

**L D College of Engineering**

**Circular**

**Date: 18/05/2022**

**Science & Humanities Department**

**Syllabus**

**MID SEM EXAMINATION -2022**

**SEM-II (ALL BRANCH)**

**Sub: Mathematics-02 (3110015)**

**Exam Date: 06/06/2022**

**Vector Calculus:** Parameterization of curves, Arc length of curve in space, Divergence, Curl, Fundamental theorem of line integrals, Conservative fields, Component test for conservative fields, Line Integral, Work done, Path independence, Potential function.

CO1

**Fourier Integral:** Fourier Integral, Fourier Cosine Integral and Sine Integral.

**Laplace Transform :** Definition of the Laplace transform, Inverse Laplace transform, Linearity, shifting theorem(first shifting), Transforms of derivatives and integrals, Differential equations, Unit step function, Second shifting theorem,

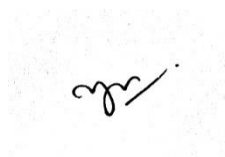
CO2

**Ordinary Differential Equations:** First order differential equations, Exact differential equations, Integrating factor, Linear differential equations, Bernoulli equations.

CO3

**Ordinary differential equations of higher order:** Homogeneous linear ordinary differential equations of higher order, Homogeneous Linear ODEs with constant coefficients, Existence and uniqueness of solutions, Linear dependence and Independence of solutions, Wronskian, Nonhomogeneous ODEs.

CO4



Subject Coordinator

Head of Department