

ECAT Physics Chapter 6 Fluid Dynamics Online Test

Sr	Questions	Answers Choice
1	A fluid at a certain point has 50 J of potential energy per unit volume, 75 J of kinetic energy per unit volume, and 35 J of pressure energy per unit volume. the total energy of the fluid is	A. 125 J B. 90 J C. 160 J D. 85 J
2	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
3	What is another name for laminar flow?	A. streamline B. unsteady flow C. turbulent flow D. both (a) and (b)
4	Blood pressure is measured in torr. Which of the following units could belong to torr?	A. N m^{-1} B. N m^{-2} C. N m D. $\text{N}^{-1} \text{m}^{-2}$
5	Fluids have three types of energies. The Bernoulli's equation combines those energies. which of the following is one of the three energies possessed by a fluid?	A. potential energy B. pressure energy C. strain energy D. (a) and (b) only
6	The flow of an ideal fluid is	A. streamline flow B. incompressible flow C. non-viscous D. all of the above
7	Which of the following is a characteristic of an ideal fluid?	A. it is non-viscous B. it is incompressible C. its motion is steady D. all of the above
8	The value for systolic blood pressure for a normal healthy person is	A. 140 torr B. 80 torr C. 90 torr D. 120 torr
9	Which of the following options correctly states the equation of continuity for an ideal fluid?	A. $A_1V_1 = A_2V_2$ B. $A_1V_1/A_2V_2 = V_2/V_1$ C. $A_1V_1/A_2V_2 = V_1/V_2$ D. none of the above
10	Which of the following has the greatest coefficient of viscosity?	A. water B. gasoline C. honey D. tar
11	What are the SI base units of the coefficient of viscosity	A. kg m s^{-2} B. $\text{kg m}^2 \text{s}^{-2}$ C. kg m s^{-1} D. $\text{kg m}^{-1} \text{s}^{-1}$
12	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
13	Viscosity is defined as	A. the friction between fluid and its container's walls B. the internal friction between two layers of fluid C. the resistance to flow a fluid experiences D. the extent to which outside factors effect the fluid's flow

14 Bernoulli's equation is applicable for

- B. streamline flow
- C. both (a) and (b)
- D. all kinds of flows

15 The value of viscosity of a fluid is dependent on (at constant temperature)

- A. the fluid itself
- B. the fluid and its container
- C. anything in contact with the fluid
- D. all of the above