

ECAT Physics Chapter 11 Heat & Thermodynamics

Sr	Questions	Answers Choice
1	During the whole carnot cycle	A. Thermal equilibrium is maintained B. mechanical equilibrium is maintained C. both the thermal and mechanical equilibriums maintained D. both the thermal and mechanical equilibrium is not maintained
2	On the exhaust stroke, the outlet valves opens. The residual gases are expelled and piston moves	A. outwards B. inwards C. in either way D. none of these
3	When two objects are rubbed together, their internal energy	A. remains same B. decreases C. remains the same then decreases D. increases
4	Truth of kinetic energy is confirmed by:	A. Diffusion of gases B. Brownian motion C. Both A and B D. None of these
5	Since the absolute scale is independent of the property of the working substance, hence, can be applied at	A. very high temperature B. very low temperature C. any one of them D. none of them
6	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
7	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
8	The efficiency of diesel engine is	A. 25% B. 25 - 30% C. 35% D. 35 - 40%
9	No spark plug is needed in	A. petrol engine B. diesel engine C. both of them D. none of them
10	The volume of given mass of a gas will be doubled at atmosphere pressure if the temperature of the gas is changed from 150°C to	A. 300 °C B. 573 °C C. 600 °C D. 743 °C
11	A process which can be retraced in exactly reverse order, without producing any change in the surroundings is called	A. reversible process B. irreversible process C. any one of them D. none of them
12	A typical four stroke petrol engine undergoes how many successive processes in each cycle	A. one B. two C. three D. four

13	The basis to define a temperature scale that is independent of material properties is provided by	A. carbon cycle B. nitrogen cycle C. Carnot cycle D. irreversible cycle
14	At 0° K which of the following properties of a gas will be zero?	A. Kinetic energy B. Potential energy C. Vibrational energy D. Density
15	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
16	The rate of change of momentum of a molecule is equal to:	A. Pressure B. Work C. Density D. Force
17	Real gases strictly obey gas law at:	A. High pressure and low temperatures B. Low pressures and high temperatures C. High pressures and high temperatures D. None of these
18	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
19	In an ideal gas, the molecules have:	A. Kinetic energy only B. Potential energy only C. Both KE and PE D. None of these
20	In the reverse process, the working substance passes through the same stages as in the direct process and	A. thermal effects at each stage are exactly reversed 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