

## ECAT Physics Chapter 11 Heat & Thermodynamics

Sr	Questions	Answers Choice
1	The internal energy of a system does not depend upon the	A. initial state of the system B. final state of the system C. path D. none of them
2	At the constant temperature, if the value of a given mass of a gas is double, then the density of gas becomes:	A. Double B. Remains constant C. Half D. None of these
3	A diatomic gas molecule has	A. translational energy B. rotational energy C. vibrational energy D. all of them
4	Generally a temperature scale is established by	A. one fixed point B. two fixed point C. three fixed point D. four fixed point
5	The concept of entropy was introduced into the study of thermodynamics in	A. 1856 B. 1865 C. 1656 D. 1685
6	If the volume of the gas is to be increased by 4 times, then	A. Temperature and pressure must be doubled B. At constant P the temperature must be increased by 4 times C. At constant T the pressure must be increased by four times D. It cannot be increased
7	The curve representing an adiabatic process is called	A. isotherm B. adiabat C. adiabale D. none of them
8	Which of the following is a state variable	A. entropy B. pressure C. volume D. all of them
9	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
10	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
11	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
12	Pressure may be define as _____ per second per unit area:	A. Change in force B. Change in momentum C. Change in energy D. Work done
13	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
14	The volume of universal gas constant R is:	A. 8.314 J/K mole K B. 8314 J/K mole K C. 8.314 J/mole K D. 8.314 J/mole K

		D. None of these
15	The bicycle pump provides a good example of	A. first law of thermodynamics B. second law of thermodynamics C. third law of thermodynamics D. none of them
16	The absolute temperature for an ideal gas is	A. directly proportional to the rotational K.E of gas molecules B. directly proportional to the vibrational K.E of gas molecules C. directly proportional to the average translational K.E. of gas molecules D. directly proportional to the P.E. of gas molecules
17	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 <span style="color: rgb(84, 84, 84); font-family: arial, sans-serif; font-size: small;">°C</span> B. 6.67 <span style="color: rgb(84, 84, 84); font-family: arial, sans-serif; font-size: small;">°C</span> C. 5 <span style="color: rgb(84, 84, 84); font-family: arial, sans-serif; font-size: small;">°C</span> D. 0 <span style="color: rgb(84, 84, 84); font-family: arial, sans-serif; font-size: small;">°C</span>
18	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
19	In an adiabatic expansion, the temperature of the gas	A. increases B. becomes zero C. decreases D. decreases rapidly
20	If R is gas constant for 1 gram mole, $C_p$ and $C_v$ are specific heat for a solid then	A. $C_p - C_v = R$ B. $C_p - C_v < R$ C. $C_p - C_v = 0$ D. $C_p - C_v > R$