ECAT Physics Chapter 11 Heat & Thermodynamics

Sr	Questions	Answers Choice
1	The process which is carried out at constant temperature is known as	A. adiabatic process B. isothermal process C. isochoric process D. none of them
2	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 molecules
3	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
4	If a system undergoes a natural process it will go in the direction that causes the entropy of the system plus the environment to increase, this is another statement of	A. second law thermodynamics B. first law of thermodynamics C. third law of thermodynamics D. none of them
5	Which of the following is not an assumption of kinetic energy	A. a finite volume of gas consists of very large number of molecules B. the gas molecules are in random motion C. collision between the gas molecules are inelastic D. the size of the gas molecules is much smaller than the separation between molecules
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	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
8	The curve representing an isothermal process is called	A. adiabat B. isotherm C. fixed temperature D. none of them
9	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
10	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
11	If water in a closed bottle is taken up to the moon and opened, the water gets	A. Freeze B. Boiled C. Dissociated into O₂and H₂ D. Evaporated
12	When the temperature of source and sink of a heat engine become equal entropy change will be	A. Zero B. Max C. Min D. -ve
13	A carnot cycle consists of	A. One step B. two step C. three steps D. four steps
		A. thermal effects at each stage are exactly reversed

14	In the reverse process, the working substance passes through the same stages as in the direct process and	B. mechanical effects at each stage are exactly reversed C. thermal and mechanical effects at each stage remain the same D. thermal and mechanical effects at each stage are exactly reversed
15	The percentage of available heat energy converted into work by a diesel engine is roughly	A. 35 %` B. 40 % C. 35 - 40 % D. 25 %
16	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
17	Average KE of a gas molecule has:	A. Direct relation with absolute temperature and inverse relation with pressure B. Direction relation with both absolute temperature and pressure C. Inverse relation with both absolute temperature and pressure D. None of these
18	First law of thermodynamic is special case of	A. Law of conservation of energy B. Charle's law C. Law of conservation of mass D. Boyle's law
19	The pressure exerted by the gas is	A. directly proportional to the P.E B. inversely proportional to the P.E C. inversely proportional to the K.E D. directly proportional to the K.E
20	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