MDCAT Physics Online Test

Sr	Questions	Answers Choice
1	Brownian motion confirms the truth of :	A. Wave theory of light B. Boyle's law C. Kinetic theory of gases D. Adiabatic process
2	According to boyle's law, volume of a given mass of a gas is	A. Inversely proportional mass at constant pressure B. Directly proportional to pressure at constant temprerature C. Inversely proportional pressure at constant temprature D. None of these
3	The pressure exerted on the walls on the vessel by gas molecules is defined as:	A. Force per unit volume B. Energy per unit area C. mass per unit volume D. None of these
4	Change in momentum per second is:	A. Product force and time B. Product of pressure and area C. Ratio of pressure and area D. None of these
5	The rate of change of momentum of a molecule is equal to:	A. Pressure B. Work C. Density D. Force
6	If a molecule with momentum mv strikes a wall and rebound then the change in momentum will be:	A. -2 mv B. Zero C. 2 mv D. mv
7	Pressure may be defined as_____per second per unit area:	A. Change in force B. Change in momentum C. Change in energy D. Work done
8	Truth of kinetic energy theory is confirmed by:	A. Diffusion of gases B. Brownian motion C. Both A and B D. None of these
9	Electromagnetic waves emitted by hot bodies are called:	A. Photoelectrons B. Alpha rats C. Thermal radiation D. None of these
10	The nature of thermal radiation is similar to:	A. Ultraviolet rays B. Light rays C. Both of them D. None of them
11	The relationship between Boltzmann constant K with R and $N_A$is given as:	A. k = RN_A B. k = R/N_A C. k = NR/N_A D. None of these
12	At constant temperature, if the density of the gas is increased, its pressure will:	A. Decrease B. Increase C. Remain unchanged D. None of these
13	The motion of molecules in gases i:	A. Orderly B. Random C. Circular D. All of these
14	In an ideal gas, the molecules have:	A. Kinetic energy only B. Potential energy only C. Both KE and PE D. None of these
		A. Work

15	Which of the following does not have the same units:	B. Heat C. Kinetic energy D. Power
16	The temperature scale approved in SI units is:	A. Calslus scale B. Kelvin scale C. Fehrenhelt scale D. None of these
17	In the theory of dimensional analysis, heat may be properly represented by:	A. ML²T⁻² B. MT⁻² C. ML⁻¹T⁻¹ D. None of these
18	The only significant motion possessed by the mono-atomic gas molecules is:	A. Translatory B. Rotatory C. Vibratory D. None of these
19	At constant temperature, if the volume of a given mass of a gas is doubled, then the density of gas becomes:	A. Double B. Remains constant C. Half D. None of these
20	Real gases strictly obey gas laws at:	A. High pressures and low temperatures B. Low pressures and high temperatures C. High pressures and & temperatures D. None of these
21	A gas which strictly obeys the gas laws under all conditions of temperatures and pressure is called:	A. Ideal gas B. Inert gas C. Real gas D. None of these
22	When two objects come to common temperature, the body is said to be in:	A. Static equilibrium B. Dynamic equilibrium C. Thermal equilibrium D. None of these
23	Absolute zero is considered as that temperature at which:	A. All liquids become gases B. All gases become liquids C. Water freezes D. None of these
24	Hotness and coldness of an object is represented in terms of:	A. Heat B. Temperature C. Chemicial D. None of these
25	When heat is added to the system, the entropy change is:	A. Positive B. Negative C. Zero D. None of these
26	Only those processes are probable to take place for which entropy os the system:	A. Increases B. Remains constant C. Both A and B are correct D. None of above
27	No entropy change is associated with:	A. Isothermal B. Adiabatic process C. Isobaric process D. None of them
28	Number of spark plugs needed in diesel engine is:	A. Four B. Five C. Six D. None of these
29	The efficiency of a particle heat engine:	A. can be 100% B. Cannot be 100% C. Is always zero D. None of these
30	Carnot cycle is:	A. Reversible B. Irreversible C. Sometimes A, Sometimes B D. None of these
31	In which process the change in internal energy of the system is zero:	A. Isochoric process B. Isobaric process C. Adiabatic process D. Isothermal process
		A. Ultraviolet rays B. Light rays

32	The nature of thermal radiation is smaller to:	B. Light rays C. Both of them D. None of these
33	Avogadro number is known as number of molecules in:	A. One kg of a substance B. Unit volume of a substance C. One mole of a substance D. None of these