

ECAT Physics Chapter 11 Heat & Thermodynamics

Sr	Questions	Answers Choice
1	Sadi cannot described an ideal heat engine in	A. 1820 B. 1840 C. 1860 D. 1880
2	On a cold morning a metal surface will feel colder to touch than a wooden surface, because	A. Metal has high specific heat B. Metal has high thermal conductivity C. Metal has low specific heat D. Metal has low thermal conductivity
3	The unit of thermodynamical scale is	A. centigrade B. fahrenheit C. kelvin D. none of them
4	We cannot utilize the heat contents of oceans and atmosphere because	A. there is no reservoir at the same temperature B. there is no reservoir at the temperature lower than any one of two C. there is no reservoir at the temperature higher than any one of two D. none of them
5	Tick the correct pair when M denotes the molecular mass and other symbols carry usual meanings:	A. $N = nN_{sub>A</sub>}$, $M = MN_{sub>A</sub>}$ B. $n = N N_{sub>A</sub>}$, $M = mN_{sub>A</sub>}$ C. $M = N_{sub>A</sub>}/N$, $N_{sub>A</sub>} = m/n$ D. $N = nN_{sub>A</sub>}$, $M = mN_{sub>A</sub>}$
6	The value of $E_{Coulomb}$ is:	A. $9 \times 10^9 Nm^2/C^2$ B. $8.85 \times 10^{12} C^2/Nm^2$ C. $8.85 \times 10^{12} Nm^2/C^2$ D. $9 \times 10^9 C^2/Nm^2$
7	According to kinetic theory of gases, molecules of a gas behave like	A. Inelastic spheres B. Perfectly elastic rigid sphere C. Perfectly elastic non-rigid spheres D. Inelastic non-rigid spheres
8	An isochoric process is one which take place at	A. Constant internal energy B. Constant entropy C. Constant volume D. Constant pressure
9	In an adiabatic expansion, the temperature of the gas	A. increases B. becomes zero C. decreases D. decreases rapidly
10	At $0^\circ K$ which of the following properties of a gas will be zero?	A. Kinetic energy B. Potential energy C. Vibrational energy D. Density
11	The internal energy of an ideal gas system is generally the	A. translational K.E of molecules B. vibrational K.E of molecules C. rotational K.E of molecules D. all of them
12	The temperature of gas is produced by	A. At potential energy of its molecules B. The kinetic energy of its molecules C. The attractive force between its molecules D. The repulsive force between its

13	In an adiabatic process the work is done at the expense of the	A. energy supplied to the system B. energy gained from the surroundings C. internal energy D. none of them
14	The heat required to raise the temperature of one mole of the substance through 1 K is called	A. heat capacity B. specific heat capacity C. molar specific heat D. all of them
15	At constant volume temperature is increased. Then	A. Collision on walls will be less B. Number of collisions per unit time will increase C. Collision will be in straight lines D. Collision will not change
16	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
17	The kinetic energy of one molecule of a gas at normal temperature and pressure will be ($k = 8.31 \text{ J/mole K}$):	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. $6.8 \times 10^3 \text{ J}$
18	The second law of thermodynamics is concerned with the circumstances in which	A. heat can be converted into work B. direction of flow of heat C. none of them D. both of them
19	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
20	An irreversible heat flow from a hot to cold substances of a system, causes the disorder to	A. decrease B. remains the same C. increase D. any one of them