Physics ECAT Pre Engineering Chapter 11 Heat & Thermodynamics

Sr	Questions	Answers Choice
1	The example of irreversible process is	A. slowly liquification B. slowly evaporation C. an explosion D. all of them
2	On the exaust stroke, the outlet values opens. The residual gases are expelled and piston moves	A. outwards B. inwards C. in either way D. none of these
3	Two metal rods A and B have their initial lengths in the ratio 2 : 3 and coefficients of linear expansion in the ratio 4 : 3. When they are heated through same temperature difference the ratio of their linear expansion is	A. 1 : 2 B. 2 : 3 C. 3 : 4 D. 8 : 9
4	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
5	Truth of kinetic energy is confirmed by:	A. Diffusion of gases B. Brownian motion C. Both A and B D. None of these
6	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
7	The ideal gas law is	A. P = nRT B. V = nRT C. PV =RT D. PV =nRT
8	We can express the work in term of	A. directly measurable variables B. indirectly measurable variables C. either of them D. both of them
9	Brownian motion increases due to	A. Increase in size of Brownian particle B. Increase in temperature of medium C. Increase in density of medium D. Increase in viscosity of medium
10	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
11	The highest efficiency of a heat engine whose low temperature is 17°C and the high temperature is 200°C is	A. 70% B. 100% C. 35% D. 38%
12	At absolute temperature, the kinetic energy of the molecules	A. Becomes zero B. Becomes maximum C. Becomes minimum D. Remain constant
13	At what temperature the adiabatic change is equivalent to the isothermal change?	A. Zero degree Celsius B. Zero Kelvin C. Critical temperature D. Above critical temperature
14	If 42 J heat is transferred to the system and the work done by the system is 32 J then what will be the change in internal energy	A. 0 J B. 2 J C. 5 J D. 10 J
15	Rate of diffusion is	A. Faster in solids than in liquids and gases B. Faster in liquids than in solids and gases

		C. Equal to solids, liquids and gases D. Faster in gases than in liquids and solids
16	A diatomic gas molecule has	A. translational energy B. rotaional energy C. vibrational energy D. all of them
17	Specific heat at constant pressure is greater than the specific heat at constant volume because	A. Heat is used up to increase temperature at constant pressure B. Heat is used by gas for expansions purposes at constant pressure C. Heat is use dup to increase internal energy D. The above statement is invalid
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	The value of E_0in coulomb's law is:	A. 9 x 10⁹Nm²C⁻² B. 8.85 x 10⁻¹²C²N⁻¹m⁻² C. 8.85 x 10⁻¹²Nm²C⁻² D. 9 x 10⁹C²N⁻¹m⁻²
20	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