# Physics ECAT Pre Engineering Chapter 6 Fluid Dynamics

| Sr | Questions | Answers Choice |
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| 1 | The equation of continuity is | A. A<sub>1</sub>A<sub>2 = V</sub><sub>1</sub>V<sub>2</sub><br>B. A<sub>1/</sub><sub>V</sub><sub>1 = </sub>A<sub>2/</sub>V<sub>2</sub><br>C. <sub>V</sub><sub>1/</sub>A<sub>1= </sub>V<sub>2/</sub>A<sub>2</sub><br>D. A<sub>1</sub><sub>V</sub><sub>1 = </sub>A<sub>2</sub>V<sub>2</sub> |
| 2 | Drag force increases if speed of the object moving through the fluid: | A. Increases<br>B. Decreases<br>C. Remains constant<br>D. None of these |
| 3 | When a water droplet falls through air, the net force on it is | A. Net force = drag force - weight<br>B. Net force = weight - drag force<br>C. Net force = drag force + weight<br>D. Net force = weight + drag force |
| 4 | Fire fighters have jet attached to the head of their water pipes in order to | A. Increase the mass of water flowing per second<br>B. Increase the velocity of water flowing out<br>C. Increase the volume of water flowing per second<br>D. Avoid wastage of water |
| 5 | The resistance offered by a fluid to a solid moving inside it is called: | A. Drag force<br>B. Surface force<br>C. Viscosity<br>D. None of these |
| 6 | When the upward drag force of the fluid becomes equal to downward force of gravity of the droplet, then its velocity: | A. Starts increasing<br>B. Starts decreasing<br>C. Becomes constant<br>D. Is called escape velocity |
| 7 | A massive object falls through a fluid: | A. Faster<br>B. Slower<br>C. Slowest<br>D. None |
| 8 | Surface tension of water is reduced by adding | A. Detergents<br>B. Camphor<br>C. Plastic<br>D. Both A and B |
| 9 | In Bernoulli's theorem the relation between velocity and pressure is | A. Inverse<br>B. Direct<br>C. None of the above<br>D. Both a and b |
| 10 | When a water droplet falling freely through air, the drag force on water droplet increases with th | A. decrease in speed<br>B. increase in speed<br>C. pressure<br>D. none of them |
| 11 | Terminal velocity is the maximum velocity attained by a spherical droplet when the drag force_____the weight of droplet: | A. Is smaller than<br>B. Is greater than<br>C. Becomes equal to<br>D. None of these |
| 12 | Two copper balls of 1 cm and 2 cm in diameter are simultaneously dropped in the same viscous medium. The terminal velocity of bigger ball is: | A. Not affected due to its size<br>B. Twice that of small size ball<br>C. Four times that of small size ball<br>D. 1/4th of that of small size ball |
| 13 | The law of conservation of energy gives us | A. equation of continuity<br>B. Bernoulli's theorem<br>C. both of them<br>D. none of them |

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| 14 | 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 | A. Independent of h<br>B. Proportional to h<sup>1/2</sup><br>C. Proportional to h<br>D. Proportional to h<sup>2</sup> |
| 15 | Fluids resist force, This property is called | A. Stiffness<br>B. Strength<br>C. Ductility<br>D. Elasticity |
| 16 | Fog droplets are suspended in air when their weight is balanced by: | A. Force of gravity<br>B. Upward trust due to air<br>C. Surface tension<br>D. None of these |
| 17 | In a _____ flow, each particle of the fluid is called a streamline and different streamlines _____cross each other. | A. Streamline, cannot<br>B. Turbulent, cannot<br>C. Streamline, can<br>D. None of these |
| 18 | When weight of an object falling freely becomes equal to the drag force, then the body will move with | A. increasing speed<br>B. decreasing speed<br>C. constant speed<br>D. none of them |
| 19 | Bernoulli's equation is important in the field of | A. Electrical circuit<br>B. Magnetism<br>C. Photoelectric effect<br>D. Flow of fluids |
| 20 | Surface tension of water is due to | A. Inter molecular attractions<br>B. Inter molecular spaces<br>C. Inter molecular repulsion<br>D. None of above |