

Physics ECAT Pre Engineering Chapter 11 Heat & Thermodynamics Online Test

Sr	Questions	Answers Choice
1	The work done on the system by the environment is considered as	A. positive B. negative C. zero D. any one of them
2	The work done by the system on its environment is considered as	A. positive B. negative C. zero D. any one of them
3	The internal energy of a system does not depend upon the	A. initial state of the system B. final state of the system C. path D. none of them
4	In thermodynamics, internal energy is the function of	A. temperature B. pressure C. state D. none of them
5	When two objects are rubbed together, their internal energy	A. remains same B. decreases C. remains the same then decreases D. increases
6	The internal energy of an ideal gas system is generally the	A. translational K.E of molecules B. vibrational K.E of molecules C. rotational K.E of molecules D. all of them
7	In the study of thermodynamics, which gas is considered as the working substance	A. real gas B. ideal gas C. any gas may be ideal or real D. none of them
8	Internal energy is the sum of all the forms of	A. K.E B. P.E C. both of them D. none of them
9	The volume of given mass of a gas will be doubled at atmosphere pressure if the temperature of the gas is changed from 150°C to	A. 300 °C B. 573 °C C. 600 °C D. 743 °C
10	The absolute temperature for an ideal gas is	A. directly proportional to the rotational K.E of gas molecules B. directly proportional to the vibrational K.E of gas molecules C. directly proportional to the average translational K.E of gas molecules D. directly proportional to the P.E. of gas molecules
11	The Boltzman constant has the value	A. $1.38 \times 10^{-23} \text{ JK}^{-1}$ B. $1.28 \times 10^{-23} \text{ JK}^{-1}$ C. $1.38 \times 10^{-26} \text{ JK}^{-1}$ D. $1.28 \times 10^{-26} \text{ JK}^{-1}$
12	The ideal gas law is	A. $P = nRT$ B. $V = nRT$ C. $PV = RT$ D. $PV = nRT$

13	The pressure exerted by the gas is	A. directly proportional to the P.E B. inversely proportional to the P.E C. inversely proportional to the K.E D. directly proportional to the K.E
14	While deriving the equation for pressure of a gas we consider the	A. rotational motion of molecules B. vibrational motion of molecules C. linear motion of molecules D. all of them
15	The pressure of gas everywhere inside the vessel will be the same provided the gas is of	A. Non-uniform density B. uniform density C. high density D. low density
16	If N is the total number of molecules and V is the volume of the container, then the expression for the pressure of gas is	A. $P = \frac{P}{V} \cdot \frac{1}{2} m v^2$; B. $P = \frac{2N}{V} \cdot \frac{1}{2} m v^2$; C. $P = \frac{2}{3} \frac{N}{V} \cdot \frac{1}{2} m v^2$; D. $P = \frac{2}{3} \frac{N}{V} \cdot m v^2$;
17	Which of the following is not an assumption of kinetic energy	A. a finite volume of gas consists of very large number of molecules B. the gas molecules are in random motion C. collision between the gas molecules are inelastic D. the size of the gas molecules is much smaller than the separation between molecules
18	The behaviour of gases is well accounted by the kinetic theory based on	A. microscopic approach B. macroscopic approach C. both of them D. none of them