Motilal Nehru National Institute of Technology Allahabad

Subject (Scientific Computing CS-1602)

Lesson Plan

S.No.	Topics to be covered	No of Lecture
1	Introduction of Algebraic and Transcendental Equation	1
2	Bisection Method, Method of false position	2
3	Secant Method ,Newton-Raphson method,	2
4	Iteration Method, Rate of convergence of Iterative methods	2
5	Muller's method, Gauss Elimination.	2
6	Gauss Jordan Method	1
7	Finite Differences, Difference tables Polynomial Interpolation: Newton's forward and backward formula	2
8	Central difference Formula Gauss forward and backward formula	2
9	Bessel's, Everett's formula	2
10	Interpolation with unequal intervals: Langrange's interpolation, Newton Divided difference formula.	2
11	Introduction, Numerical differentiation Numerical Integration Trapezoidal rule	1
12	Simpson's 1/3 and 3/8 rule	1
13	Boole's rule Waddle's rule	2
14	Picard's Method, Euler's Method	2
15	Taylor's Method	1
16	Runge-Kutta Methods, Milne's Predictor Corrector Methods	2
17	Frequency chart, Curve fitting by method of least squares	2
18	Fitting of straight lines, polynomials, exponential curves	2
19	Data fitting with Cubic splines, Regression Analysis	2
20	Linear and Non linear Regression, Multiple regression, Statistical Quality Control methods	2

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