LESSON PLAN

NAME OF SUBJECT: - **Applied Mathematics-II**
LESSON PLAN PREPARED BY: - **Dr Kajal Sachdeva**

WEEK		THEORY	
	Lect. Day	**TOPIC (WITH ASSIGNMENT & TESTS)**	
		UNIT-1	
1	1	Introduction to Curriculum and evaluation scheme	
	2	Definition of function; Concept of limits	
	3	Problems related to four standard limits only	
	4	Students Problem on Topic Limits	
2	1	Differentiation of x^n by first principle.	
	2	Differentiation of Sin x,Cos x by first principle.	
	3	Differentiation of e^x by first principle.	
	4	Revision	
3	1	Differentiation of sum of function	
	2	Differentiation of product of function	
	3	Differentiation of quotient of functions.	
	4	Problem based on Differentiation of sum, product and quotient of functions	
		UNIT-2	
4	1	Differentiation of trigonometric functions	
	2	Differentiation of inverse trigonometric functions.	
	3	Logarithmic differentiation	
	4	Successive differentiation	
5	1	1stSessional Test	
	2	-do-	
	3	-do-	
	4	-do-	
6	1	Application of differential calculus in: Rate measures	

	2		Application of differential calculus in: Maxima and minima
	3		Problem Based on Application of Differential calculus
	4		UNIT-3 Integration as inverse operation of differentiation with simple examples.
7	1		Simple standard integrals and related problems
	2		Integration by Substitution method
	3		Integration by parts.
	4		Problem Based on Integration
8	1		Evaluation of definite integrals with given limits. Evaluation of $\int sinn\ x.\ dx$,
	2		Evaluation of definite integrals with given limits. $\int cosn\ x\ dx$,
	3		Evaluation of definite integrals with given limits. $\int sinm\ x\ cosn\ x\ dx$
	4		Revision
9	1		2ndSessional Test
	2		-do-
	3		-do-
	4		-do-
UNIT-4			
10	1		Applications of integration: for evaluation of area under a curve and axes (Simple problems).
	2		Numerical integration by Trapezoidal Rule
	3		Numerical integration by Simpson's 1/3rd Rule using pre-existing mathematical models.
	4		Numerical Problem Based on Trapezoidal Rule and Simpson's 1/3rd Rule
11	1		Differential Equations
	2		Definition, order, degree
	3		Type of differential Equations, linearity
	4		Formulation of ordinary differential equation (up to 1st

			order)
12	1		Solution of ODE (1st order) by variable separation method.
	2		Statistics Measures of Central Tendency: Mean
	3		UNIT-5 Measures of Central Tendency: Median
	4		Measures of Central Tendency: Mode
13	1		Measures of Dispersion: Mean deviation
	2		Measures of Dispersion: Standard deviation
	3		Problem Based on Mean, Median, Mode
	4		Problem Based on Mean Deviation and Standard Deviation
14	1		Sci Lab software – Theoretical Introduction.
	2		Basic difference between MATLAB and SciLab software,
	3		Calculations with MATLAB or ScilLab - (a) Representation of matrix (2×2 order)
	4		Calculations with MATLAB or ScilLab (b) Addition, Subtraction of matrices (2×2 order) in MATLAB or SciLab
15	1		Revision of Unit-1
	2		Revision of Unit-2
	3		Revision of Unit-3
	4		Revision of Unit-4