**BBDNITM**

**MECHANICAL DEPARTMENT**

**SESSION(2018-19)**

**Subject- Fluid Mechanics [ RCE-303]**

**Assignment no. 2**

1. Explain with examples compressible ,incompressible flows and uniform & non uniform flows?
2. What do you understand by continuity equations?
3. Explain circulation & vortex motion ?
4. Derive the equation of a stream line for a 2D flows?
5. Explain Buckingham’s equation?
6. A pipe tapers from 250mm to 125mm when the rate of flow of the liquid in the pipe is 2400ltr/min .calculate the average velocity of flow at the two sections?
7. The velocity vector in a fluid particle is given by

V = 4x3ᵔi -10x2yj+2tk

Find the velocity & acceleration of a fluid particle at (2,1,3) at time t=1

1. What is stream function ? give its properties?