

ECAT Pre General Science Physics Chapter 6 Fluid Dynamics Online Test

Sr	Questions	Answers Choice
1	In a _____ flow, each particle of the fluid is called a streamline and different streamlines _____ cross each other.	A. Streamline, cannot B. Turbulent, cannot C. Streamline, can D. None of these
2	The study of fluid in motion basically involves law of conservation of:	A. Mass B. Energy C. Change D. Both A and C E. Both A and B
3	The drag force acting on a spherical droplet of radius 10^{-5}m moving with a velocity of 1 cm/sec in a fluid of viscosity $5.31 \times 10^{-7}\text{m/sec}$. The units comes out to be:	A. 10^{-16}N B. 10^{-14}N C. 10^{-12}N D. 10^{-10}N
4	The dimensions of viscosity are:	A. $M^2L^{-1}T^{-2}$ B. $M^{-1}L^{-1}T^{-1}$ C. $M^{-1}L^{-1}T^{-1}$ D. $ML^{-1}T^{-1}$
5	The unit of viscosity in SI system is:	A. $\text{Kg}^{-1}\text{m sec}^{-1}$ B. $\text{Kg m}^{-1}\text{ sec}^{-1}$ C. $\text{Kg}^{-1}\text{m}^{-1}\text{ sec}$ 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 B. Starts decreasing C. Becomes constant D. Is called escape velocity
7	0.10 cm can be written as:	A. $1.0 \times 10^{-2}\text{m}$ B. $1.0 \times 10^{-3}\text{cm}$ C. $1.0 \times 10^{-4}\text{cm}$ D. $1. \times 10^{-4}\text{m}$
8	Stoke;s law is not applicable when the speed of the object moving through a fluid is:	A. Zero B. Small C. Large D. None of these
9	Drag force increases if speed of the object moving through the fluid:	A. Increases B. Decreases C. Remains constant D. None of these
10	Fog droplets are suspended in air when their weight is balanced by:	A. Force of gravity B. Upward thrust due to air C. Surface tension D. None of these
11	At high speed, fluid friction _____ and fuel consumption _____:	A. Increases, decreases B. Increases, increases C. Decreases, increases 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 B. Twice that of small size ball C. Four times that of small size ball D. $1/4$ th of that of small size ball
13	When the droplet moves with terminal velocity in a fluid, the net force acting on the droplet is:	A. $F_D - mg$ B. Zero C. $mg - F_D$ D. None of these
14	The _____ viscous the medium is _____, is the value of terminal velocity of the droplet:	A. More, lesser B. Lesser, more C. Both A and B D. None of these

		D. Lesser, lesser
15	Terminal velocity is the maximum velocity attained by a spherical droplet when the drag force_____the weight of droplet:	A. Is smaller than B. Is greater than C. Becomes equal to D. None of these
16	A massive object falls through a fluid:	A. Faster B. Slower C. Slowest D. None
17	High speed meteors rushing through air reduces to ashes because of:	A. Force of gravity B. High resistance of air C. Drag force D. None of these
18	Stock's law holds for:	A. Motion through free space B. Motion through viscous medium C. Bodies of all shapes D. None of these
19	Viscosity of water is _____ that of air but ____ that of plasma.	A. More, more B. Less, more C. Less, less D. More, less
20	Fluid friction is _____ the friction between two solid surfaces:	A. Greater than B. Smaller than C. Equal to D. None of these
21	Density of fluid is defined as:	A. Its volume to mass ratio B. Product of volume and mass C. Its mass of volume ratio D. None of these
22	Unit of viscosity is:	A. $\text{Kg m}^{-1}\text{sec}^{-1}$ B. N s m^{-2} C. J s m^{-3} D. All of these
23	Glycerin has viscosity _____ the viscosity of water:	A. More than B. Equal to C. Less than D. None of these
24	A body is moving through a viscous medium eventually comes to rest because of:	A. Force of gravity B. Force of friction C. Its weight D. Both A and C
25	N s m^{-2} is unit of:	A. Drag force B. Pressure C. Surface tension D. Coefficient of viscosity
26	Machine parts are jammed due to:	A. Increasing in viscosity of lubricant B. Decreasing in viscosity of lubricant C. Decreasing in surface tension of lubricant D. None of these
27	The body passing a viscous medium affected by:	A. One force only B. Two forces only C. Four forces D. None of these
28	The resistance offered by a fluid to a solid moving inside it is called:	A. Drag force B. Surface force C. Viscosity D. None of these
29	The property of fluids due to which they resist their own flow is called:	A. Drag force B. Surface tension C. Viscosity D. None of these
30	A tube is tapered from 20 cm diameter to 2 cm diameter, the velocity at the first cross-section is 50 cm/s, then the velocity at the second cross-section is	A. 50 m/s B. 20 m/s C. 40 cm/s D. 5 cm/s