

**DEPARTMENT: MECHANICAL SEMESTER: 4** 

**SUBJECT NAME: Fluid Mechanics and Hydraulic Machines** 

**SUBJECT CODE: 3141906** 

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ENGINEERING A TECHNICLOGY

## Assignment: 3 MOTION OF FLUID PARTICLES AND STREAMS

- 1. Derive continuity equation in 3 dimensional coordinate system.
- 2. Explain briefly:

Steady and unsteady flow, uniform and non-uniform flow and Laminar and turbulent flow.

- 3. Distinguish between forced vortex and free vortex flow.
- 4. Explain flow-net and state the importance of flow net.
- 5. Distinguish between rotational and irrotational flow.
- 6. Define circulation and prove its equation.
- 7. Explain the term vorticity.