

Physics ECAT Pre Engineering Online Test

Sr	Questions	Answers Choice
1	The fluid which is incompressible and non viscous is called	A. Ideal fluid B. Non-ideal fluid C. Prefect fluid D. All
2	The electrical forces between the molecules of a liquid are	A. Repulsive B. Attractive C. Both A and B D. None
3	A container has a small hole in the bottom. Air can go through this hole, but water cannot. This can be best explained by the statement that	A. water contains hydrogen atoms, air does not B. water molecules are smaller than molecules in the air C. water molecules are smaller than molecules in the air D. surface tension of the water prevents it from
4	If water rises 4 cm in a long, thin tube because of capillary action, then, under corresponding conditions of use, the rise (in the tube) of a liquid whose density is 2 g/cm^2 will be	A. 1 cm B. 2 cm C. 8 cm D. None
5	When the velocity of a liquid flowing steadily in a tube increases, its pressure?	A. Decreases B. Increases C. Remains same D. Zero
6	Fire fighters have jet attached to the head of their water pipes in order to	A. Increase the mass of water flowing per second B. Increase the velocity of water flowing out C. Increase the volume of water flowing per second D. Avoid wastage of water
7	Deep water almost runs still when surface water flow in rivers. What does it explain	A. Magnus effect B. Equation of continuity C. Surface energy D. Bernoulli's equation
8	Fire fighters have a jet attached to the head of their water pipes in order to head of their water pipes in order to	A. Increase the mass of water flowing per second B. Avoid wastage of water C. Increase the velocity of water flowing out D. Increase the volume of water flowing per second
9	Surface tension of water is reduced by adding	A. Detergents B. Camphor C. Plastic D. Both A and B
10	Bernoulli's equation is based upon law of conversation of	A. mass B. momentum C. Energy D. None
11	A flowing liquid possess	A. K.E B. P.E C. Pressure Energy D. All
12	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	A. 20 B. 200 C. 2000 D. 20,000
13	The density of water is 10^3 kg/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	A. 200 m B. 11000 m C. 2000 m D. 8000 m

14	The term Brownian movement refers to	<p>A. irregular motions of small particles suspended in a fluid</p> <p>B. convection currents in a liquid or gas</p> <p>C. convection currents in a gas but not in a liquid</p> <p>D. the stretching of a body beyond its elastic limit</p>
15	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>
16	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>
17	In a surface tension experiment with a capillary tube water rises up to 0.1 m. if the same experiment is repeated on an artificial satellite, which is revolving around the earth, water will rise in the capillary tube up to a height of	<p>A. 0.1 m</p> <p>B. 0.2 m</p> <p>C. 0.98 m</p> <p>D. Full length of the capillary tube</p>
18	In a container having water filled up to a height h, a hole is made in the bottom. The velocity of water flowing out of the hole is	<p>A. Independent of h</p> <p>B. Proportional to $h^{1/2}$</p> <p>C. Proportional to h</p> <p>D. Proportional to h^2</p>
19	Internal friction of fluid is called	<p>A. Surface tension</p> <p>B. Viscosity</p> <p>C. Resistance</p> <p>D. Cohesive force</p>
20	At high altitude the blood oozes out of the nose and ear because	<p>A. The blood pressure increase at high altitudes</p> <p>B. The percentage of oxygen in the air increase</p> <p>C. The atmospheric pressure decrease there</p> <p>D. The density of blood decrease at high altitudes</p>
21	The pressure will be low where the speed of the fluid is	<p>A. Zero</p> <p>B. High</p> <p>C. Low</p> <p>D. Constant</p>
22	Blood has a density	<p>A. Equal to water</p> <p>B. Greater than water</p> <p>C. Lesser than water</p> <p>D. None of these</p>
23	According to Stoke's law, drag force depends on	<p>A. Initial velocity</p> <p>B. Final velocity</p> <p>C. Terminal velocity</p> <p>D. Instantaneous velocity</p>
24	Ball pen functions on the principle of	<p>A. Viscosity</p> <p>B. Boyle's law</p> <p>C. Gravitational force</p> <p>D. Surface tension</p>
25	A person standing near the track of a fast moving train has tendency to fall towards it because of	<p>A. Vibration due to motion of train</p> <p>B. Gravitation force of attraction between person and trains</p> <p>C. The high speed of train</p> <p>D. Some other effect</p>
26	Surface tension of water is due to	<p>A. Inter molecular attractions</p> <p>B. Inter molecular spaces</p> <p>C. Inter molecular repulsion</p> <p>D. None of above</p>
27	Bernoulli's equation is based upon law of conservation	<p>A. Mass</p> <p>B. Momentum</p> <p>C. Energy</p> <p>D. None of these</p>
28	The terminal velocity of a small size spherical body of radius R moving in a fluid varies as	<p>A. R</p> <p>B. R^2</p> <p>C. $1/R$</p> <p>D. $(1/R)^2$</p>

29	The velocity of falling raindrops attains limited value because of	<div>A. Up thrust of air B. Air currents of the earth atmosphere C. Surface tension effect D. Viscous force exerted by air</div>
30	A body whose momentum is constant must have constant	<div>A. Acceleration B. Velocity C. Force D. None of these</div>