MDCAT Chemistry Online Test

Sr	Questions	Answers Choice
1	The kinetic energy of three moles of gas is:	A. 3/2 RT B. 3 RT C. 1/2 RT D. 2 RT
2	The total K.E. of one mole of an ideal gas is given by:	A. 1/2 RT B. 3/2 RT C. 1/2 KT D. 3/2 KT
3	Lind's ,method for liquefaction of gases is based on the principle of:	A. Graham's law of diffusion B. Joule Thomson effect C. Avogadro's hypothesis D. Dalton's law of partial pressure
4	The distribution of energies among the molecules of gases was studied by:	A. Maxwell B. Coulomb C. Newton D. Boltzmann
5	Smell of cooking gas during leakage from gas cylinder is detected because of the property of:	A. Effusion B. Evapotration C. Diffusion D. Conduction
6	The rate of diffusion of a gas is inversely proportional to:	A. Density of a gas B. Velocity of the gas C. Viscosity of the gas D. All of above
7	The diffusion of gasses at absolute zero will be:	A. Slightly decrease B. unchanged C. Slightly increased D. Zero
8	The rate of diffusion of a gas of molar mass 72 as compared to H_2will be:	A. Same B. 6 times C. 1.4 times D. 1/6 times
9	Which of the following gases have maximum root mean square velocity at 25°C:	A. SO₂ B. NH₃ C. CO₂ D. H₂S
10	The ratio of diffusion of equal volume of He and $SO_2$is (molecular mass He = 4, SO_2 = 64):	A. 1:4 B. 16:1 C. 1:16 D. 4:1
11	Which of the following gases diffuse quickly:	A. N₂ B. NH₃ C. CO₂ D. Cl₂
12	What can be deduce about two gases which have the same molecular mass:	A. They have same numbers of atoms in a molecule B. They have same rate of diffusion C. They have same boiling points D. They have equal solubility in water at room temprature
13	Which of the following is an example of diffusion?	A. Spreading of smell of flowers in garden B. Steam condensing on a cold window C. Bubbles rising in a beaker of boiling water D. All of above
14	Deep sea divers take oxygen with:	A. A heavy gas B. A lighter gas C. An inert gas D. All of above

15	Dalton's law finds its application during the process of:	A. Digestion B. Respiration C. Reproduction D. All of above
16	The partial pressure of gas can be calculated if we know total pressure of mixture and:	A. Number of protons B. Number of electrons C. Number of neutrons D. Mole fraction of gases
17	Partial pressure of gases in a mixture depend upon:	A. Number of moles B. Number of protons C. Number of electrons D. Number of neutrons
18	Total pressure of mixture of two gases is:	A. The ratio of their partial pressure B. The product of their partial pressure C. The difference partial pressure D. The sum of their partial pressure
19	Which pair of gases do not obey Dalton's law of partial pressures?	A. H2 and He B. NH3and HCl C. H2 and O2 D. N2 and O2
20	One molecule of gas is approximately Distance_____ times its own diameter from its neighbour at room temperature.	A. 30 B. 3000 C. 3 D. 300
21	Oxygen molecule is 16 times heavier than:	A. Helium B. Hydrogen C. Neon D. Aluminium
22	Equal volumes of ideal gases contain equal number of molecules at:	A. Same temperature B. Same pressure C. Same environmental conditions D. Both (A) and (B)
23	The value of general gas constant R is derived from:	A. Newton's Cooling law B. Maxwell's law C. Avogadro's law D. Charle's law
24	If R, T, M, V and P are gas constant, temperature, molar mass, volume and pressure then density is given by:	A. M/V B. RT/M C. PM/RT D. V/M
25	Which of the following equation is for idea gas:	A. PV = dRT B. PR = nTP C. PM = nRT D. PV = nRT
26	Which one of the following gases has lowest density at room temperature:	A. NH₃ B. Ne C. N₂ D. CO
27	At same temperature which substance has high kinetic energy:	A. Liquid water B. N₂gas in a container C. Solid piece of iron D. Solution of alcohol and water
28	If the number of gas molecules are doubled in the certain volume the pressure is:	A. Increased to four times B. Remains unchanged C. Doubeld D. Decrease to half
29	A gas is heated in such a way that its volume and absolute temperature both are doubled. the pressure of gas:	A. Becomes 4 time B. Becomes half C. Becomes 2 time D. Remains same
30	The volume occupied by 1.4g of N2at STP is:	A. 2.24 dm3 B. 1.12 dm3 C. 112 cm3 D. 22.4 dm3
31	At constant temperature when pressure of a gas is plotted against volume, the curve is:	A. Slanting straight line. B. Parabolic. C. Straight line, parallel to pressure axis. D. Of neither type.
		A. Kinetic energy of molecules will

