



**ACROSS**

- 1 \_\_\_\_\_ action is the ability of a substance to draw another substance into it such as with water and porous paper.
- 4 A \_\_\_\_\_ is a fluid that can freely form a distinct surface at the boundaries of its bulk material.
- 8 A \_\_\_\_\_ flow is flow in which the divergence of velocity is zero. This is more precisely termed isochoric flow.
- 9 The \_\_\_\_\_ is the SI unit of pressure or stress.
- 11 \_\_\_\_\_ is the upward force on an object produced by the surrounding fluid in which it is fully or partially immersed.
- 12 A \_\_\_\_\_ is defined as a substance that continually deforms under an applied shear stress regardless of the magnitude of the applied stress.
- 15 \_\_\_\_\_ is the force per unit area applied on a surface in a direction perpendicular to that surface.
- 17 \_\_\_\_\_ is fluid dynamics applied to liquids.
- 19 A flow is considered a \_\_\_\_\_ flow if the change in density of the flow with respect to pressure is non-zero.
- 20 \_\_\_\_\_ is a measure of the resistance of a fluid to deform under shear stress.
- 21 Identifying different flow regimes, such as laminar or turbulent flow, the \_\_\_\_\_ number is the ratio of inertial forces to viscous forces quantifying the relative importance of these two types of forces for given flow conditions.

**DOWN**

- 2 \_\_\_\_\_ or streamline flow occurs when a fluid flows in parallel layers, with no disruption between the layers.
- 3 \_\_\_\_\_ flow is a flow regime characterized by chaotic, stochastic property changes such as low momentum diffusion, high momentum convection, and rapid variation of pressure and velocity in space and time.
- 5 \_\_\_\_\_ is mass per unit volume.
- 6 For a viscous liquid flowing through a cylindrical tube with constant circular cross-section, \_\_\_\_\_'s law relates the flow rate, pipe radius, pipe length, and the pressure difference between the two ends.
- 7 \_\_\_\_\_'s Principle states that for an ideal fluid with no work being performed on the fluid, an increase in velocity occurs simultaneously with decrease in pressure or a change in the fluid's gravitational potential energy.
- 10 Fluid \_\_\_\_\_ is the sub-discipline of fluid mechanics dealing with fluids in motion.
- 13 The \_\_\_\_\_ flow rate, also volume flow rate, is the volume of fluid which passes through a given surface per unit time.
- 14 \_\_\_\_\_ is a curve in the surface of a liquid produced in response to the surface of its container.
- 16 Surface \_\_\_\_\_ is an effect within the surface layer of a liquid that causes that layer to behave as an elastic sheet.
- 18 \_\_\_\_\_'s law states that for all points at the same absolute height in a connected body of an incompressible fluid at rest, the fluid pressure is the same, even if additional pressure is applied on the fluid at some place.