COURSE TEACHING STRUCTURE
Course: Engineering Mathematics-3

Dept: COMPUTER ENGINEERING **Class: SE**

UNIT 1: LINEAR DIFFERENTIAL EQUATION
MARKS: 16
LECTURE: 12 HOURS

SR NO	TOPIC	DURATION	TOPIC BASED	MARKING SKIM
1	Complementary Function	1 Hr	Numerical	3
2	Particular Integral	15 Min	Theoretical	0
3	General Method	1.15 Hrs	Numerical	6
4	Shortcut Methods	4.30 Hrs	Numerical	13
5	Method Of Variation Of Parameters	1.45 Hrs	Numerical	7
6	Cauchy's DE	50 Min	Numerical	7
7	Legender's DE	40 Min	Numerical	7
8	Simultaneous DE	1 Hrs	Numerical	6
9	Symmetric Simultaneous DE	45 Min	Numerical	5

UNIT 2: TRANSFORMS
MARKS: 14
LECTURE: 09 HOURS

SR NO	TOPIC	DURATION	TOPIC BASED	MARKING SKIM
	FOURIER TRANSFORM			
1	Fourier Integral Theorem	1 Hr	Numerical	5
2	Fourier Sine & Cosine Integrals	1 Hr	Numerical	5
3	Fourier Transform	40 Min	Numerical	5
4	Fourier Sine Inverse	45 Min	Numerical	4
5	Fourier Cosine Inverse	30 Min	Numerical	4
6	Discrete Fourier Transform	40 Min	Numerical	5

	Z - TRANSFORM			
1	Definition	10 Min	Theoretical	0
2	Standard Properties	1.30 Hrs	Numerical	5
3	ZT Of Standard Sequences And	1.40 Hrs	Numerical	4

	Theire Inverses			
4	Solution Of Difference Equations	1.05 Hrs	Numerical	5

UNIT 3: STATISTICS
MARKS: 17
LECTURE: 06 HOURS

SR NO	TOPIC	DURATION	TOPIC BASED	MARKING SKIM
1	Measures Of Central Tendency	30 Min	Numerical	4
2	Measures Of Dispersion	50 Min	Numerical	6
3	Coefficient Of Variation	30 Min	Numerical	7
4	Moments, Skewness & Kurtosis	1 Hr	Numerical	7
5	Curve Fitting: Fitting Of Straight Line, Parabola And Other Curves	1.15 Hrs	Numerical	6
6	Correlation And Regression	1.35 Hrs	Numerical	7
7	Reality Of Regression Estimates	20 Min	Numerical	4

UNIT 4: PROBABILITY AND PROBABILITY DISTRIBUTION
MARKS: 18
LECTURE: 06 HOURS

SR NO	TOPIC	DURATION	TOPIC BASED	MARKING SKIM
1	Bayes Theorem	30 Min	Numerical	4
2	Random Variables	20 Min	Numerical	6
3	Mathematical Expectation	20 Min	Numerical	6
4	Probability Density Function	20 Min	Numerical	5
5	Bionomial Distribution	1.35 Hrs	Numerical	7
6	Poisson's Distribution	1.15 Hrs	Numerical	7
7	Normal & Hypergeometric	1 Hr	Numerical	7
8	Test Of Hypothesis: Chi-Square & T Test	40 Min	Numerical	6

UNIT 5: NUMERICAL METHODS
MARKS: 17
LECTURE: 08 HOURS

SR NO	TOPIC	DURATION	TOPIC BASED	MARKING SKIM
1	Bisection Method	1.20 Hrs	Numerical	6

2	Secant	25 Min	Numerical	6
3	Regula Falsi	50 Min	Numerical	5
4	Newton Raphson	45 Min	Numerical	5
5	Successive Approximation Methods	40 Min	Numerical	7
6	Convergance And Stability	55 Min	Numerical	7
7	Gauss Elimination	1 Hr	Numerical	7
8	LU Decomposition	30 Min	Numerical	6
9	Cholesky	1 Hr	Numerical	7
10	Jacobi	20 Min	Numerical	5
11	Gauss Seidel Methods	15 Min	Numerical	5

UNIT 6: NUMERICAL METHODS
MARKS: 18
LECTURE: 09 HOURS

SR NO	TOPIC	DURATION	TOPIC BASED	MARKING SKIM
1	Finite Difference	30 Min	Numerical	6
2	Newton's Interpolation	1.10 Hrs	Numerical	6
3	Lagrange's Interpolation	50 Min	Numerical	5
4	Trapezoidal Rule	35 Min	Numerical	5
5	Simpson's Rule	1 Hr	Numerical	7
6	Bound Of Truncation Error	35 Min	Numerical	7
7	Euler's Method	1 Hr	Numerical	7
8	Modified Euler's Method	1.30 Hrs	Numerical	7
9	Runge Kutta 4th Order	1.30 Hrs	Numerical	7
10	Predictor Corrector Method	20 Min	Numerical	6