CBL Govt. College Balsamand (Hisar)

Lesson Plan 2024-25 (Even Semester)

Teacher's Name - Ms. Meenakshi | Dept. Mathematics

Class- B.A 1st | Subject- Financial Mathematics

Semester- 2nd | Paper Code- C24MDC219T

Month	Week	Topic	Assignment/Test
Feb 2025	1st week 14-15th Feb	Simple Interest.	
Feb 2025	2nd week 17-22nd Feb	Bank Discount, Compound Interest.	Assignment on Simple Interest.
Feb-March 2025	3rd week 24 Feb-01st Mar	Growth and depreciation of value and population.	
March 2025	4th week 03-08th Mar	Annuity, future and present value of annuity.	
March 2025	5th week 10-15th Mar	**Holi Vacation**	
March 2025	6th week 17-22nd Mar	Application of Annuity.	
March 2025	7h week 24-29th Mar	Data, Frequency, Grouped Data.	
March-Apr 2025	8th week 31st Mar-05th Apr	Pictograph, Bar graph, Double Bar graph, Histogram	
Apr 2025	9th week 07-12th Apr	Pie Chart.	Unit Test on Data Arrangement.
Apr 2025	10th week 14-19th Apr	Chance, Random Experiment, Equally Likely Outcome.	
Apr 2025	11th week 21-26th Apr	Probability .	
Apr 2025	12th week 28-30th Apr	Revision	Assignment on Probability.

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Meenakshi

Department of Mathematics

CBL Govt. College Balsamand (Hisar)

Lesson Plan 2024-25 (Even Semester)

Teacher's Name - Ms. Meenakshi | Dept. Mathematics

Class- B.A 3rd | Subject- Linear Algebra

Semester- 6th | Paper Code- BAMH-304(i)

Month	Week	Topic	Assignment/Test
Jan. 2025	1st week 01-04th Jan	Discussion on the syllabus and pattern of examination of GJUS&T, Hisar. Discussion on the Scope of Linear Algebra.	
Jan. 2025	2nd week 05-11th Jan	Vector spaces, subspaces, Sum and Direct sum of subspaces.	
Jan. 2025	3rd week 13-18th Jan	Linear span, Linearly Independent and dependent subsets of a vector space. Finitely generated vector space.	
Jan. 2025	4th week 20-25th Jan	Existence theorem for basis of a finitely generated vector space, Finite dimensional vector spaces.	Assignment on Vector spaces and its properties
Jan-Feb 2025	5th week 27th Jan – 01st Feb	Invariance of the number of elements of bases sets, Dimensions, Quotient space and its dimension.	
Feb 2025	6th week 03-08th Feb	Homomorphism and isomorphism of vector spaces.	
Feb 2025	7th week 10-15th Feb	Linear transformations and linear forms on vector spaces, Vector space of all the linear transformations.	
Feb 2025	8th week 17-22nd Feb	Null Space, Range space of a linear transformation.	
Feb-March 2025	9th week 24 Feb-01st Mar	Rank and Nullity Theorem, Algebra of Linear Transformation.	
March 2025	10th week 03-08th March	Minimal Polynomial of a linear transformation, Singular and non-singular linear transformations.	
March 2025	11th week 10-15th March	**Holi Vacation**.	
March 2025	12th week 17-22nd March	Matrix of a linear Transformation, Change of basis.	
March 2025	13th week 24-29th March	Eigen values and Eigen vectors of linear transformations.	Unit Test on Linear transformations
March-Apr 2025	14th week 31st Mar-05th Apr	Inner product spaces, Cauchy-Schwarz inequality.	
Apr 2025	15th week 07-12th Apr	Orthogonal vectors, Orthogonal complements.	Assignment on Newton's laws
Apr 2025	16th week 14-19th Apr	Orthogonal sets and Basis, Bessel's inequality for finite dimensional vector spaces.	
Apr 2025	17th week 21-26th Apr	Gram-Schmidt Orthogonalization process.	
Apr 2025	18th week 28-30th Apr	Revision	

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Department of Mathematics

CBL Govt. College Balsamand (Hisar)

Lesson Plan 2024-25 (Even Semester)

Teacher's Name - Ms. Meenakshi | Dept. Mathematics

Class- B.A 3rd | Subject- Machanics-II

Semester- 6th | Paper Code- BAMH-305(i)

