ECAT Physics Online Test

Sr	Questions	Answers Choice
1	According to the second law, which is must to produce work	A. a source contains a large amount of heat energy B. two sources at the same temperature C. two sources at the different temperatures D. a source contains a small amount of energy
2	It is impossible to devise a processes which may convert heat, extracted from a single reservoir, entirely into work without leaving any change in the working system. This is the statement of	A. Clausius statement of second law B. Kelvin'sstatement of second law C. Clausius statement of first law D. Kelvin's statement of first law
3	The percentage of available heat energy converted into work by a diesel engine is roughly	A. 35 %` B. 40 % C. 35 - 40 % D. 25 %
4	The percentage of available heat energy converted into work by a petrol engine is roughly	A. 35 % B. 40 % C. 35 to 40 % D. 25 %
5	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
6	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
7	In a heat engine, heat is supplied by the	A. cold reservoir B. sink C. hot reservoir D. none of them
8	The earliest heat engine was	A. petrol engine B. diesel engine C. electric engine D. steam engine
9	A heat engine is that which converts	A. mechanical energy into thermal energy B. thermal energy into mechanical energy C. K.E into potential energy D. heat energy into light energy
10	The example of irreversible process is	A. slowly liquification B. slowly evaporation C. an explosion D. all of them
11	The example of reversible process is	A. an explosion B. changes occur suddenly C. slow compression of a gas D. all of them
12	If a process cannot be retraced in the backward direction by reversing the controlling factors, it is	A. a reversible process B. an irreversible process C. any one of them D. both of them
13	A reversible cycle is the one in which	A. some of the changes are reversible B. all of the changes are reversible C. all of the changes are irreversible D. none of them
14	A succession of events which bring the system back to its initial condition is called	A. reversible process B. irreversible process

		C. a cycle D. none of them
15	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
16	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
17	Heat required to raise the temperature of one mole of a gas through 1 K at constant pressure is called	A. heat capacity B. specific heat capacity C. specific heat at constant volume D. specific heat at constant pressure
18	The heat required to raise the temperature of one mole of the gas through 1 K at constant volume is called	A. heat capacity B. specific heat capacity C. molar specific heat D. molar specific heat at constant volume
19	The heat required to raise the temperature of one mole of the substance through 1 K is called	A. heat capacity B. specific heat capacity C. molar specific heat D. all of them
20	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
21	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
22	The curve representing an adiabatic process is called	A. isotherm B. adiabat C. adiable D. none of them
23	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
24	Adiabatic change occurs when the gas	A. expands B. compressed C. expands or compressed D. expands or compressed rapidly
25	In an adiabatic expansion, the temperature of the gas	A. increases B. becomes zero C. decreases D. decreases rapidly
26	In an adiabatic process the work is done at the expense of the	A. energy supplied to the system B. energy gained from the surroundings C. internal energy D. none of them
27	A process in which no heat enters or leaves the system is called	A. isochoric process B. isothermal process C. adiabatic process D. none of them
28	The curve representing an isothermal process is called	A. adiabat B. isotherm C. fixed temperature D. none of them
29	In case of an ideal gas, the P.E associated with its molecule is	A. maximum B. zero C. minimum D. not fixed
		A. isochoric process B. adiabatic process

30	In which process the condition for the application of Boyle's law on the gas is fulfilled	B. adiabatic process C. isothermal process D. none of them