LESSON PLAN

Name of Assistant Professor: Ms. Mamtesh Rani
Class: B.A. 1st(Semester- 1st)
Subject: Mathematics
Paper: Calculus
Session: 2025-26

Week 1	ε-δ definition of limit and continuity of a real valued function, Basic properties of limits, Types of discontinuities, Practical
Week 2	Differentiability of functions , Application of L'Hospital rule to indeterminate forms, Practical
Week 3	Successive differentiation, Leibnitz theorem, Practical
Week 4	Taylor's and Maclaurin's series expansion with different forms of remainder, Practical, test
Week 5	Asymptotes: Horizontal, vertical and oblique asymptotes for algebraic curves, Practical
Week 6	Asymptotes for polar curves, Intersection of a curve and its asymptotes, Practical
Week 7	Curvature and radius of curvature of curves, Practical
Week 8	Newton's method, Centre of curvature and circle of curvature , Practical
Week 9	Multiple points, Node, Cusp, Conjugate point, Practical, assignment
Week 10	Tests for concavity and convexity , Practical
Week 11	Points of inflexion, Practical
Week 12	Tracing of curves, Practical
Week 13	Reduction formulae, Practical
Week 14	DIWALI VACATION
Week 15	Rectification, Practical
Week 16	Intrinsic equation of a curve, Practical
Week 17	Quadrature, Area bounded by closed curves, Practical
Week 18	Volumes and surfaces of solids of revolution, Practical
	Revision

LESSON PLAN

Name of Assistant Professor: Ms. Mamtesh Rani
Class: B.A. 2nd(Semester- 3rd)
Subject: Mathematics
Paper: Differential Equations-1
Session: 2025-26

Week 1	Basic concepts ordinary differential equations, Order and degree of a differential equation, Solutions of differential equations of first order and first degree, Practical
Week 2	Exact differential equations, Integrating factor, First order higher degree equations solvable for *x*, *y* and *p*, Practical
Week 3	Lagrange's equations, Clairaut's form and singular solutions, Practical
Week 4	Orthogonal trajectories of one-parameter families of curves in a plane, Practical
Week 5	Solutions of linear ordinary differential equations with constant coefficients, linear non-homogeneous differential equations, Practical
Week 6	Linear differential equation of second order with variable coefficients, Practical
Week 7	Method of reduction of order, method of undetermined coefficients, Practical
Week 8	Method of variation of parameters. Cauchy-Euler equation, Practical
Week 9	Solution of simultaneous differential equations, total differential equations, Practical
Week 10	Genesis of Partial differential equations (PDE), Concept of linear and nonlinear PDEs, Practical
Week 11	Complete solution, general solution and singular solution of a PDE. Linear PDE of first order, Practical
Week 12	Integral surfaces passing through a given curve, Practical
Week 13	Surfaces orthogonal to a given system of surfaces, Practical
Week 14	DIWALI VACATION
Week 15	Compatible systems of first order equations, Practical
Week 16	Charpit's method, Practical
Week 17	Jacobi's method, Practical
Week 18	Second Order Partial Differential Equations with Constant Coefficients, Practical
	Revision

LESSON PLAN

Name of Assistant Professor: Ms. Mamtesh Rani
Class: B.A. 3rd (Semester-5th)
Subject: Mathematics
Paper: Sequences and Series
Session: 2025-26

