

ECAT Pre General Science Physics Chapter 11 Heat & Thermodynamics

Sr	Questions	Answers Choice
1	The nature of thermal radiation is similar to:	A. Ultraviolet rays B. Light rays C. Both of them D. None of these
2	A gas which strictly obeys the gas laws under all conditions of temperature and pressure is called:	A. Ideal gas B. Inert gas C. Real gas D. None of these
3	On the compression stroke of the petrol engine, the inlet valve is closed and the mixture is compressed	A. adiabatically B. isothermally C. isochorically D. isobarically
4	If an amount of heat enters the system it could	A. decrease the internal energy B. not change the internal energy C. increase the internal energy D. none of them
5	What temperature is the same on Celsius scale as well as on Fahrenheit scale?	A. 32°C B. -32°C C. -40°C D. -212°C
6	Hotness and coldness of an object is represented in terms:	A. Heat B. Temperature C. Chemical energy D. None of these
7	Amount of heat required to raise the temperature of a body through 1 K is called its	A. Specific heat B. Water equivalent C. Thermal capacity D. Entropy
8	A reversible cycle is the one in which	A. some of the changes are reversible B. all of the changes are reversible C. all of the changes are irreversible D. none of them
9	When the temperature of source and sink of a heat engine become equal entropy change will be	A. Zero B. Max C. Min D. -ve
10	Pressure exerted by a gas is	A. Independent of density of the gas B. Inversely proportional to the density of the gas C. Directly proportional to the square of the density of the gas D. Directly proportional to the density of the gas
11	The product of the pressure and volume of an ideal gas is	A. A constant B. Approximately equal to the universal gas constant C. Directly proportional to its temperature D. Inversely proportional to its temperature
12	Heat travels through vacuum by	A. Conduction B. Convection C. Radiation D. Both A and B

13	A succession of events which bring the system back to its initial condition is called	<ul style="list-style-type: none"> A. reversible process B. irreversible process C. a cycle D. none of them
14	Which of the following is a state variable	<ul style="list-style-type: none"> A. entropy B. pressure C. volume D. all of them
15	The kinetic energy of one molecule of a gas at normal temperature and pressure will be ($k = 8.31 \text{ J/mole K}$) :	<ul style="list-style-type: none"> A. $1.7 \times 10^{3} \text{ J}$ B. $10.2 \times 10^{3} \text{ J}$ C. $3.4 \times 10^{3} \text{ J}$ D. $6.8 \times 10^{3} \text{ J}$
16	On the power stroke, a spark fires the mixtures causing a rapid increase in pressure and temperature and the burning mixture expands	<ul style="list-style-type: none"> A. adiabatically B. isothermally C. isochorically D. isobarically
17	The heat required to raise the temperature of one mole of the substance through 1 K is called	<ul style="list-style-type: none"> A. heat capacity B. specific heat capacity C. molar specific heat D. all of them
18	The example of irreversible process is	<ul style="list-style-type: none"> A. slowly liquification B. slowly evaporation C. an explosion D. all of them
19	One kilogram of different substances contain	<ul style="list-style-type: none"> A. same number of molecules B. different number of molecules C. may be same or different D. none of them
20	A process in which no heat enters or leaves the system is called	<ul style="list-style-type: none"> A. isochoric process B. isothermal process C. adiabatic process D. none of them