ECAT Pre General Science Physics Chapter 11 Heat & Thermodynamics

Sr	Questions	Answers Choice
1	On the power stroke, a spark fires the mixtures causing a rapid increase in pressure and temperature and the burning mixture expands	A. adiabatically B. isothermally C. isochorically D. isobarically
2	The volume of a gas will be double of what it is at 0°C (pressure remaining constant) at	A. 546 K B. 273 K C. 546°C D. 273°C
3	Which of the following is a state variable	A. entropy B. pressure C. volume D. all of them
4	The efficiency of diesel engine is	A. 25% B. 25 - 30% C. 35% D. 35 - 40%
5	Internal energy is the sum of all the forms of	A. K.E B. P.E C. both of them D. none of them
6	Heat travels through vacuum by	A. Conduction B. Convection C. Radiation D. Both A and B
7	Which quantity is important in stating the entropy of the system	A. initial entropy B. final entropy C. change in entropy D. none of them
8	Rice takes longest to cook	A. In a submarine 100 m below the surface of the sea B. At sea level C. At Murree D. At Mount Everest
9	Adiabatic change occurs when the gas	A. expands B. compressed C. expands or compressed D. expands or compressed rapidly
10	Which of the following does not have the same units:	A. Work B. Heat C. Kinetic energy D. Power
11	If the ratio of densities of two gases is 1:4, then the ratio of their rates of diffusion into one another is	A. 2 : 1 B. 4 : 1 C. 1 : 4 D. 3 : 4
12	For the working of a heat engine, there must be	A. a source of heat at high temperature B. a sink at low temperature C. both of them D. none of them
13	An isochoric process is one which take place at	A. Constant internal energy B. Constant entropy C. Constant volume D. Constant pressure
14	A process is a reversible process, if the entropy of the system	A. increases B. decreases C. remains constant

		D. none of them
15	The length of a metallic rod is 5 meter at 100°C. The coefficient of cubical expansion of the metal will be	A. 2.0 x 10⁻⁵/°C B. 4.0x10⁻⁵/°C C. 6.0x10⁻⁵/°C D. 2.33x10⁻⁵/°C
16	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
17	The temperature scale approved in SI units is:	A. Celsius scale B. Kelvin scale C. Fehrenheit scale D. None of these
18	In an ideal gas, the molecules have:	A. Kinetic energy only B. Potential energy only C. Both KE and PE D. None of these
19	Carnot heat engine only used	A. isothermal processes B. adiabatic processes C. both of them D. none of them
20	The kinetic energy of one molecule of a gas at normal temperature and pressure will be (k = 8.31 J/mole K) :	A. 1.7 x 10³J B. 10.2 x 10³J C. 3..4 x 10³J D. 6.8 x 10³J