Week 1	Boundedness of the set of real numbers, Least upper bound and Greatest lower bound of a set. Archimedean, algebraic and ordered properties in $\mathbb{R}$, Practical
Week 2	The real number system as a complete ordered field. Neighbourhoods, interior points, isolated points, Practical
Week 3	Limit points, Open sets, closed sets, interior of a set, closure of a set in real numbers and their properties, Practical
Week 4	Bolzano-Weierstrass theorem, Open covers, compact sets and Heine-Borel theorem. , Practical
Week 5	Denumerable and non-denumerable sets, Denumerability of integers, rationals and non-denumerability of real numbers, Practical
Week 6	Sequences: Real sequences and their convergence, Theorems on limit of sequence,Practical
Week 7	Bounded and monotonic sequences, Cauchy's sequence, Practical
Week 8	Cauchy general principle of convergence, Subsequences and subsequential limits, Limit superior and limit inferior, Practical
Week 9	Infinite series: Convergence and divergence of Infinite Series, Comparison tests of positive terms infinite series, Practical
Week 10	Cauchy's general principle of Convergence of series, Convergence and divergence of geometric series, Hyper Harmonic series or pseries, Practical
Week 11	D-Alembert's ratio test, Raabe's test, Logarithmic test, Cauchy's nth root test, Practical
Week 12	De-Morgan and Bertrand's test, Gauss Test, Cauchy's integral test, Cauchy's condensation test, Practical
Week 13	Alternating series, Absolute and conditional convergence, Leibnitz test, Practical
Week 14	DIWALI VACATION
Week 15	Arbitrary series, Abel's and Dirichlet's test, Practical
Week 16	Insertion and removal of parenthesis, Re-arrangement of terms in a series, Practical
Week 17	Riemann's re-arrangement theorem , Practical
Week 18	Pringsheim's theorem, Cauchy product of series , Practical
	Revision

LESSON PLAN

Name of Assistant Professor: Ms. Mamtesh Rani
Class: B.Com. 1st (Semester-1st)
Subject: Mathematics
Paper: Bussiness Mathematics-1
Session: 2025-26

Week 1	Set Theory: Representation of sets, equivalent sets, power set
Week 2	Complement of a set. Venn Diagrams: Union and intersection of sets
Week 3	De-Morgan's laws; Logical statements and truth tables
Week 4	Logarithms: Laws of operation
Week 5	Logarithms: log tables
Week 6	Arithmetic and geometric progression
Week 7	Matrices and Determinants: Definition of a matrix, order, equality
Week 8	Types of matrices, Operations on matrices: Addition, multiplication
Week 9	Operations on matrices: Multiplication with a scalar and their simple properties
Week 10	Determinant of a square matrix (upto 3x3 order): Properties of determinants
Week 11	Minors, co-factors , Applications of determinants in finding the area of triangle
Week 12	Adjoint and inverse of a square matrix
Week 13	Solutions of a system of linear equations by examples
Week 14	DIWALI VACATION
Week 15	Compound interest
Week 16	Annuities: Different types of interest rates, types of annuities
Week 17	Present value and amount of an annuity
Week 18	Valuation of simple loans and debentures, problems related to sinking funds.
	Revision

LESSON PLAN

Name of Assistant Professor: Ms. Mamtesh Rani
Class: B.A. & B.Com. 1st (Semester-1st)
Subject: Mathematics
Paper: Ofiice and spreadsheet tools learning
Session: 2025-26

Week 1	Operating System - Definition, Functions, Types of Operating System, Practical
Week 2	Basics of Popular Operating Systems, The User Interface, Practical
Week 3	Exploring Computer, Icons, taskbar, desktop, Using Menu and Menu selection, Practical
Week 4	Managing files and folders, Practical
Week 5	Control panel – display properties, add/remove software and hardware, Common utilities, Practical
Week 6	Word Processing - Introduction to Word Processing, Practical, Test
Week 7	Creating, Editing & Formatting Document, Spell Checking, Printing, Views, Tables, Word Art, Practical
Week 8	Mail Merge, Macros, Inserting hyperlinks, Searching for text, Modifying page setup, Applying document themes, Practical
Week 9	Applying document style sets, Inserting headers and footers, Practical, Assignment
Week 10	Spread Sheet: Elements of Electronics Spread Sheet, Applications, Practical
Week 11	Creating and Opening of Spread Sheet, Enter texts numbers and dates, Cell Height and Widths, Practical
Week 12	Mathematical, Statistical and Financial function, Practical
Week 13	Drawing different types of charts, Sort and Filter Data, Practical
Week 14	DIWALI VACATION
Week 15	Presentation Software: Creating, Modifying, Practical
Week 16	Enhancing a presentation, Practical
Week 17	Type of presentation views Using sound, Animation, Practical
Week 18	Working with Objects, Printing, Practical
	Revision