

SHANTILAL SHAH ENGINEERING COLLEGE, BHAVNAGAR

GENERAL DEPARTMENT

MATHEMATICS

- Syllabus of Mid Semester Test- MARCH 2018
- Subject : NUMERICAL AND STATISTICAL METHODS FOR COMPUTER ENGINEERING.
- Subject Code: 2140706
- B. E. Semester-IV (IT Engineering)

Sr.No.	Topics
1	Roots of Equations: Mathematical background, Bisection, RegulaFalsi, NR method, Secant ,Successive approximation method, Budan's Theorem, Barristow's method, case studies.
2	Systems of linear algebraic equations: Mathematical background, Gauss elimination; pitfalls and techniques for improvement, matrix inversion and Gauss-Seidel methods, ill- conditional Equations, Predictor-Corrector methods.
3	Curve Fitting: Mathematical background, Least squares linear and polynomial regression, Lagrange interpolating Polynomials.
4	Numerical Integration: Newton-Cotes integration formulas; trapezoidalrule and Simpson's rules: Interpolation,
5	Ordinary differential equations: Euler's method, Runge-Kutta methods. General methods for boundary value problems
6	Statistical Methods: Frequency distributions, Data analysis, Expectations and moments, Co-relation and regression, Trend analysis, Seasonal effects, Cyclical Fluctuation, Moving average, MSE, Predictions. Non-parametric statistics.

➤ Mid Semester test question paper will contained 30 Marks .