

## MDCAT Physics Chapter 8 Heat and Thermodynamics Online Test

Sr	Questions	Answers Choice
1	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
2	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
3	In the theory of dimensional analysis, heat may be properly represented by:	A. $ML^2T^{-2}$ B. $MT^{-2}$ C. $ML^{-1}T^{-1}$ D. None of these
4	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
5	First law of thermodynamics is merely a statement of law of conversation of:	A. Energy B. Angular momentum C. Change D. Linear momentum
6	The rate of change of momentum of a molecule is equal to:	A. Pressure B. Work C. Density D. Force
7	The equation $PV^r = \text{Constant}$ applies to:	A. Isothermal process B. Adiabatic process C. Isobaric process D. None of these
8	Diesel engine converts _____ of available heat energy into work.	A. 20% to 25% B. 25% to 30% C. 30% to 35% D. 35% to 40%
9	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
10	While dealing with the processes i thermodynamics, the working substances is usually:	A. Oxygen gas B. Hydrogen gas C. Ideal gas D. None of these
11	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
12	A certain engine converts 20% of available heat energy into work. Then its efficiency will be:	A. 20% B. 80% C. 50% D. None of these
13	No entropy change is associated with:	A. Isothermal B. Adiabatic process C. Isobaric process D. None of them
14	In thermodynamics, the change in internal energy depends upon:	A. The path taken between initial and final states B. The initial state only C. The final state only D. Initial and final states
15	Thermal radiations are a type of:	A. Mechanical waves B. Electromagnetic waves C. Alpha rays D. Beta rays

D. Electrons

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| 16 | The nature of thermal radiation is similar to:   | A. Ultraviolet rays<br>B. Light rays<br>C. Both of them<br>D. None of them                |
| 17 | A process which is carried at constant temperature and Boyle's law can be applied is called:   | A. Adiabatic process<br>B. Isothermal process<br>C. Isochoric process<br>D. None of these |
| 18 | What will be efficiency of carnot engine when it is operated between the temperatures $47^{\circ}\text{C}$ and $127^{\circ}\text{C}$ : | A. Reversible<br>B. Irreversible<br>C. Sometimes A and B<br>D. None of these              |
| 19 | For a gas obeying Boyle's law, if the pressure is doubled the volume becomes:  | A. One half<br>B. Double<br>C. Four times<br>D. None of these                             |
| 20 | The motion of molecules in gases i:  | A. Orderly<br>B. Random<br>C. Circular<br>D. All of these                                 |