

**Maulana Abul Kalam Azad University of Technology, West Bengal**  
(Formerly West Bengal University of Technology)  
**Syllabus for B. Tech in Electrical Engineering**  
(Applicable from the academic session 2018-2019)

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|---|---|--|--|
|   | distributions: Uniform, Exponential, Normal distributions and related problems. Determination of Mean & Variance for Binomial, Poisson & Uniform distributions only.  | 2  |  |
| 2 | <b>Numerical Methods:</b><br>Approximation in numerical computation: Truncation and rounding errors, Fixed and floating-point arithmetic, Propagation of errors.<br><br>Interpolation: Newton forward/backward interpolation, Lagrange's and Newton's divided difference Interpolation.<br><br>Numerical integration: Trapezoidal rule, Simpson's 1/3 rule, Expression for corresponding error terms.<br><br>Numerical solution of a system of linear equations: Gauss elimination method, Matrix inversion, LU Factorization method, Gauss-Seidel iterative method.<br><br>Numerical solution of Algebraic equation: Bisection method, Regula-Falsi method, Newton-Raphson method.<br><br>Numerical solution of ordinary differential equation: Euler's method, Runge-Kutta methods, Predictor-Corrector methods and Finite Difference method. | 4<br><br>5<br><br>3<br><br>6<br><br>4<br><br>6 |  |
| 3 | <b>Z transform:</b><br>Sequence, Representation of sequence, Basic operations on sequences, Z-transforms, Properties of Z-transforms, Change of scale, Shifting property, Inverse Z-transform, Solution of difference equation, Region of convergence.  | 4  |  |