

Semester — II Allied Mathematics — II

(For B.Sc Electronics and B.Sc Electronics & Electronic Communications)

Unit — I DIFFERENTIAL EQUATIONS.

Second order linear differential equation with constant coefficients- Laplace equations-Application to electric circuits RL, RC,RLC

Unit — II NUMERICAL METHODS

Solving simultaneous equation using elimination process-Gauss Jordan method Gauss Jacobi method-Gauss Seidel Process L. Numerical Integration- Trapezoidal Rule- Simpson's Rule

Unit — III FOURIER TRANSFORMS

Definition of Fourier transform- Properties of Fourier Transform Inverse Fourier transform-Convolution theorem- Finite Fourier Sine & Cosine transform-parsevais theorem.

Unit— IV SPECIAL FUNCTIONS

Beta and Gamma functions definitions- Relationship between Beta and Gamma properties of Gamma and Beta functions.

Unit — V COMPLEX NUMBERS

Definition of complex number — Argand Diagram — rectangular form — polar form — Conversion of rectangular form into polar and vice versa- Addition, Subtraction, - Multiplication and Division by using polar and rectangular forms- Demoivr's Theorem- Expansion of Sine(no), Cos(no),Sine(o),Cos(o).

TEXT BOOKS FOR REFERENCE

1. Venkataraman : Engineering Mathematics Vol.II
2. Venkataraman : Higher Mathematics for Engineering & Science
3. Venkataraman : Numerical Methods in Science & Engineering