

## PPSC Chemistry Part I Physical Chemistry Online Test

Sr	Questions	Answers Choice
1	For one mole a gas, the total kinetic energy is equal to.	A. $\frac{2}{3} R t$ B. $\frac{3}{2} R T$ C. $\frac{2}{3} k T$ D. $\frac{3}{2} k T$
2	Which of the following is not a correct postulate of the kinetic theory of gases.	A. The molecules are in random motion B. The gaseous collisions are perfectly elastic C. The average kinetic energies of different gases are equal at a particular temperature. D. The pressure exerted on the walls of the container is due to inter molecular forces.
3	The gases $H_2$ , $N_2$ , $O_2$ and $NH_3$ . $H_2 = 2$ , $N_2 = 28$ , $O_2 = 32$ and $NH_3 = 17$ will effuse in the order.	A. $H_2 > N_2 > O_2 > NH_3$ B. $NH_3 > O_2 > N_2 > H_2$ C. $H_2 > N_2 > NH_3 > O_2$ D. $H_2 > NH_3 > N_2 > O_2$
4	For a given mass of a gas, if pressure is reduced to half and temperature is doubled, then volume.	A. $2V$ B. $4V$ C. $8V$ D. $V$
5	For a given mass of a gas at constant temperature, if the value $V$ becomes $a$ times, the pressure will become.	A. $3P$ B. $\frac{P}{3}$ C. $9P$ D. $\frac{3P}{T}$
6	Which of the following statement is not correct regarding the constant $R$ and in ideal gas equation $PV = nRT$	A. Its value is independent of temperature B. Its value is independent of pressure C. In SI Units its value is $8.314 \text{ K}^{-1} \text{ mol}^{-1}$ D. It is called the universal gas constant per molecule.
7	For a given mass of a gas if temperature increase	A. Pressure and volume remain constant B. Volume increases provided pressure is kept constant C. Pressure decreases provided volume is constant D. Both volume and pressure decrease
8	Total pressure exerted by a mixture of two or more than two gases in a definite volume as any given temperature is equal to the sum of partial pressures which each gas would exert, if it occupied the same volume alone, at the same temperature This is a statement.	A. Boyle's law B. Charles's law C. Graham's law D. Dalton's law
9	The constant temperature and pressure, the rates of effusion of various gases vary inversely as square root of their density. This is a statement of.	A. Boyle's law B. Charles's law C. Graham's law D. Dalton's law
10	Equal volumes of all gases, under similar conditions of temperature and pressure, contain equal number of molecules. This is a statement of.	A. Graham's law B. Dalton's law C. Avogadro's law D. Boyle's law
11	The volume of given mass of gas at constant pressure is directly proportional to the absolute temperature. This is a statement of.	A. Charles's law B. Boyle's law C. Avogadro's law D. Dalton's law
12	The volume of a given mass of gas at constant temperature varies inversely with the pressure. This is a statement of.	A. Charles's law B. Avogadro's law C. Boyle's law D. Dalton's law

A. 760 mm of Hg

13	The SI unit of pressure is Pascal it is define da sa force per unit are of 1N/m2 one atmosphere of pressure is equal to.	B. 1 bar C. 101 k Pa D. 760 torr E. All are correct
14	Which of the following statement is not related to the characteristics of gaseous state.	A. The inter molecular forces of attraction are not strong in gaseous state B. The gases do not have definite shape and volume C. The gases are characterized by low density. D. The gases have low comprehensibility
15	A theoretical link between quantum mechanics and thermodynamic is.	A. Electrochemistry B. Kinetic theory of gases C. Spectroscopic analysis D. Statistical thermodynamics
16	Which of the following is not evoked in quantum theory?	A. Schrodinger wave equation B. The rigid rotor approximation C. The particle in a box D. Boltzmann distribution
17	The Schrodinger equation when solved for any system gives.	A. The mean force path B. The Polarizability C. The energy function D. The wave function
18	In quantum theory, which of the following tells us that the prediction of quantum mechanics must pass smoothly into those of classical mechanics as we progress in a continuous way from microscopic to macroscopic.	A. Uncertainty principle B. Correspondence principle C. Probability distribution D. Aufbau principle
19	Which of the following statement is not related to MOT	A. Atomic orbitals lose their identities B. MOT gives as idea of denationalization C. MOT uses all the orbitals and elections D. It treated bond as purely covalent
20	Which of the following statement is not related to VBT	A. individual orbitals lose their indention B. VBT uses the concept of resonance C. VBT does not explain the paramanhetic nature of molecule D. it uses only valence electron