Lesson Plan

Name of College : **Government College for Women, Shahzadpur (Ambala)**
Academic Session **: (2022-23)**
Class   : B.Sc. Vth Sem
Paper   : Numerical Analysis
Teacher's Name : **Aarti Saini**

Month	Dates	Topic to be covered	Academic/ Activity to be organized	Assignments/ Tests
September	16-17	Finite Differences operators		
	19-24	their relations, Finding the missing terms		
	26-30	and effect of error in a difference tabular value.		Test
October	1-8	Newton's forward, Newton's backward interpolation formulae		
	10-15	Newton's divided difference, Lagrange's Interpolation formulae, Hermite Formula.		Test
	17-21	Gauss forward and Gauss's backward interpolation formulae. Sterling, Bessel Formula		
	27-31	Probability distribution of random variables. Binomial distribution, Poisson's distribution.		Assignment
November	1-5	Normal distribution		Test
	7-15	Numerical Differentiation, Eigen Value Problems		
	16-23	Newton-Cote's Quadrature formula. Trapezoidal rule, Simpson's one- third and three-eighth rule		Test
	24-30	Gauss Quadrature formula. Numerical solution of ordinary, Single step methods Picard's method		
December	1-10	Taylor's series method, Euler's method. Modified Euler's method		Assignment
	12-16	Predictor-corrector method, Milne - Simpson's method		
	17-22	Runge-Kutta Methods.		Test
	23-24	Gauss Quadrature formula.		Test

Teacher's Sign

Lesson Plan

Name of College : **Government College for Women, Shahzadpur (Ambala)**
Academic Session **: (2022-23)**
Class   : B.Sc. 3ʳᵈ Sem
Paper   : Advance Calculus
Teacher's Name : **Aarti Saini**

Month	Dates	Topic to be covered	Academic/ Activity to be organized	Assignments/ Tests
September	16-17	Continuity, sequential continuity		
	19-24	properties of continuous functions, uniform continuity, chain rule of differentiability. MVT		
	26-30	Rolle's theorem and Lagrange's mean value theorem and their geometrical interpretations.		Test
October	1-8	Taylor's theorem with various form of remainders, Darboux intermediate value theorem for derivatives		
	10-15	Indeterminate forms. Limit and continuity of real valued functions of two variables. Partial differentiation		Test
	17-21	Total differentials; Composite functions and implicit functions		
	27-31	Change of variables, homogeneous functions and Eulur's theorem on homogeneous functions		Assignment
November	1-5	Taylor's theorem for functions of two variables.		Test
	7-12	Differentiability of real valued functions of two variables.		
	13-23	Schwarz and Young's theorem. Implicit function theorem.		Test
	24-30	Maxima, minima and saddle points of two variables. Lagrange's method of multipliers. Curves: tangents, principal normals,		
December	1-10	binormals, serrate- fernet formulae. Locus of the center of curvature		Assignment
	12-16	spherical curvature, locus of center of spherical curvature		
	17-22	involutes, evolutes		Test
	23-24	one parameter family of surfaces, envelops		Test

Teacher's Sign

Lesson Plan

Name of College : **Government College for Women, Shahzadpur (Ambala)**
Academic Session **: (2022-23)**
Class   : B.Sc. 1ˢᵗ Sem
Paper   : Solid Geometry
Teacher's Name : **Aarti Saini**

Month	Dates	Topic to be covered	Academic/ Activity to be organized	Assignments/ Tests
September	16-17	General equation of second degree		
	19-24	Tracing of conics. Tangent at any point to the conic, chord of contact, pole of line to the conic		
	26-30	director circle of conic. System of conics. Confocal conics		Test
October	1-8	Polar equation of a conic, tangent and normal to the conic.		
	10-15	Plane section of a sphere		Test
	17-21	Sphere through a given circle. Intersection of two spheres, radical plane of two spheres		
	27-31	Co-oxal system of spheres, Cylinder: Right circular cylinder and enveloping cylinder.		Assignment
November	1-5	Equation of tangent plane.		Test
	7-15	Director sphere. Normal to the conicoids		
	16-23	Polar plane of a point. Enveloping cone of a coincoid		Test
	24-30	Enveloping cylinder of a coincoid. Circular section		
December	1-10	Plane sections of conicoid, Generating lines		Assignment
	12-15	Confocal conicoid		
	16-21	Reduction of second-degree equations		Test
	22-24	Right circular cone, enveloping cone and reciprocal cone		Test

Teacher's Sign

Lesson Plan

Name of College **: Government College for Women, Shahzadpur (Ambala)**
Academic Session **: (2022-23)**
Class   : B.Com. 1ˢᵗ Sem
Paper   : Business Mathematics
Teacher's Name **: Aarti Saini**

Month	Dates	Topic to be covered	Academic/ Activity to be organized	Assignments/ Tests
September	16-17	Logarithms		
	19-24	Anti-logarithms		
	26-30	Arithmetic Progressions		Test
October	1-8	Geometric Progressions		
	10-15	Idea of simple derivative of different functions		Test
	17-21	Rules of differentiation, Maxima and Minima of functions of one variable relating to cost, revenue and profit		
	27-31	concept of matrix, types, and algebra of matrices		Assignment
November	1-5	properties of determinants; calculation of values of determinants up to third order, adjoint of a matrix,		Test
	7-15	elementary row or column operations; Finding inverse of a matrix through adjoint and elementary row or column operations		
	16-23	solution of a system of linear equations having unique solution and involving not more than three variables		Test
	24-30	different types of interest rates		
December	1-10	concept of present value and amount of a sum; types of annuities		Assignment
	12-16	present value and amount of an annuity (including the case of continuous compounding		
	17-22	valuation of simple loans and debentures		Test
	23-24	problems relating to sinking funds		Test

Teacher's Sign