

Lesson Plan Applied Maths (Common for all branch)

Discipline : Applied Science
 Semester : 2nd
 Lesson Plan Duration: 16 weeks
 Work load: 4 hours/week

Week	Day	Theory
1 st	1	Definition of function with examples
	2	Concept of limits and examples
	3	Problems related to four standard limits.
	4	Differentiation of x^n , $\sin x$ by first principle
2 nd	5	Differentiation of $\cos x$, e^x by first principle
	6	Differentiation of sum, product of functions.
	7	Differentiation of quotient of functions.
	8	Differentiation of trigonometric functions.
3 rd	9	Differentiation of inverse trigonometric functions.
	10	Differentiation of Logarithmic functions.
	11	successive differentiation (upto 2nd order).
	12	Application of differential in Rate measures
4 th	13	Application of differential in Maxima and minima.
	14	Problem based on differential calculus.
	15	Class test
	16	Assignment
5 th	17	Discussion about assignment
	18	Solution of problems.
	19	Sessional test
	20	Analysis of sessional test
6 th	21	PTM
	22	Integration as inverse operation of differentiation with simple examples
	23	Integration as inverse operation of differentiation with simple examples
	24	Simple standard integrals and related problems.
7 th	25	Simple standard integrals and related problems.
	26	Integration by Substitution method.

	27	Integration by parts.
	28	Problem based on Integration
8 th	29	Solution of problems.
	30	Evaluation of $\int_0^{\pi/2} \sin nx \cdot dx$, $\int_0^{\pi/2} \cos nx \cdot dx$, $\int_0^{\pi/2} \sin mx \cos nx \cdot dx$
	31	Applications of integration: for evaluation of area under a curve and axes.
	32	Applications of integration: for evaluation of area under a curve and axes.
9 th	33	Numerical integration by Trapezoidal Rule.
	34	Numerical integration by Simpson's Rule.
	35	Class test
	36	Assignment
10 th	37	Discussion about assignment
	38	Solution of problems.
	39	Sessional test
	40	Analysis of sessional test.
11 th	41	PTM
	42	Definition, order, degree, Type of differential Equations.
	43	Differential Equations, linearity, Formulation of ordinary differential equation.
	44	Solution of ODE (1 st order) by variable separation method.
12 th	45	Measures of Central Tendency: Mean.
	46	Measures of Central Tendency: Median.
	47	Measures of Central Tendency: Mode.
	48	Measures of Dispersion: Mean deviation about mean.
13 th	49	Measures of Dispersion: Mean deviation about median.
	50	Measures of Dispersion: Standard deviation
	51	Solution of problems.
	52	SciLab software – Theoretical Introduction
14 th	53	Basic difference between MATLAB and SciLab software
	54	Calculations with MATLAB or SciLab - (a) Representation of matrix (2×2 order).
	55	Addition of matrices (2×2 order) in MATLAB or SciLab.
	56	Subtraction of matrices (2×2 order) in MATLAB or SciLab.
15 th	57	Class test
	58	Assignment
	59	Discussion about assignment
	60	Solution of problems.
16 th	61	Sessional test
	62	Analysis of sessional test
	63	PTM
	64	Practice of sample papers.