

MDCAT Physics Chapter 8 Heat and Thermodynamics Online Test

Sr	Questions	Answers Choice
1	Carnot engine is _____ heat engine.	A. A reversible B. An irreversible C. An ideal D. Both A and C
2	Brownian motion confirms the truth of :	A. Wave theory of light B. Boyle's law C. Kinetic theory of gases D. Adiabatic process
3	The nature of thermal radiation is smaller to:	A. Ultraviolet rays B. Light rays C. Both of them D. None of these
4	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
5	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 temperature C. Inversely proportional pressure at constant temperature D. None of these
6	The equation $PV^{\gamma} = \text{Constant}$ applies to:	A. Isothermal process B. Adiabatic process C. Isobaric process D. None of these
7	A certain engine coverts 20% of available heat energy into work. Then its efficiency will be:	A. 20% B. 80% C. 50% D. None of these
8	Number of spark plugs needed in diesel engine is:	A. Four B. Five C. Six D. None of these
9	Thermal radiations are a type of:	A. Mechanical waves B. Electromagnetic waves C. Alpha rays D. Electrons
10	The relationship between Boltzmann constant K with R and N_A is given as:	A. $k = R/N_A$ B. $k = R/N_A$ C. $k = NR/N_A$ D. None of these
11	Hotness and coldness of an object is represented in terms of:	A. Heat B. Temperature C. Chemical D. None of these
12	No entropy change is associated with:	A. Isothermal B. Adiabatic process C. Isobaric process D. None of them
13	Diesel engine coverts _____ of available heat energy into work.	A. 20% to 25% B. 25% to 30% C. 30% to 35% D. 35% to 40%
14	What will be efficiency of carnot engine when it is operated between the temperatures 47°C and 127°C :	A. Reversible B. Irreversible C. Sometimes A and B D. None of these
		A. -2 mv - -

15	If a molecule with momentum mv strikes a wall and rebound then the change in momentum will be:	B. Zero C. $2\ mv$ D. mv
16	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
17	As the working substance of a heat engine completes a cycle, there is no change in:	A. Internal energy B. Pressure C. Volume D. All of these
18	The efficiency of a particle heat engine:	A. can be 100% B. Cannot be 100% C. Is always zero D. None of these
19	Tick which of the following is not state variable:	A. Heat energy B. Pressure C. Entropy D. Volume
20	When a gas is compressed:	A. Its internal energy decreases B. Its temperature decreases C. Its temperature increases D. None of these