

LESSON PLAN

NAME OF SUBJECT: -

Applied Mathematics-II

LESSON PLAN PREPARED BY: -

JYOTI MANGLA

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		1st Sessional 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 $\int \sin n x \cdot dx$,
	2		Evaluation of definite integrals with given limits. $\int \cos n x \cdot dx$,
	3		Evaluation of definite integrals with given limits. $\int \sin m x \cos n x \cdot dx$
	4		Revision
9	1		2nd Sessional 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 SciLab - (a) Representation of matrix (2×2 order)
	4		Calculations with MATLAB or SciLab (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