

Lesson Plan (2023-24)

Name : **Monika Kumari**
Discipline : **Common for all branches**
Semester : **2nd**
Subject : **Applied Mathematics II**
Code : **220022**

Theory	
Lecture No.	Topics
1	Functions.
2	Concept of limits, Standard limits and related problems. (L-1)
3	Concept of limits, Standard limits and related problems. (L-2)
4	First Principle of Differentiation
5	Differentiation of sum, subtraction and product of functions and related problems.
6	Differentiation of quotient of functions and related problems.
7	Differentiation of Algebraic and Trigonometric functions.
8	Differentiation of Trigonometric and Inverse Trigonometric functions.
9	Logarithmic Differentiation.
10	Successive differentiation (up to 2nd order). (L-1)
11	Successive differentiation (up to 2nd order). (L-2)
12	Application of differential calculus in: Rate measures. (L-1)
13	Application of differential calculus in: Rate measures. (L-2)
14	Application of differential calculus in: Maxima and minima. (L-1)
15	Application of differential calculus in: Maxima and minima. (L-2)
16	Integration as inverse operation of differentiation i.e. Indefinite Integral with simple examples.
17	Indefinite Integral. (L-2)
18	Simple standard integrals and related Simple problems.
19	Integration by Substitution Method.
20	Integrations by parts and related Simple problems. (L-1)
21	Integrations by parts and related Simple problems. (L-2)
22	Evaluation of $\int_0^{\frac{\pi}{2}} \sin^m x dx$ and $\int_0^{\frac{\pi}{2}} \cos^m x dx$ and related problems.
23	Evaluation of $\int_0^{\frac{\pi}{2}} \sin^m x \cos^n x dx$ and related problems.
24	Applications of integration: for evaluation of area under a curve and axes. (L-1)
25	Applications of integration: for evaluation of area under a curve and axes. (L-2)
26	Numerical integration by Trapezoidal Rule existing mathematical models. (L-1)
27	Numerical integration by Trapezoidal Rule existing mathematical models. (L-2)
28	Numerical integration by Simpson's 1/3 rd existing mathematical models. (L-1)
29	Numerical integration by Simpson's 1/3 rd existing mathematical models. (L-2)
30	Definition, order, degree and linearity of an ordinary differential equation.
31	Formulation of Differential Equations.
32	Solution of I st order and I st degree differential equation by variable separable method.
33	Measures of Central Tendency: Mean and related problems.
34	Measures of Central Tendency: Median and related problems.
35	Measures of Central Tendency: Mode and related problems.
36	Measures of Dispersion: Mean deviation.
37	Measures of Dispersion: Standard deviation.
38	SciLab Software – Theoretical Introduction.
39	Basic differences between MATLAB and SciLab Software.
40	Calculation with MATLAB or SciLab: Representation, Addition and Subtraction of Matrices.
41	Revision of UNIT-I
42	Revision of UNIT-I
43	Revision of UNIT-II
44	Revision of UNIT-II
45	Revision of UNIT-III
46	Revision of UNIT-III
47	Revision of UNIT-IV
48	Revision of UNIT-IV
49	Revision of UNIT-V
50	Revision of UNIT-V