Month	Week	Topic	Assignment/Test
Jan. 2025	1st week 01-04th Jan	Discussion on the syllabus and pattern of examination of GJUS&T, Hisar. Discussion on the Scope of Mechanics.	
Jan. 2025	2nd week 05-11th Jan	Analytical conditions of equilibrium of co-planar forces: Equilibrium of three forces.	
Jan. 2025	3rd week 13-18th Jan	Conditions of equilibrium, trigonometric theorem's, conditions of equilibrium of co-planar forces (First, Second and Third form).	Assignment on Co-planer forces and their equilibirium.
Jan. 2025	4th week 20-25th Jan	Friction: Definition of friction and basic laws, problems based on equilibrium of rods.	
Jan-Feb 2025	5th week 27th Jan – 01st Feb	Centre of gravity: Basic concepts and definitions centre of gravity of a uniform rod.	
Feb 2025	6th week 03-08th Feb	Motion of a particle attached to an elastic string, Hooke's law.	
Feb 2025	7th week 10-15th Feb	Motion of horizontal and vertical elastic strings, Definition of work.	
Feb 2025	8th week 17-22nd Feb	Power and Energy, work done by a variable force, work done in stretching an elastic string, principle of work and energy, conservative system of forces.	
Feb-March 2025	9th week 24 Feb-01st Mar	Principle of conservation of energy, impulse of a constant force and a variable force, work done.	
March 2025	10th week 03-08th March	Motion of a particle on smooth curves.	
March 2025	11th week 10-15th March	**Holi Vacation**	
March 2025	12th week 17-22nd March	Motion on the outside and inside of a smooth vertical circle.	
March 2025	13th week 24-29th March	Cycloidal motion, Projectile motion of a particle in a plane.	Unit Test on Power and Energy.
March-Apr 2025	14th week 31st Mar-05th Apr	Velocity at any point of the trajectory.	
Apr 2025	15th week 07-12th Apr	Directions of projection for a particle, range and time of flight on an inclined plane	Assignment on Projectile motion.
Apr 2025	16th week 14-19th Apr	Directions of projection for a given velocity and a given range.	
Apr 2025	17th week 21-26th Apr	Range and time of flight down an inclined plane.	
Apr 2025	18th week 28-30th Apr	Revision.	

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Department of Mathematics

CBL Govt. College Balsamand (Hisar)

Lesson Plan 2024-25 (Even Semester)

Teacher's Name - Ms. Meenakshi | Dept. Mathematics

Class- B.A 3rd | Subject- Real & Complex Analysis

Semester- 6th | Paper Code- BAMH-306(i)

Month	Week	Topic	Assignment/Test
Jan. 2025	1st week 01-04th Jan	Discussion on the syllabus and pattern of examination of GJUS&T, Hisar. Discussion on the Scope of Real & Complex Analysis.	
Jan. 2025	2nd week 05-11th Jan	Definition and examples of metric spaces, neighbourhoods.	
Jan. 2025	3rd week 13-18th Jan	Limit points, interior points, open and closed sets, closure and interior, boundary points.	
Jan. 2025	4th week 20-25th Jan	Subspace of a metric space, equivalent metrics, Cauchy sequences.	Assignment on metric spaces and its properties.
Jan-Feb 2025	5th week 27th Jan – 01st Feb	Completeness, Cantor's intersection theorem.	
Feb 2025	6th week 03-08th Feb	Baire's category theorem, Contraction Principle, continuous functions.	
Feb 2025	7th week 10-15th Feb	Uniform continuity, compactness for metric spaces.	
Feb 2025	8th week 17-22nd Feb	Sequential compactness, Bolzano-Weierstrass Property.	
Feb-March 2025	9th week 24 Feb-01st Mar	Total boundedness, finite intersection property.	
March 2025	10th week 03-08th March	Improper integrals and their convergence, comparison tests.	
March 2025	11th week 10-15th March	**Holi Vacation**.	
March 2025	12th week 17-22nd March	Abel's and Dirichlet's tests, Frullani's integral.	
March 2025	13th week 24-29th March	Integral as a function of a parameter.	Unit Test on Uniform continuity for metric space
March-Apr 2025	14th week 31st Mar-05th Apr	Topology of complex numbers: Trigonometric, exportemhal, logarithmic and hyperbolic trigonometric functions.	
Apr 2025	15th week 07-12th Apr	Extended complex plane. Continuity and differentiability of complex functions. Analytic functions.	Assignment on Topology of complex numbers
Apr 2025	16th week 14-19th Apr	Cauchy-Riemann equations. Construction of analytic functions-Introduction.	
Apr 2025	17th week 21-26th Apr	Construction of analytic functions-direct method and Milne-Thomson method.	
Apr 2025	18th week 28-30th Apr	Revision.	

