ECAT Physics Chapter 11 Heat & Thermodynamics

Sr	Questions	Answers Choice
1	One kilogram of different substances contain	A. same number of molecules B. different number of molecules C. may be same or different D. none of them
2	When heat is added into the system then change in entropy is	A. negative B. positive C. zero D. any one of them
3	The relationship between Boltzmann constant k with R and N_A is given as:	A. $k = RN_A$ B. $k = R/N_A$ C. $k = NR/N_A$ D. None of these
4	The heat required to raise the temperature of one mole of the gas through 1 K at constant volume is called	A. heat capacity B. specific heat capacity C. molar specific heat D. molar specific heat at constant volume
5	At absolute temperature, the kinetic energy of the molecules	A. Becomes zero B. Becomes maximum C. Becomes minimum D. Remain constant
6	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
7	While deriving equation of pressure by kinetic theory of gases, we take into account:	A. Only linear motion of molecules B. Only rotational motion C. Only vibratory motion D. All of these
8	Heat required to raise the temperature of one mole of a gas through 1 K at constant pressure is called	A. heat capacity B. specific heat capacity C. specific heat at constant volume D. specific heat at constant pressure
9	Sadi carnot described an ideal heat engine in	A. 1820 B. 1840 C. 1860 D. 1880
10	If a process cannot be retraced in the backward direction by reversing the controlling factors, it is	A. a reversible process B. an irreversible process C. any one of them D. both of them
11	One mole of any substance contain	A. same number of molecules B. different number of molecules C. may be same or different D. none of them
12	It is impossible to devise a processes which may convert heat, extracted from a single reservoir, entirely into work without leaving any change in the working system. This is the statement of	A. Clausius statement of second law B. Kelvin'sstatement of second law C. Clausius statement of first law D. Kelvin's statement of first law
13	If water in a closed bottle is taken up to the moon and opened, the water gets	A. Freeze B. Boiled C. Dissociated into O_2 and H_2 D. Evaporated
14	If denotes the total number of molecules in cubic vessel such that m is mass of each milecule and I is length of each side of vessel, then mN/l^3 gives the:	A. Force B. Density C. Work done D. Pressure
15	Internal energy is the sum of all the forms of	A. K.E B. P.E C. both of them

D. none of them

16	A carnot cycle consists of	A. One step B. two step C. three steps D. four steps
17	R.M.S velocity of a particle is V at pressure P. If pressure increases by two times, then R.M.S velocity becomes	A. 2V B. 3V C. 0.5V D. V
18	At O° K which of the following properties of a gas will be zero?	A. Kinetic energy B. Potential energy C. Vibrational energy D. Density
19	The unit of thermodynamical scale is	A. centigrade B. fahrenheit C. kelvin D. none of them
20	When heat is removed from the system	A. negative B. positive C. zero D. any one of them