# Objective Type Questions & Answers

**Select the best answer for the following MCQs:**

**i) The study of fluids in motion is called,**

(a) fluid statics      (b) fluid dynamics      (c) dynamics      (d) none of these

**ii) An object moving through fluid experiences a retarding force called.**

(a) surface tension                          (b) frictional force

(c) drag force                               (d) gravitational force

**iii) The drag force increases as the speed of the object.**

(a) increases      (b) decreases      (c) remains constant      (d) none of these

**iv) S.I. unit of viscosity is.**

(a) $kg\ m^{-2}\ s^{-1}$      (b) $kg\ m^2\ s^{-2}$      (c) $kg\ m^{-1}\ s^{-1}$      (d) $kg\ m^{-2}\ s^{-2}$

**v) The equation F = 6 nnrv is called.**

(a) Stokes' law      (b) Newton's law   (c) Faraday's law   (d) Lenz's law

**vi) The fluid which is incompressible and non-viscous is called.**

(a) viscous fluid      (b) non-ideal fluid   (c) ideal fluid      (d) perfect fluid

**vii) The irregular or unsteady flow of the fluid is called.**

(a) turbulent flow   (b) laminar flow     (c) stream line flow (d) steady flow

**viii) When the drag force on an object falling vertically downward becomes equal to its weight, the body will fall with constant velocity is called.**

(a) drag velocity                          (b) terminal velocity

(c) average velocity                       (d) instantaneous velocity

**ix) The terminal velocity of water droplet of radius 1×10$^{-4}$ m & density 1000 kg m$^{-3}$ descending through air of viscosity 19 ×10$^{-6}$ kg m$^{-1}$ s$^{-1}$ is,**

(a) 1.1 m s$^{-1}$        (b) 2.2 m s$^{-1}$        (c) 3.3 m s$^{-1}$        (d) 4.4 m s$^{-1}$

**x) If each particle of the fluid passing through a point follows the same path, then the flow is called.**

(a) irregular flow    (b) turbulent flow   (c) stream line flow (d) none of these

**xi) The terminal velocity of a spherical droplet is given by.**

(a) $v_t = \dfrac{2\rho^2 g r^2}{9\eta}$     (b) $v_t = \dfrac{2\rho g r^2}{9\eta}$     (c) $v_T = \dfrac{2\rho g^2 r^2}{9\eta^2}$     (d) $v_T = \dfrac{2\rho^2 g^2 r^2}{9\eta^2}$

**xii) The terminal velocity of a tiny droplet of radius r falling vertically downward through air is proportional to.**

(a) $v_t \propto r$        (b) $v_t \propto r^2$        (c) $v_t \propto r^3$        (d) $v_t \propto 1/r$