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Department of Mathematics

CBL Govt. College Balsamand (Hisar)

Lesson Plan 2024-25 (Even Semester)

Teacher's Name - Ms. Meenakshi | Dept. Mathematics

Class- B.A 3rd | Subject- Solid Geometry

Semester- 6th | Paper Code- BAMH-307(i)

Month	Week	Topic	Assignment/Test
Jan. 2025	1st week 01-04th Jan	Discussion on the syllabus and pattern of examination of GJUS&T, Hisar. Discussion on the Scope of Solid Geometry.	
Jan. 2025	2nd week 05-11th Jan	Central Conicoids: Equation of tangent plane.	
Jan. 2025	3rd week 13-18th Jan	Director sphere.	
Jan. 2025	4th week 20-25th Jan	Normal to the conicoids.	Assignment on Central Conicoids.
Jan-Feb 2025	5th week 27th Jan – 01st Feb	Polar plane of a point.	
Feb 2025	6th week 03-08th Feb	Enveloping cone of a coincoid.	
Feb 2025	7th week 10-15th Feb	Enveloping cylinder of a coincoid.	
Feb 2025	8th week 17-22nd Feb	Paraboloids: Circular section.	
Feb-March 2025	9th week 24 Feb-01st Mar	Plane sections of conicoids	
March 2025	10th week 03-08th March	Generating lines.	
March 2025	11th week 10-15th March	**Holi Vacation.**	
March 2025	12th week 17-22nd March	Confocal conicoid.	
March 2025	13th week 24-29th March	Reduction of second degree equations.	Unit Test on Enveloping Cone nad Cylinder of a Conicoid.
March-Apr 2025	14th week 31st Mar-05th Apr	Revision	
Apr 2025	15th week 07-12th Apr	Revision	Assignment on Confocal Conicoid.
Apr 2025	16th week 14-19th Apr	Revision	
Apr 2025	17th week 21-26th Apr	Revision	
Apr 2025	18th week 28-30th Apr	Revision	

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Department of Mathematics

CBL Govt. College Balsamand (Hisar)

Lesson Plan 2024-25 (Even Semester)

Teacher's Name - Ms. Meenakshi | Dept. Mathematics

Class- B.A 2nd | Subject- Machanics-I

Semester- 4th | Paper Code- BAMH-205

Month	Week	Topic	Assignment/Test
Jan. 2025	1st week 01-04th Jan	Discussion on the syllabus and pattern of examination of GJUS&T, Hisar. Discussion on the Scope of Mechanics.	
Jan. 2025	2nd week 05-11th Jan	Forces in two dimension (co-planner), triangle law and polygon law of forces,	
Jan. 2025	3rd week 13-18th Jan	Lemi's theorem, resultant of concurrent and coplanar forces	
Jan. 2025	4th week 20-25th Jan	conditions of equilibrium of concurrent concurrent forces, parallel and unequal unlike parallel forces	Assignment on forces and their Applications
Jan-Feb 2025	5th week 27th Jan – 01st Feb	resultant and centre of parallel forces	
Feb 2025	6th week 03-08th Feb	Moments and Couples.	
Feb 2025	7th week 10-15th Feb	Forces in three dimensions, Poinset's central axis	
Feb 2025	8th week 17-22nd Feb	conditions for the reduction of a general system of forces in space to a single force	
Feb-March 2025	9th week 24 Feb-01st Mar	equations of central axis, Wrenches: Definition and basic laws	
March 2025	10th week 03-08th March	resultant wrench of two wrenches, Velocity and acceleration along a plane curve	
March 2025	11th week 10-15th March	**Holi Vacation.**	
March 2025	12th week 17-22nd March	Component of velocity and acceleration in radiant, transverse, tangential and normal directions.	
March 2025	13th week 24-29th March	Relative velocity and acceleration, Simple harmonic motion (SHM).	Unit Test on Wrenches and its basic laws
March-Apr 2025	14th week 31st Mar-05th Apr	Newton's laws of motion, Central Orbits, differential equations of Central Orbits in polar form and in pedal form, areal velocity	
Apr 2025	15th week 07-12th Apr	elliptic, hyperbolic and parabolic orbit, Kepler's laws of planetary motion	Assignment on Newton's laws
Apr 2025	16th week 14-19th Apr	equivalence of Kepler's laws of planetary motion and Newton's law of gravitation	
Apr 2025	17th week 21-26th Apr	motion under the inverse square law	
Apr 2025	18th week 28-30th Apr	Revision	

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CBL Govt. College Balsamand (Hisar)

