

Physics ECAT Pre Engineering Chapter 6 Fluid Dynamics

Sr	Questions	Answers Choice
1	What are the SI base units of the coefficient of viscosity	<p>A. Kg m s^{-2}</p> <p>B. $\text{kgm}^2 \text{ s}^{-2}$</p> <p>C. Kg m s^{-1}</p> <p>D. $\text{kg m}^{-1} \text{ s}^{-1}$</p>
2	The density of water is 10^3kg/m^3 . The water pressure on a submarine is $2.0 \times 10^7 \text{N/m}^2$. The depth of the submarine below the surface of the water, in meters, is approximately	<p>A. 200 m</p> <p>B. 11000 m</p> <p>C. 2000 m</p> <p>D. 8000 m</p>
3	Pressure exerted by a gas on the walls of its container is due to	<p>A. adhesion between the gas molecules and the container</p> <p>B. cohesion between the gas molecules and the container</p> <p>C. collision between the gas molecules and the container</p> <p>D. surface tension of the gas</p>
4	At the starting point of the free fall motion of an object, its acceleration will be	<p>A. maximum</p> <p>B. minimum</p> <p>C. zero</p> <p>D. none of them</p>
5	Substances that do not flow easily have	<p>A. large coefficient of viscosity</p> <p>B. small coefficient of viscosity</p> <p>C. either of them</p> <p>D. none of them</p>
6	Blood vessels can be stretch like rubber, therefore they are	<p>A. rigid</p> <p>B. hard</p> <p>C. very thick</p> <p>D. not rigid</p>
7	A body is floating in a liquid. The up thrust on the body is	<p>A. Equal to weight of liquid displaced</p> <p>B. Zero</p> <p>C. Less than the weight of liquid displaced</p> <p>D. Weight of body-weight of liquid displaced</p>
8	Under normal circumstances, the volume of blood is sufficient to keep the vessels	<p>A. flatted for all times</p> <p>B. inflated for all times</p> <p>C. inflated for small times</p> <p>D. none of them</p>
9	Rate of flow can be expressed in	<p>A. litre/sec</p> <p>B. litre-sec</p> <p>C. sec/litre</p> <p>D. sec/litre-m</p>
10	According to the equation of continuity, when water falls from the tap, it's speed increases and its cross-sectional area	<p>A. decreases</p> <p>B. increases</p> <p>C. becomes zero</p> <p>D. none of them</p>
11	The force exerted by the fluid in a hydraulic pump on the piston is 10 cm^2 , the fluid pressure on the piston is, in N/cm^2	<p>A. 20</p> <p>B. 200</p> <p>C. 2000</p> <p>D. 20,000</p>
12	Bernoulli's equation is the fundamental equation in fluid dynamics, which relates pressure to fluid	<p>A. speed</p> <p>B. height</p> <p>C. none of them</p> <p>D. both of them</p>
13	The smooth or steady stream-line flow is know as	<p>A. Laminar flow</p> <p>B. Turbulent flow</p> <p>C. Both a and b</p> <p>D. None of the above</p>
14	Bernoulli's equation is based upon law of conservation	<p>A. Mass</p> <p>B. Momentum</p> <p>C. Energy</p>

		D. None of these
15	With increase of temperature, the viscosity of liquid and gases	A. Increases for both B. Decreases for both C. Increases for liquids and decreases for gases D. Decreases for liquids and increases for gases
16	The terminal velocity of a small size spherical body of radius R moving in a fluid varies as	A. R B. R^2 C. $1/R$ D. $(1/R)^2$
17	Ball pen functions on the principle of	A. Viscosity B. Boyle's law C. Gravitational force D. Surface tension
18	The equation of continuity $A_1V_1 = A_2V_2$ is for the flow of	A. an ideal fluid B. an incompressible fluid C. a non viscous fluid D. all of the above
19	Which of the following options states the names of fluids in the order of increasing viscosity?	A. mercury, motor oil, methanol B. methanol, mercury, motor oil C. motor oil, mercury, methanol D. methanol, motor oil, mercury
20	The velocity of falling raindrops attains limited value because of	A. Up thrust of air B. Air currents of the earth atmosphere C. Surface tension effect D. Viscous force exerted by air