

MDCAT Chemistry Chapter 3 Gases Online Test

Sr	Questions	Answers Choice
1	If increase in temperature and volume of an ideal gas is two times, then the initial pressure P changes to	A. 4P B. P C. 2P D. 3P
2	Helium atom is two times heavier than a hydrogen molecule. At 298 K, the average kinetic energy of a helium atom is	A. same as that of a hydrogen molecule B. half that of a hydrogen molecule C. two times that of a hydrogen molecule D. four times that of hydrogen molecule
3	For an ideal gas, number of mole in terms of its pressure P, temperature T and gas constant is	A. PT/R B. PRT C. PV/RT D. RT/P
4	Which type of motion is exhibited by gases?	A. Vibrational B. Transitional C. Rotational D. All of them
5	The volume of given mass of gas is directly proportional to absolute temperature when pressure is kept constant this is called	A. Boyle's law B. Charles's law C. Graham's law D. Dalton's law
6	If temperature is 73K and volume is 146 cm ³ then calculate the value of $K=V/T$	A. 5 B. 4 C. 3 D. 2
7	An ideal gas, obeying Kinetic theory of gases cannot be liquified, because	A. its critical temperature is above 0°C B. its molecules are relatively small in size C. It solidifies before becoming a liquid D. Forces acting between its molecules are negligible
8	What are the conditions under which the relation between volume (V) and number of moles (n) of gas is plotted? (Pressure; T-temperature)	A. constant P and T B. constant P and V C. constant T and V D. constant n and v
9	If a gas expands at constant temperature	A. The pressure decreases B. The Kinetic energy of the molecules remains the same C. The kinetic energy of the molecules decreases D. The number of molecules of the gas increase
10	The density of neon will be highest at	A. STP B. 0°C, 2 atm C. 273°C, 1 atm D. 273°C, 2 atm
11	An ideal gas expands according to $PV=\text{constant}$. On expansion, the temperature of gas	A. will rise B. will drop C. cannot be determined because the external pressure is not known D. will remain same
12	According to the kinetic theory of gases	A. The pressure exerted by a gas is proportional to mean square velocity of the molecules B. The pressure exerted by the gas is proportional to the root mean square velocity of the molecules C. The root mean square velocity is inversely proportional to the temperature D. The mean translational KE of the

		D. The mean translational KE of the molecule is directly proportional to the absolute temperature
13	According to kinetic theory of gases kinetic energy depends on	A. Temperature B. Collision C. Pressure D. Atomic number
14	Which is not true in case of an ideal gas?	A. It cannot be converted into a liquid B. There is no interaction between the molecules C. All molecules of the gas move with same speed D. At a given temperature P*V is proportional to the amount of the gas
15	The molecular speed Crms of gas is	A. Independent of temperature B. Proportional to the absolute temperature C. Proportional to the square root of absolute temperature D. Proportional to the square of absolute temperature
16	At constant volume, for a fixed number of moles of a gas the pressure of the gas increases with size of temperature due to	A. increase in average molecular speed B. increase in number of moles C. increase in molecular attraction D. decrease in the distance between the molecules
17	The root mean square velocity of a gas is doubled when the temperature is	A. reduced to half. B. reduced to one-fourth C. increased four times D. increased two times
18	Which one of the following statements is wrong for gases?	A. gases do not have a definite shape and volume B. volume of the gas is equal to volume of container confining the gas C. confirmed gas exerts uniform pressure on the walls of its container in which it is enclosed D. mass of gas cannot be determined by weighing a container in which it is enclosed
19	The pressure of gas at constant temperature in a container of 2dm ³ is 10 atm what will be its final pressure if it is connected with 10 dm ³ container	A. 2 atm B. 1.6 atm C. 5 atm D. 1 atm
20	One dm ³ of H ₂ and O ₂ : has different masses but no. of particles are	A. same B. H ₂ has greater C. different D. O ₂ has greater
21	.The number of moles in 2.24 dm ³ of H ₂ gas at STP is:	A. 1 B. 0.1 C. 10 D. 0.01
22	Theoretically, the temperature at which volume of gas become equal to zero is called	A. Boiling point of water B. Zero absolute C. Zero Kelvin D. both B and C
23	The motion imparted to the gas molecules by gravity is	A. very small B. very large C. negligible D. appreciable
24	The temperature of a gas is directly proportional to its	A. average translational kinetic energy B. enthalpy C. internal energy D. hydration energy
25	The pressure exerted by gas molecules is due to their	A. collisions B. densities C. masses D. kinetic energy
26	The volume of gas depends upon the----- molecules	A. Size of B. Space between C. Molecular weight D. both a and b

