Heat) Equation (one and two
dimension) in Cartesian Coordinate system.
(Assignment + Test)

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Signature of Asst/Asso. Professor

GOVERNMENT COLLEGE BIROHAR (JHAJJAR)

Summary of Lesson Plans of College Faculty for Academic Session 2024-25

Name of Assistant/Associate Professor: Dr Monika

Class: B.Sc 2nd

Subject: Statics

Semester: IIIrd

Months	Topics/Chapters to be Covered
July 2024	Composition and resolution of forces. parallel forces. Moments and Couples. Test + Revisions.
August 2024	Analytical Conditions of Equilibrium of Coplanar forces. Friction. Centre of Gravity. II unit Test + Revisions.
September 2024	virtual work. Forces in three dimensions. I unit Revisions.

October
2024

Points Central axis IV unit Revisions
+ Test

November
2024

wrenches Null lines and planes.
stable and Unstable equilibrium.

IV unit Revision + Assignment

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GOVERNMENT COLLEGE BIROHAR (JHAJJAR)

Summary of Lesson Plans of College Faculty for Academic Session 2024-25

Name of Assistant/Associate Professor: Dr. Monika

Class: B.Sc 2nd Subject: Advanced Calculus

Semester: IIIrd Sem

Months	Topics/Chapters to be Covered
July 2024	Continuity, Sequential Continuity, properties of Continuous f^n , Uniform Continuity, Chain rule of differentiability. Mean value th^m , Rolle's th^m and Lagrange's Mean value th^m and their Geometrical interpretations.
August 2024	Taylor's th^m with various form of remainders, Darboux Intermediate value th^m for derivatives, Indeterminate forms. Limit & Continuity of real valued functions of two variables.
September 2024	Partial Diff ⁿ total differentials, Composite f^n & implicit f^n . Change of variables. Homogeneous f^u & Euler's th^m on Homogeneous f^n . Taylor's th^m for functions of two variables. Differentiability of real valued f^n of two variables. Schwarz and Young's th^m Implicit f^n th^m . Maxima & minima and Saddle point of two variables.

October
2024

Lagrange's Method of Multipliers.
Curves: Tangents, principal normals,
Binormals, Serret-Frenet formulae Locus
of the Centre of Curvature.
Spherical Curvature, Locus of Centre
of Spherical Curvature Revision + Test

November
2024

Involutes, Evolutes, Bertrand Curves. Surfaces
Tangent planes, one parameter family of
Surfaces, Envelopes, Alignment + Test

M. Naveen

Signature of Asst/Asso. Professor