32	Keeping the temperature constant, if the gas is expended:	A. Kinetic energy of molecules will increase. B. Number of gas molecules increases. C. Temperature will increase. D. Pressure will decrease.
33	The highest temperature at which a substance can exist as a liquid is called its:	A. Critical temperature B. Zero temperature C. Absolute temperature D. None of above
34	Absolute temperature of a gas is proportional to:	A. Rotational Kinetic energy B. Translational Kinetic energy C. Vibrational Kinetic energy D. Potential energy
35	If absolute temperature of a gas is doubled and the pressure is reduced to one half, the volume of the gas will be:	A. Remain uncharged B. Double C. Reduced D. Increased four times
36	The destiny of a gas is directly proportional to pressure, inversely proportional to temperature and directly proportional to:	A. Viscosity B. Molar mass C. Momentum D. All of above
37	The graph between pressure and volume at constant temperature for gas is:	A. Isobaric B. Isothermal C. Isotherm D. None of above
38	The ratio of volume to temperature on Kelvin scale is constant according to:	A. Charle's law B. Newton's law C. Coulomb's law D. Boyle's law
39	The product of pressure and volume remains constant when temperature and quantity of gas is:	A. Zero B. Variable C. Kept constant D. None of above
40	A graph between P and PV constant temperature and number of moles is parallel to:	A. Y-axis B. X-axis C. Z-axis D. Pressure axis
41	A graph between P and 1/V at constant temperature and number of moles of a gas meets the:	A. Y-axis B. X-axis C. Origin D. None of above
42	Boyle's law does not fall even:	A. Temperature is extremely high. B. Pressure is extremely high. C. Mixture of gases is taken. D. All of above.
43	According to Boyle's law, which parameters give a straight line parallel to x-axis, when we plot a graph between:	A. V and T B. P and V C. P and 1/V D. P and PV
44	For gas obeying Boyle's law if pressure is double, the volume becomes:	A. Remains constant. B. Double. C. One half. D. None of above.
45	In Boyle's law which of the following pair is variable:	A. Temperature and quantity of a gas. B. Pressure and volume. C. Volume and quantity of a gas. D. Pressure and quantity of a gas.
46	In Boyle's law which of the following pair remains constant:	A. Temperature and quality of a gas. B. Pressure and quality of a gas. C. Temperature and pressure. D. Temperature and quantity of a gas.
47	The relationship between volume of a given amount of gas and prevailing conditions of temperature and pressure are:	A. Charle's law B. Graham's law C. Boyle's law D. Gas laws
48	The intramolecular forces in gases are:	A. Weak. B. Normal. C. Very weak. D. Strong.
		A. Solids

49	Liquids are less common than:	A. Solids. B. Plasmas. C. Gases. D. All of above.
50	Gases show uniform behavior towards their:	A. Internal conditions. B. External conditions. C. Internal and external conditions. D. None of above.
51	Cooling happens under the Joule Thomson Effect due to sudden:	A. Contraction. B. Absorption. C. Expansion. D. All of above.
52	In solid, the temperature is the measure of:	A. Rotational kinetic energies. B. Translational kinetic energies. C. Vibrational kinetic energies. D. None of above.
53	In gasses and liquid, temperature is the measure of:	A. Average transnational kinetic energies of molecules. B. Average vibrational kinetic energies of molecules. C. Average rotational kinetic energies of molecules. D. None of above.
54	The rate of diffusion of a gas is:	A. Inversely proportional to its density. B. Inversely proportional to square root of its molecules mass. C. Directly proportional to molecular mass. D. Directly proportional to its density.
55	Gases of air, always remain in random motion and do not settle due to:	A. Difference of molecules masses of air gases. B. Difference in partial pressure of gas molecules. C. Unequal number of different gas molecules. D. Elastic collision of gas molecules.
56	Gases exert pressure on walls of container because the gas molecules:	A. Obey gas laws. B. Have definite volume. C. Collide with the walls of container. D. Collide with each other.
57	All gases can be compressed by:	A. Keeping constant pressure B. Decreasing pressure C. Increasing pressure D. None of above
58	The movement of gas molecules from a region of high pressure to vacuum is called:	A. Evaporation B. Effusion C. Conduction D. Diffusion
59	Which state about gases is not correct?	A. They spread throughout the vessel. B. Pressure is due to collision. C. There are larger spaces between the molecules. D. Molecules are arranged regularly.
60	Which of the following is the simplest form of matter?	A. Gaseous state B. Liquid state C. Solid state D. All of above