

SHANTILAL SHAH ENGINEERING COLLEGE, BHAVNAGAR

Bachelor of Engineering Subject Code: 3130908

Semester – III

Subject Name: Applied Mathematics for Electrical Engineering
MID SEMISTER EXAM SYLLABUS

1. Numerical Solutions :

Roots of Algebraic and Transcendental Equations : Bisection, false position, Secant and Newton-Raphson methods, Fixed Point Iteration, Rate of convergence, Applications to electrical engineering problems.

2. Numerical Integrations :

Newton-Cotes formula, Trapezoidal and Simpson's formulae, error formulae, Gaussian quadrature formulae, Applications to electrical engineering problems

3. Curve fitting by the numerical method

Curve fitting by of method of least squares, fitting of straight lines, second degree parabola and more general curves

4. Basic Probability

Experiment, definition of probability, conditional probability, independent events, Bayes' rule, Bernoulli trials, Random variables, discrete random variable, probability mass function, continuous random variable, probability density function, cumulative distribution function, properties of cumulative distribution function, Applications to electrical engineering problems

5. Basic Statistics

Measure of central tendency: Moments, Expectation, dispersion, skewness, kurtosis, , Bounds on probability, Chebyshev's Inequality, Applications to electrical engineering problems