LESSON PLAN

Name of Assistant Professor: Ms. Mamtesh Rani
Class: B.Com 1st (Semester-1st)
Subject: Mathematics
Session: 2024-25

Week 1	Matrix and its order, equality, type of matrices
Week 2	Operation on matrix and their properties.
Week 3	Determinant and its properties and application
Week 4	Adjoint and inverse of matrix, test
Week 5	Solution of system of linear equation
Week 6	Sets representation, equivalent sets,
Week 7	Venn diagram, de morgan law, assignment
Week 8	Logarithms, log tables
Week 9	Arithmetic and geometric progression
Week 10	Union and intersection of sets, test
Week 11	Logical statements and truth tables
Week 12	Different types of interest rates
Week 13	Type of annuities
Week 14	Present value and amount of an annuity, assignment
Week 15	Valuation of Simple loan and debentures
Week 16	Valuation of debentures
Week 17	Problem related to sinking funds
Week 18	Revision
EXAMINATIONS	

Mamtesh

LESSON PLAN

Name of Assistant Professor: Ms. Mamtesh Rani

Class: B.A. 1st (Semester-I)

Subject: Mathematics

Session: 2024-25

Week 1	Limit and continuity of a real valued function
Week 2	Basic properties of limits, type of discontinuities
Week 3	Differentiability of function, Indeterminate forms, Successive differentiation, test
Week 4	Leibnitz theorem, Taylor's and Maclaurin's series expansion, Practical problem
Week 5	Horizontal, vertical asymptotes for algebraic curves, assignment
Week 6	Oblique asymptotes, asymptotes for polar curves, , test
Week 7	Intersection of a curve and its asymptotes, Practical problem
Week 8	Curvature and radius of curvature of curves
Week 9	Newton's method, Centre of curvature and circle of curvature
Week 10	Multiple points, node, cusp, , test
Week 11	Conjugate point, test for concavity and convexity
Week 12	Point of inflexion, Tracing of curves, Practical problem
Week 13	Reduction formulae, Rectification, test
Week 14	Quadrature, intrinsic equation of a curve, Practical problem
Week 15	Area bounded by closed curves, assignment
Week 16	Volume and surfaces of solids of revolution, revision
Week 17	revision
EXAMINATIONS	

Mamtesh

LESSON PLAN

Name of Assistant Professor: Ms. Mamtesh Rani
Class: B.A. 2nd (Semester-3rd)
Subject: Mathematics
Session: 2024-25

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

Mamtesh

LESSON PLAN

Name of Assistant Professor: Ms. Mamtesh Rani
Class: B.A. 3rd (Semester-5th)
Subject: Mathematics
Session: 2024-25

Week 1	Finite difference operator, Interpolation with equal interval
Week 2	Interpolation with unequal intervals, Central difference Interpolation formulae, Practical problems
Week 3	Probability distributions, Numerical differentiation
Week 4	Eigen value problems Numerical integration, Practical problems
Week 5	Numerical solutions of ODE, test, assignment
Week 6	Groups and subgroups, cosets
Week 7	Homomorphism and automorphism, Permutation groups
Week 8	Rings and fields, Practical problems
Week 9	Ideal and quotient ring, Practical problems
Week 10	Homomorphism of rings, Euclidean rings
Week 11	Polynomial rings, Practical problems
Week 12	Riemann integral, improper integral and their convergence
Week 13	Integral as a function of a parameter, , test, assignment
Week 14	Metric space, open and closed sets in metric space
Week 15	Connectedness in metric space, continuity and uniform continuity
Week 16	Compactness in metric space, Practical problems
Week 17	Connectedness in metric space
Week 18	Revision
EXAMINATIONS	

Mamtesh