JNTUK/JNTUGV Mathematics-3 IMPORTANT QUESTIONS

UNIT I: Vector calculus:

-Problems on Greens, Stokes, and Gauss Divergence theorems (very Imp- 1 sum for sure)

-Directional Derivative & Scalar Potential (Very Imp)

- Surface and volume integrals

UNIT II: Laplace Transforms

- Dirac's delta function

- Solving ordinary differential equations (Imp - One Problem for sure)

- Shifting theorems & Convolution theorem (V.Imp – high chances of giving one problem)

- Inverse Laplace transforms (imp)

UNIT III: Fourier series and Fourier Transforms

- Dirichlet's conditions & Half-range sine and cosine series. (imp)

- Fourier integral theorem & Fourier sine and cosine integrals (imp- chances for giving one problem)

- Fourier series of periodic function & Finite Fourier transforms.

UNIT IV: PDE of first order

- Problems on PDE (V.V.Imp)

- Lagrange & standard types (one sum for sure)

UNIT V: Second order PDE and Applications

- Method of separation of Variable (V.Imp- one sum for sure)

(Unit-5 Continuation)

- Second order PDE (Try to Learn complete- one sum for sure)

- Heat and two-dimensional Laplace equation.