Lesson Plans 2024-25 odd semester

Name of the Assistant professor-Dr Meenu Gupta   **Class- B.Sc. III**
Subject -Mathematics ^{5th} sem
Paper name - Numerical analysis   **Paper code- BM 353**

Date	Topics
July	**Unit-IV**
4th week	Numerical integration: Trapezoidal rule.
August 1st week	Newton-Cote's Quadrature formula.
2nd week	Simpson one-third-eighth rule.
	Chebychev formula.
3rd week	Gauss Quadrature formula.
4th week	Numerical solution of ordinary differential equations:
	Single step methods-picard's method.
September	Taylor's series method.
1st week	Euler's method.
	Runge-Kutta meyhods.
2nd week	Multiple step methods;
	redictor-corrector method,
	Modified Euler's method
	Milne-Simpson's method
3rd week	**UNIT-1**
	Central Differences: Gauss forward interpolation formulae.
	Gauss's backward interpolation formulae.
4th week	Sterling formula.
	Bessel formula.
October	Probability distribution of random variables.
1st week	Binomial distribution.
	Poisson distribution.
	Normal Distribution.

	Mean, Variance and Fitting.
	UNIT -III
	Numerical differentiation:
2nd week	Derivatives of a function using interpolation formulae.
	Eigen Value Problems: Power method.
	Jacobi method.
3rd week	Given's method.
	House-Holder's method.
	QR method, Lanczos method.

4th week	**UNIT-II**
	Finite difference operators and their relations.
	Finding the missing terms.
	Effect of error in tabular values.
	Diwali Holidays from 27 October to 3 November
November	Newton's backward interpolation formulae.
1st week	Subdivision of intervals.
	Interpolation with equal intervals: Newton's forward interpolation formulae
2nd week	Interpolation with unequal intervals: Newton's Divided difference.
	Lagranges Interpolation formulae.
	Hermite's Formula.
3rd week	Revision