BHARATHIYAR UNIVERSITY :: COIMBATORE -641 046

Semester —I Allied Mathematics-I

(For B.Sc Electronics and B.Sc Electronics and Communication)

2007-08 onwards

Unit-1 VECTOR CALCULUS

Concepts of vector and scalar fields-the Del operator-Divergence of a vector-curl of a vector- Laplacian operator-Gauss's theorem, Green theorem, Stroke's theorem (statements only).

Unit — II MATRICES
Different types of matrices- Inverse of a matrix- properties of an Unitary and Orthogonal matrices Characteristics equation and Characteristics roots- solution of simultaneous equation of matrix method.

Unit — III LAPLACE TRANSFORMS
Definition of laplace transform-properties of Laplace Transform, Inverse Lap-lace transform-convolution

Unit — IV FOURIER SERIES
Dirchlets conditions - General Fourier series-change of length of Interval-Fourier cosine and sine series-Half range series - Fourier series in complex form.

Unit — V THEORY OF ERRORS
Concepts of Probability- Addition theorem-multiplication. Theorem- Binomial Distribution-Distribution (No derivation) and simple problems. Different Types of errors — Principles of curve fitting.

TEXT BOOK FOR REFERENCE

1. Venkataraman: Engineering Mathematics Part B, VOL II, Part A.