

BAIJNATH CHAUDHARY GOVT. COLLEGE FOR WOMEN, NANGAL CHAUDHARY

Lesson Plan

Name of the Assistant/ Associate Professor: ...Dd: Sushma Yadav Sem...2nd.....

Class and Section: ...B.Com. Ist year

Subject: ...Mathematics

Month	Topics
1 st Jan. 2024 to 31 st Jan. 2024	Def ⁿ of a Matrix. Types of Matrices, Algebra of matrices. Finding inverse Matrices through adjoint and elementary row or column operations. Sol ⁿ of a system of Linear eq ⁿ . Test of unit - 1 st
1 st Feb. 2024 to 29 th Feb. 2024	Differentiation: Application of differentiation Test of unit - 2 nd
1 st March 2024 to 31 st March 2024	Compound interest and Annuities Certain different types of interest rate, Concept of present value and amount of a sum Types of Annuities. Test of unit - 3 rd
1 st April 2024 to 30 th April 2024	Certain different types of interest rate Concept of present value. Ratio, Proportion and Percentage Profit and Loss. Test of unit - 4 th

Sushma
Teacher's Signature

BAIJNATH CHAUDHARY GOVT. COLLEGE FOR WOMEN, NANGAL CHAUDHARY

Lesson Plan

Name of the Assistant/ Associate Professor: Dr. Sukma Yadav Sem...2nd.....

Class and Section: B.A./B.Sc. Ist year Subject: Ordinary Differential Equations
(Maths)

Month	Topics
1 st Jan. 2024 to 31 st Jan. 2024	Geometrical meaning of a differential eq ⁿ . Exact differential eq ⁿ , integrating factors. Lagrange's eq ⁿ . Clairaut's eq ⁿ . Equations reducible to Clairaut's form. Singular Sol ⁿ . Test of unit - I
1 st Feb. 2024 to 29 th Feb. 2024	Orthogonal trajectories in cartesian coordinates and Polar coordinates. Self orthogonal family of curves. Homogeneous linear ordinary differential equation. Test of unit - II
1 st March 2024 to 31 st March 2024	Linear differential equations of Second order Reduction of normal form. Transformation of the eq ⁿ by changing the dependent variable. Method of undetermined coefficients. Test of unit - III
1 st April 2024 to 30 th April 2024	Ordinary simultaneous differential equations. Solution of simultaneous differential eq ⁿ 's involving operators $x \left(\frac{d}{dx} \right)$ or $t \left(\frac{d}{dt} \right)$ etc. Total differential equations. Method of auxiliary equations. Test of unit - IV

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Lesson Plan

Name of the Assistant/ Associate Professor: Dr. Sushma Yadav Sem. 4th

Class and Section: B.A./B.Sc. 2nd (N.M) Subject: Special function (Mathematics)

Month	Topics
1 st Jan. 2024 to 31 st Jan. 2024	Power Series method, Definitions of Beta & Gamma functions, Bessel equation and its Sol ⁿ convergence, Recurrence relations and generating function, orthogonality of Bessel functions. Test of unit - I st
1 st Feb. 2024 to 29 th Feb. 2024	Legendre and Hermite differential equations and their sol ⁿ . orthogonality of Legendre and Hermite's polynomials, Rodrigue's Formula for Legendre and Hermite polynomials, Laplace Integral Representation of Legendre polynomial. Test of unit - II
1 st March 2024 to 31 st March 2024	Laplace Transforms: Existence Th ^m for Laplace transform, Linearity of the Laplace transforms, Convolution Th ^m , Inverse Laplace transforms, Sol ⁿ of O.D.E. Test of unit - III
1 st April 2024 to 30 th April 2024	Fourier Transforms: Linearity Property, Shifting, modulation, convolution Th ^m , Relations bet ⁿ Fourier transform and Laplace transform, Sol ⁿ of differential equations using Fourier transforms. Test - IV

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BAIJNATH CHAUDHARY GOVT. COLLEGE FOR WOMEN, NANGAL CHAUDHARY

Lesson Plan

Name of the Assistant/ Associate Professor: Dr. Sushma Yadav Sem 6th

Class and Section: B.A./B.Sc. 3rd year Subject: Linear Algebra (Mathematics)

Month	Topics
1 st Jan. 2024 to 31 st Jan. 2024	Vector spaces, Subspaces, Sum and Direct Sum of subspaces, Linear Span, Linearly Independent and dependent subset of a vector space. Invariance of the number of elements of basis Set, Quotient space Test of unit-I
1 st Feb. 2024 to 29 th Feb. 2024	Homomorphism and isomorphism of a vector spaces Linear Transformation, Singular linear Transformation Dual spaces, Bidual spaces, annihilator of subspaces of finite dimension vector spaces. Rank and Nullity Theorem. Test of unit-II
1 st March 2024 to 31 st March 2024	Algebra of Linear Transformation, Minimal Polynomial of a linear Transformation, Singular and non-singular L.T. Matrix. change of basis, Eigen values and Eigen vectors of L.T Test of unit - III
1 st April 2024 to 30 th April 2024	Inner Product spaces, Cauchy-Schwarz inequality Orthogonal vectors, Orthogonal sets and Basis Bessel's inequality for finite dimensional vector Test of unit - IV

Sushma
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