

## PPSC Physics Chapter 3 Thermal Properties of Matter

Sr	Questions	Answers Choice
1	The expression $PV/KT$ represents.	A. Number of moles of the gas B. Number of molecules in the gas C. Total mass of the gas D. Density of the gas
2	If pressure and temperature of an ideal gas is doubled and volume is halved, the number of the gas molecules.	A. Become half B. Remain constant C. Become double D. Become three times
3	If the specific latent heat of vaporization of oxygen is $214 \text{ kJ kg}^{-1}$ how much heat will be absorbed when $3.0 \text{ kg}$ of oxygen is boiled off at its boiling point.	A. $14 \text{ kJ}$ B. $64 \text{ kJ}$ C. $140 \text{ kJ}$ D. $642 \text{ kJ}$
4	When a solid is melting the temperature remains constant even though heat is being supplied because the	A. Heat is being used to break up the intermolecular bonds B. Solid is not absorbing any heat C. Molecules are moving faster D. Molecules are farther a part
5	During solidification the temperature.	A. Remains constant at the freezing point B. Increases at the freezing point C. Decreases at the freezing point D. Decreases at the melting point
6	The law of conservation of energy is applicable to the system whose constituents are.	A. At rest B. In orderly motion C. In random motion D. Moving at constant speed
7	What is the triple point of water.	A. $273.15 \text{ K}$ B. $0 \text{ K}$ C. $100 \text{ K}$ D. $0 \text{ }^{\circ}\text{C}$
8	On which of the following the kinetic theory of gases is not applicable.	A. Water vapour B. Smoke particles C. Bound particles D. Free electrons
9	If the gas pressure is increased then its mean free path becomes.	A. More B. Zero C. Infinite D. Less
10	Below which temperature gas can be liquified by increasing its pressure.	A. Natural temperature B. Boyle temperature C. Critical temperature D. Absolute zero
11	If the number of gas molecules in a cubical vessel is increased from $N$ to $3N$ then its pressure and total energy will be.	A. Half B. Three times C. Double D. Four times
12	The highest efficiency of a heat engine whose low temperature is $17 \text{ }^{\circ}\text{C}$ and the high temperature of $200 \text{ }^{\circ}\text{C}$ is.	A. $20\%$ B. $30\%$ C. $35\%$ D. $40\%$
13	What is the internal energy of a mono atomic ideal gas.	A. Potential only B. Parity kinetic and parity potential C. Kinetic only D. Neither kinetic nor potential
14	In the gas equation $PV = nRT$ , $V$ is the volume of.	A. $1 \text{ g}$ of gas B. $1 \text{ L}$ of gas C. $1 \text{ mol}$ of gas D. $1 \text{ kg}$ of gas
15	The gas temperature is increased from $27 \text{ }^{\circ}\text{C}$ to $127 \text{ }^{\circ}\text{C}$ What is the ratio of mean kinetic energies.	A. $3/4$ B. $4/3$ C. $9/10$ D. $10/9$

16	The heat required to sublime one mole of the substance at standard temperature and pressure is called.	A. Latent heat B. Specific heat C. Heat of sublimation D. Heat capacity
17	Mean free path in a gas is the	A. Distance travelled by a molecule before hitting a wall B. Average distance travelled by a molecule in one second C. Average distance travelled between molecules between any two successive collisions D. Root mean square velocity
18	The gas thermometer is taken as the primary standard because.	A. Thermometers are easily reproducible B. Readings can be accurately taken C. No correction are necessary D. It produces the thermodynamic scale
19	A standard fixed point for calibrating a thermometer is.	A. Boiling point of water B. Melting point of ice C. Temperature of steam D. Triple point of water
20	In general work done on or by a gas depends on.	A. The initial state only B. The final state only C. The initial and final states D. The initial state the final state and the path