GOVERNMENT POLYTECHNIC NAWADA

LESSON PLAN APPLIED MATHEMATICS (1615301) –II (CE/ME)

WEEK	LECTURE/ DAY	TOPIC /ASSIGNMENT/ TEST
1	**1**	Integration as inverse operation of differentiation with simple example, Simple standard integral and related problems
	2	Rules of integration like integration of sum , difference and scalar multiplication, Methods of integration
	3	problems on integration by substitution
	4	Problems on Integration of rational function,
2	**5**	Problems on Integration by partial fraction, nine special integral
	6	Problems on Integration by trigonometric transformation
	7	Problems on Integration by parts
	8	Definition of definite integral and their evaluation, properties of definite integral
3	**9**	Problems on definite integral using properties
	10.	Doubts class/ Test /Assignment
	11.	Application of definite integral, general overview, curve tracing
	12.	Area under curve with their geometrical interpretation and related problems
4	**13**	Problems on area bounded by two curve and their geometrical interpretation
	14	Problems on volume of revolution and their geometrical interpretation
	15	Problems on Centre of gravity of rod and plane lamina
	16	Definition of moment of inertia of uniform rod , rectangular lamina and related problems
5	**17**	Parallel axis theorem and perpendicular axis theorem
	18	Problems on Parallel axis theorem and perpendicular axis theorem
	19.	Introduction to differential equation order and degree of the differential equation with example.
	20	Formation of differential equation and related problems
6	**21**	Solution of differential equation of first order and first degree, variable separable method
	22	Problems on variable separable and reducible to variable separable method
	23	Homogeneous differential equation and related problems
	24	Problems on homogeneous and non-homogeneous differential equation
7	**25**	Exact differential equation and related problems
	26	Problems on Linear differential equation and Bernoulli's differential equation
	27	Problems on rectilinear motion with constant and variable acceleration
	28	Simple harmonic motion and related problems
8	**29**	Probability distribution , some basic terminology of probability theory
	30	Binomial distribution and derivation of men and variance
	31	Problems on binomial distribution
	32	Poisson's distribution and related problem
9	**33**	Normal distribution and related problems
	34	Problems on Normal distribution
	35	Production process with example

	36	Doubt class/Test/Assignment
10	**37**	Introduction to numerical method ,solution of algebraic equation and methods
	38	Bisection method and their Geometrical interpretation
	39	Problems on Bisection method
	40	Regula falsi method and their Geometrical interpretation
11	**41**	Problems on Regula Falsi method
	42	Newton Raphson method and their Geometrical interpretation
	43	Problems on Newton Raphson method
	44	System of linear equation, problems on Gauss elimination method
12	**45**	Iterative method- Gauss Seidal method and related problems
	46	Iterative method- Jacob's method and related problems
	47	Some more problems on Gauss Seidal and Jacob's method
	48	Doubt class/ Test/ Assignment

(Dr. K. Prasad)
Lecturer (Mathematics)
Govt. polytechnic Nawada