ECAT Pre General Science Physics Chapter 11 Heat & Thermodynamics Online Test

Sr	Questions	Answers Choice
1	The efficiency of diesel engine is	A. 25% B. 25 - 30% C. 35% D. 35 - 40%
2	No spark plug is needed in	A. petrol engine B. diesel engine C. both of them D. none of them
3	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
4	On the exaust stroke, the outlet values opens. The residual gases are expelled and piston moves	A. outwards B. inwards C. in either way D. none of these
5	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
6	On the compression stroke of the petrol engine, the inlet value is closed and the mixture is compressed	A. adiabatically B. isothermally C. isochorcally D. isobarically
7	A typical four stroke petrol engine undergoes how many successive processes in each cycle	A. one B. two C. three D. four
8	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
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	The unit of thermodynamical scale is	A. centigrade B. fahrenheit C. kelvin D. none of them
11	The absolute temperature of the tripple point of water is	A. 100°C B. 4°C C. 373 K D. 273.16 K
12	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
13	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
14	Generally a temperature scale is established by	A. one fixed point B. two fixed point C. three fixed point D. four fixed point

15	The efficiency of carnot engine cannot be 100% or one unless cold reservoir is at	A. 100 K B. 273 K C. 0 K D. -273 K
16	Efficiency of carnot engine is independent of the	A. temperature of sink B. temperature of source C. nature of the working substances D. none of them
17	The highest efficiency of a heat engine whose low temperature is 17°C and the high temperature is 200°C is	A. 70% B. 100% C. 35% D. 38%
18	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
19	During the whole carnot cycle	A. Thermal equilibrium is maintained B. mechanical equilibrium is maintained C. both the thermal and mechanical equilibriumis maintained D. both the thermal and mechanical equilibrium is not maintained
20	A carnot cycle consists of	A. One step B. two step C. three steps D. four steps
21	Carnot heat engine only used	A. isothermal processes B. adiabatic processes C. both of them D. none of them
22	Sadi carnot described an ideal heat engine in	A. 1820 B. 1840 C. 1860 D. 1880
23	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
24	For the working of a heat engine, there must be	A. a source of heat at high temperature B. a sink at low temperature C. both of them D. none of them
25	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
26	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
27	The percentage of available heat energy converted into work by a diesel engine is roughly	A. 35 %` B. 40 % C. 35 - 40 % D. 25 %
28	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 %
29	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
		A. how heat is absorbed

30	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