

Lesson Planning for 2 nd semester w.e. f. January to April 2018.

Name of College :- Dronacharya Degree college

Name of Teacher with designation: - (Gurmeet kaur,A.P Mathematics)

Department: -Mathematics

Class: - (B.Sc/B.A 1st year)- 2nd sem

Subject:- Ordinary Differential Equation

Months	Topic / Chapter To Be Covered	Academic activity	Test/ assignment
January	UNIT-1 Geometrical meaning of a differential equation. Exact differential equations, integrating factors. First order higher degree equations solvable for x,y,p Lagrange's equations, Clairaut's equations. Equation reducible to Clairaut's form. Singular solutions.	Group Discussion	Assignment
February	UNIT-2 Orthogonal trajectories: in Cartesian coordinates and polar coordinates. Self orthogonal family of curves.. Linear differential equations with constant coefficients. Homogeneous linear ordinary differential equations. Equations reducible to homogeneous	Group Discussion	Unit Test
March	Linear differential equations of second order: Reduction to normal form. Transformation of the equation by changing the dependent variable/ the independent variable. Solution by operators of non-homogeneous linear differential equations. Reduction of order of a differential equation. Method of variations of parameters. Method of undetermined coefficients.	Class Seminar	Assignment

April	<p>Ordinary simultaneous differential equations. Solution of simultaneous differential equations involving operators x (d/dx) or t (d/dt) etc. Simultaneous equation of the form $dx/P = dy/Q = dz/R$. Total differential equations. Condition for $Pdx + Qdy + Rdz = 0$ to be exact. General method of solving $Pdx + Qdy + Rdz = 0$ by taking one variable constant. Method of auxiliary equations.</p>	Class Seminar	Unit Test
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(Signature of the teacher concerned with date)