**GITAM (Deemed to be University), Hyderabad Campus**

**School of Technology (Dr. Reddys lab)**

**B.sc(Hons) IV sem, Mechatronics II**

**Assignment II**

**Last of date of submission: 28/10/2019**

**Module III**

1. Obtain an expression for continuity equation for a three dimensional flow.
2. The following cases represent the two velocity components, determine the third component of velocity such that it they satisfy the continuity equation
3. u= 4x2 , v= 4xyz (ii) u= 4x2+3xy, w= z3-4xy-2yz
4. Describe the velocity potential function and types of motion

**Module IV**

1. What is a venturimeter? Derive an expression for the discharge through a venturimeter.
2. Derive Euler’s equation of motion.
3. Derive an expression for Bernoulli’s theorem .mention the assumptions made.
4. What is momentum equation? State the applications for momentum equation.