

MDCAT Chemistry Online Test

Sr	Questions	Answers Choice
1	The relative rates of diffusion of a gas (Mol.wt.=98) as compared to hydrogen will be	A. 1/7 B. 1/5 C. 1/4 D. 1
2	The kinetic theory of gases predicts that total kinetic energy of a gaseous assembly depends on	A. Pressure of the gas B. Temperature of the gas C. Volume of the gas D. Pressure, temperature, and volume of the gas.
3	Which of the following statement is correct if the intermolecular forces in liquids A, B and C are in the order $A < B < C$?	A. B evaporates more readily than A B. B evaporates less readily than C C. A and B evaporates at the same rate D. A evaporates more readily than C
4	The density of a gas is 1.964 g dm^{-3} at 273K and 76 cm Hg The gas is	A. CH_4 B. CO_2 C. C_2H_4 D. Xe
5	Critical temperature for a gas depends upon	A. Shape of molecule B. Size of molecules C. Inter molecular forces D. All of these
6	Pressure remain constant at which temperature the volume of gas becomes twice of what it is at 0°C	A. 546°C B. 546K C. 200°C D. 273K
7	Which of the following gas will have lowest rate of diffusion	A. CH_4 B. N_2 C. NH_3 D. CO_2
8	Observed pressure of gas on the walls of container is less than actual pressure due to	A. Hephazard motion B. Inter molecular attractive forces C. Elastic collision D. Repulsive forces
9	The deviation of a gas from ideal behaviour is maximum at	A. -10°C and 5.0 atm B. 100°C and 2.0 atm C. -10°C and 2.0 atm D. 0°C and 2.0 atm
10	Units of van der Waals constant a is	A. $\text{atm dm}^6/\text{mol}^2$ Nm^4/mol^2 B. atm dm^4/mol^2 Nm^4/mol^2 C. atm dm^4/mol^2 Nm^6/mol^2 D. None of these
11	A line parallel to x-axis is obtained when graph is drawn between	A. Volume on abscissa pressure on ordinate B. Volume on abscissa PV on ordinate at all conditions C. Pressure on abscissa PV on ordinate at constant temperature D. None of these
12	Sudden expansion of gas molecule cause cooling because	A. Expansion release some amount of energy B. During expansion new force of attraction are developed and energy is released C. During expansion force of attraction between closest molecules break and energy is used D. Kinetic energy of gas molecules increases
13	Which of the following gas cannot be liquefied by Linde s method	A. H_2O vapours B. N_2 C. H_2 D. CO_2

14	In a closed vessel a gas is heated from 300 K to 600K The kinetic energy becomes remains	A. Double B. Same C. Half D. Four times
15	The process of effusion is best understood by law	A. Grahams B. Boyle s C. Charles s D. Avogadro s
16	Equal masses of methane and oxygen are mixed in an empty container at 25°C The fraction of total pressure exerted by oxygen is	A. 1/3 B. 1/9 C. 8/9 D. 16/17
17	Charles s law is only satisfied if temperature is taken on	A. Kelvin scale (b) B. Celsius scale (°C) C. Fahrenheit scale (°F) D. All of these
18	Van der Waals equation explains the behaviour of	A. Real gases B. Mixture of gases C. Ideal gas D. Diatomic gases
19	Which of the following substance has maximum critical temperature	A. H_2O B. N_2 C. SO_2 D. Ne
20	Plasma was introduced by	A. Crookes B. Soddy C. Faraday D. Van der Waal
21	The unit of R depends on	A. Mole B. Pressure volume C. Temperature D. None of these
22	Which of the following is not the application of plasma	A. Fluorescent light bulb B. Removal of hazardous chemical C. Neon signs D. Corrosion effective
23	The sun is a ball of plasma heated by nuclear fusion is	A. 1.0 million km B. 2.0 million km C. 1.5 million km D. 2.5 million km
24	At higher temperature isotherm moves away from y-axis because of increase in	A. Pressure B. Number of moles C. Volume D. Mass
25	Air contains 78% N_2 , 21% O_2 and 1% other gases at sea level the partial pressure of O_2 is	A. 760 torr B. 159 torr C. 592 torr D. 7.6 torr
26	Graham s law refers to	A. Boiling point of gases B. Gas compression problems C. Gaseous diffusion D. Volume changes of gases due to change in temperature
27	A real gas obeying van der Waals equation will resemble ideal gas if	A. Both a and b are large B. a is large and b is small C. Both a and b are small D. a is small and b is large
28	Which of the following is exact relationship between °F and C°	A. $^{\circ}\text{F} = 5/9[^{\circ}\text{C}-32]$ B. $^{\circ}\text{C} = 5/9[^{\circ}\text{F}]+32$ C. $^{\circ}\text{F} = 9/5^{\circ}\text{C}+32$ D. All
29	In intense electrical field and at a very high temperature matter generally exist in	A. Solid state B. Plasma state C. Liquid state D. Gaseous state
30	Pressure of 1Nm^{-2} is equal to	A. One bar B. 1 psi C. One pascal D. One atmosphere
31	General gas equation is combination of	A. Boyle s law B. Avogadro s law C. Charles s law

		C. Charles's law D. All of these
32	Temperature at which molecular motion ceases is called	A. Absolute zero B. Absolute temperature C. Critical temperature D. Difficult to predict
33	The highest temperature at which gas can be liquefied and above which liquefaction is impossible is called	A. Boiling temperature B. Upper consolute temperature C. Transition temperature D. Critical temperature
34	The rate of diffusion of hydrogen gas is three times than that of an unknown gas at same temperature and pressure than the molar mass of unknown gas is	A. 32 B. 18 C. 16 D. 27
35	Which of the following formula is correct for density of any gas	A. $d = RT/PM$ B. $d = PM/RT$ C. $d = MT/PR$ D. $d = RM/PT$
36	Which of the following gases shows more ideal behaviour at 0°C	A. CH_4 B. CH_4 C. He D. NH_3
37	Compressibility factor for an ideal gas is	A. 1.5 B. 1.0 C. 2.0 D. 0.5
38	Under which conditions real gases deviate from ideal behaviour	A. Low temperature and low pressure B. Low temperature and high pressure C. High temperature and high pressure D. High temperature and low pressure
39	The value of van der Waals constant a for gases CO_2 , N_2 , and SO_2 , are 3.59, 1.39, 1.36, and 6.17 $\text{atm dm}^6 \text{ mol}^{-2}$ respectively the gas which can be most easily liquefied is	A. CO_2 B. O_2 C. N_2 D. SO_2
40	Liquids are less common than solids and gases because	A. They exist in narrow range of temperature and pressure B. They have definite volume C. Liquid molecules can slide past each other D. Molecules contain three type of motion
41	Relationship between volume of a gas and prevailing conditions of temperature and pressure are called	A. Gas laws B. Equilibrium laws C. Rate laws D. None of these