

ECAT Pre General Science Physics Chapter 11 Heat & Thermodynamics

Sr	Questions	Answers Choice
1	Triple point of water is	A. 273.16 °F B. 372.16K C. 273.16 °F D. 273.16
2	Rate of diffusion is	A. Faster in solids than in liquids and gases B. Faster in liquids than in solids and gases C. Equal to solids, liquids and gases D. Faster in gases than in liquids and solids
3	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 %
4	In the study of thermodynamics, which gas is considered as the working substance	A. real gas B. ideal gas C. any gas may be ideal or real D. none of them
5	The unit of thermodynamical scale is	A. centigrade B. fahrenheit C. kelvin D. none of them
6	While deriving equation of pressure by kinetic theory of gases, we take into account:	A. Only linear motion of molecules B. Only rotational motion C. Only vibratory motion D. All of these
7	What temperature is the same on Celsius scale as well as on Fahrenheit scale?	A. 32 °C B. -32 °C C. -40°C D. -212 °C
8	The coefficient of linear expansion of iron is 0.000011 per°K. An iron rod is 10 metre long at 27°C. The length of the rod will be decreased by 1.1 mm when the temperature of the rod changes to	A. 0 °C B. 10 °C C. 17 °C D. 20 °C
9	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
10	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
11	On a cold morning a metal surface will feel colder to touch than a wooden surface, because	A. Metal has high specific heat B. Metal has high thermal conductivity C. Metal has low specific heat

because

C. metal has low specific heat
D. Metal has low thermal conductivity

12 The value of E_{Coulomb} 's law is:

- A. $9 \times 10^9 \text{ Nm}^2 \text{ C}^{-2}$
B. $8.85 \times 10^{12} \text{ C}^2 \text{ N}^{-1} \text{ m}^{-2}$
C. $8.85 \times 10^{12} \text{ Nm}^2 \text{ C}^{-2}$
D. $9 \times 10^9 \text{ C}^2 \text{ N}^{-1} \text{ m}^{-2}$

13 At constant temperature, if the density of the gas is increased, its pressure will:

- A. One kg of a substance
B. Unit volume of a substance
C. One mole of a substance
D. None of these

14 A process is a reversible process, if the entropy of the system

- A. increases
B. decreases
C. remains constant
D. none of them

15 In case of an ideal gas, the P.E associated with its molecule is

- A. maximum
B. zero
C. minimum
D. not fixed

16 A gas which strictly obeys the gas laws under all conditions of temperature and pressure is called:

- A. Ideal gas
B. Inert gas
C. Real gas
D. None of these

17 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

18 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

19 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

20 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