ECAT Physics Chapter 11 Heat & Thermodynamics

Sr	Questions	Answers Choice
1	The pressure of gas everywhere inside the vessel will be the same provided the gas is of	A. Non-uniform density B. uniform density C. high density D. low density
2	The work done by the system on its environment is considered as	A. positive B. negative C. zero D. any one of them
3	Pressure of a gas at constant volume is proportion to	A. Total energy of gas B. Average P.E to molecules C. Average K.E of molecules D. Total internal energy of gas
4	Carnot heat engine only used	A. isothermal processes B. adiabatic processes C. both of them D. none of them
5	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
6	An amount of water of mass 20 g at 0°C is mixed with 40 g of water at 10°C. Final temperature of mixture is	A. -20°C B. 6.67°C C. 5°C D. 0°C
7	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
8	A process is a reversible process, if the entropy of the system	A. increases B. decreases C. remains constant D. none of them
9	The Boltzman constant has the value	A. $1.38 \times 10^{-23}\,JK^{-1}$ B. $1.28 \times 10^{-23}\,JK^{-1}$ C. $1.38 \times 10^{-26}\,JK^{-1}$ D. $1.28 \times 10^{-26}\,JK^{-1}$
10	First law of thermodynamics tells us that heat energy can be converted into equivalent amount of work, but it is silent about	A. how heat is absorbed B. how heat extracted C. how this conversion takes place D. none of them
11	Which of the following is not an example of adiabatic process	A. the rapid escape of air from a burst type B. the rapid expansion and compression of air through which a sound wave is passing C. cloud formation in the atmosphere D. none of them

12	The percentage of available heat energy converted into work by a diesel engine is roughly	A. 35 %` B. 40 % C. 35 - 40 % D. 25 %
13	The nature of thermal radiation is similar to:	A. Ultraviolet rays B. Light rays C. Both of them D. None of these
14	The ideal gas law is	A. P = nRT B. V = nRT C. PV =RT D. PV =nRT
15	The only significant motion possessed by the mono-atomic gas represented is:	A. Translatory B. Rotatory C. Vibratory D. None of these
16	The efficiency of petrol engine is usually not more than 25% to 30% because of	A. friction B. heat losses C. both of them D. none of them
17	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
18	Generally a temperature scale is established by using certain physical properties of a material which varies	A. nonlinearly with temperature B. linearly with temperature C. either of them D. none of them
19	The state in which ice, water and vapour coexists in equilibrium is called	A. zero degree celsius B. zero degree fahrenheit C. absolute zero D. 373 K
20	A diatomic gas molecule has	A. translational energy B. rotaional energy C. vibrational energy D. all of them