Lesson Plan 2024-25 (Even Semester)

Teacher's Name - Ms. Meenakshi Dept. Mathematics

Class- B.A 2nd Subject-Partial Differential Equations & Special Functions

Semester- 4th Paper Code- BAMH-204

Month	Week	Topic	Assignment/Test
Jan. 2025	1st week 01-04th Jan	Discussion on the syllabus and pattern of examination of GJUS&T, Hisar. Discussion on the Scope of PDE.	
Jan. 2025	2nd week 05-11th Jan	Partial differential equations: Formation, order and degree,	
Jan. 2025	3rd week 13-18th Jan	Linear and Non-Linear Partial differential equations of the first order: Complete solution	
Jan. 2025	4th week 20-25th Jan	singular solution, General solution	Assignment on Partail Differential Equations
Jan-Feb 2025	5th week 27th Jan – 01st Feb	Solution of Lagrange's linear equations	
Feb 2025	6th week 03-08th Feb	Charpit's general method of solution	
Feb 2025	7th week 10-15th Feb	Linear partial differential equations of second and higher orders, Linear and non-linear homogeneous and non-homogeneous equations with constant coefficients	
Feb 2025	8th week 17-22nd Feb	Partial differential equation with variable coefficients reducible to equations with constant coefficients, their complimentary functions and particular integrals	
Feb-March 2025	9th week 24 Feb-01st Mar	Equations reducible to linear equations with constant coefficients	
March 2025	10th week 03-08th March	Classification of linear partial differential equations of second order, hyperbolic, parabolic and elliptic types	
March 2025	11th week 10-15th March	**Holi Vacation.**	
March 2025	12th week 17-22nd March	Reduction of second order linear partial differential equations to Canonical (Normal) forms and their solutions.	
March 2025	13th week 24-29th March	Cauchy's problem for second order partial differential equations	Unit Test on Linear PDE of second and higher orders
March-Apr 2025	14th week 31st Mar-05th Apr	Characteristic equations and characteristic curves of second order partial differential equation	
Apr 2025	15th week 07-12th Apr	Series solution of differential equations - Power series method	
Apr 2025	16th week 14-19th Apr	Bessel equation and its solution: Bessel functions and their properties- Recurrence relations and generating functions.	
Apr 2025	17th week 21-26th Apr	Legendre differential equation and its solution: Legendre function and its properties	Assignment on Bessel's equations
Apr 2025	18th week 28-30th Apr	Recurrence Relations and generating functions. Rodrigues' Formula for Legendre Polynomial	

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CBL Govt. College Balsamand (Hisar)

Lesson Plan 2024-25 (Even Semester)

Teacher's Name - Ms. Meenakshi | Dept. Mathematics

Class- B.A 2nd | Subject- Mathematics Lab (Practical-IV)

Semester- 4th | Paper Code- BAMH(P)-206

Month	Week	Topic
Jan. 2025	1st week 01-04th Jan	Discussion on the syllabus and pattern of examination of GJUS&T, Hisar. Discussion on the Importance and Scope of C language.
Jan. 2025	2nd week 05-11th Jan	Program to solve the system of linear equations using Gauss elimination method.
Jan. 2025	3rd week 13-18th Jan	Program to solve the system of linear equations using Gauss-Seidal iteration method
Jan. 2025	4th week 20-25th Jan	Revision.
Jan-Feb 2025	5th week 27th Jan – 01st Feb	Program to solve the system of linear equation using Gauss-Jordan method
Feb 2025	6th week 03-08th Feb	Revision.
Feb 2025	7th week 10-15th Feb	Program to find the largest eigen value of a matrix by Power method.
Feb 2025	8th week 17-22nd Feb	Revision.
Feb-March 2025	9th week 24 Feb-01st Mar	Program to integrate numerically using Trapezoidal rule.
March 2025	10th week 03-08th March	Program to integrate numerically using Simpson's one-third rule.
March 2025	11th week 10-15th March	**Holi Vacation.**
March 2025	12th week 17-22nd March	Revision.
March 2025	13th week 24-29th March	Program to integrate numerically using Simpson's three-eighth rule
March-Apr 2025	14th week 31st Mar-05th Apr	Revision.
Apr 2025	15th week 07-12th Apr	Program to find numerical solution of ordinary differential equations by Euler's method/Modified Euler's method
Apr 2025	16th week 14-19th Apr	Revision.
Apr 2025	17th week 21-26th Apr	Program to find numerical solution of ordinary differential equations by Runge-Kutta method
Apr 2025	18th week 28-30th Apr	Revision.

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