27	The mono atomic gases are	A. Halogens B. Noble gases C. 6h group elements D. Nitrogen and oxygen
28	Gas is enclosed in a container of 20cm ³ with the moving piston. According to kinetic theory of gases, what is the effect on freely moving molecules of the gas if temperature is increased from 20°C to 100C.	A. Colliding capability of molecule will become lower B. Pressure will become one half C. Temperature has no effect on freely moving molecules D. Volume will be increased
29	Which of the following is the correct equation to calculate relative molecular mass of a gas	A. $M = mPRTV$ B. $M = mPR/VT$ C. $M = PV/mRT$ D. $M = mRT/PV$
30	Which of the statement is applicable for both ideal and real gases molecules?	A. Have no forces of attraction B. Collisions between the molecules is elastic C. Molecules are in random movement D. The actual volume of gas is negligible as compared to the volume of gas
31	At absolute zero the molecules of hydrogen gas will have	A. Only translational motion B. Only vibrational motion C. Only rotational motion D. All the motion are ceased
32	According to the general gas equation, density of an ideal gas depends upon	A. Pressure B. Temperature C. Molar mass of the gas D. All of the above
33	The actual volume of gas molecules is considered negligible at following pressures	A. 2atm B. 4atm C. 6 atm D. 8 atm
34	Charles's law is only obeyed at which temperature scale	A. Celsius B. Kelvin C. Fahrenheit D. both A&B
35	The relationship between density and molar mass of a gas is	A. Directly proportional B. ^{Inversly proportional} C. Straight line D. Stoichiometric
36	At higher temperature isotherm of Boyle's law moves away from both axis, is due to increase in	A. pressure B. No. of moles C. Volume D. all of these
37	Under which condition CO has the maximum molar volume.	A. high T and P B. Low T and High p C. high T and low pressure D. Low T and low P
38	If volume of an ideal gas at 0°C 536cm ³ , what is volume at 1°C	A. 373 cm ³ B. 646 cm ³ C. Becomes 0cm ³ D. 746 cm ³
39	The number of molecules in 22.4 dm ³ of gas at 0°C and 1 atm are	A. $6.02 \times 10^{(23)}$ B. $6.02 \times 10^{(25)}$ C. $6.02 \times 10^{(22)}$ D. $6.02 \times 10^{(21)}$
40	At higher temperature isotherm of Boyle's law moves away from both axis, is due to increase in:	A. pressure B. No. of moles C. Volume D. All
41	Under which condition CO has the maximum molar volume	A. high T and P B. Low T and High p C. high T and low P D. Low T and low P
42	If volume of an ideal gas at 0C° 536cm ³ , what is volume at 1°C	A. 373 cm ³ B. 646 cm ³ C. Becomes 0cm ³ D. 746 cm ³
43	The volume of a gas	A. is constant B. increases with T decrease

43	The volume of a real gas	C. becomes zero at absolute zero D. never becomes zero
44	At higher temperature what is true for gases	A. pressure is decreased B. volume is decreased C. number of moles are decreased D. KE is increased
45	Density of a gas increases by	A. increasing value of R B. decreasing value of R C. increasing T D. decreasing T