MDCAT Chemistry Online Test

Sr	Questions	Answers Choice
1	An ideal gas expands according to PV=constant. On expansion, the temperature of gas	A. will rise B. will drop C. cannot be determined because the exteral pressure is not known D. will remain same
2	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
3	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
4	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
5	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
6	If temperature is 73K and volume is 146 cm3 then calculate the value of K=V/T	A. 5 B. 4 C. 3 D. 2
7	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
8	Which type of motion is exhibited by gases?	A. Vibrational B. Transitional C. Rotational D. All of them
9	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
10	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
11	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
12	Styrene has empirical formula CH, and there is 92.2%C and 7.75% hydrogen. If molar mass is 104g mol^{-}, what will be integral multiple (n) to get molecular formula:	A. 2 B. 4 C. 6 D. 8
13	The sole produets of combustion analysis are	A. CO2 and NH3 B. H2O and Mg(ClO4)2 C. CO2 and KOH D. CO2 and H2O
		A. , Na

14	6Na+ Fe2O3 -------- 3 Na2O+2Fe For above reaction, if you are provided with 230g Na and 320g Fe2O3, then limiting reactant is	B. Na2O C. Fe2O3 D. none of these
15	Which of the following is a limitation of balanced chemical equation	A. Conditions and rate of reactions B. Physical state and mechanism C. Reactants and products and their coefficients D. Both (a) and (b)
16	Moles of protons in 20g of SO3	A. 10 B. 20 C. 40 D. 80
17	Which of the following compound have empirical formula, but no molecular formula	A. H20 B. C6H6 C. H₂O₂ D. NaCl
18	If empirical formula of a compound is CH2 and its molecular mass is 56amu. What will beits molecular formula	A. CH2 B. C3H6 C. C2H4 D. C4H8
19	Atoms having same mass number but different atomic numbers are called.	A. Isotopes B. isobars C. Isotones D. isomers
20	Naturally occurring isotopes of silver are	A. ,Two B. , Four C. , Forty seven D. , sixteen
21	How many isotopes are present in palladium	A. Two B. Four C. Six D. nine
22	Which of the following is pure substance	A. Distilled water B. , Sea water C. , NaCl (aq) D. Brass
23	Haemoglobin molecule is how many times heavier than helium atom	A. 68000 times B. 17000 times C. ,34000 times D. , 1700 times
24	The best concentration unit used for K^+ ions present in potable water is	A. ppm B. Mole fraction C. Molarity D. Molality
25	The molarity of 2% W/V NaOH solution is	A. 2 B. 0.25 C. 0.05 D. 0.5
26	In s solution 7.8 g of benzene (C6H6) and 46g of toluene (C6H5CH3) is present. The mole fraction of toluene is	A. 1/3 B. 1/5 C. 2/3 D. 5/6
27	The number of moles of CO2 which contain 16g of oxygen	A. 0.25 B. 1.00 C. 1.50 D. 0.50
28	The largest number of molecules are present in	A. 3.6 g of H2O B. 4.6 g of C2H5OH C. 2.8 g of CO D. 5.4 g of N2O5
29	When we dissolve 15.8 g of KMnO4 in 1000g of H20. The solution is	A. , 0.1 M B. 0.1 M C. 0.2 M D. 0.2 M
30	How many grams of NaOH are present in 250 cm3 of its 0.2M solution	A. ,4 g B. , 0.4 g C. , 10 g D. , 2 g
31	When liquid solute is dissolved in liquid solvent, then the best unit of concentration is?	A. % W/W B. % W/V C. % V/V D. %V/W

		D. %v/v
32	250cm of 0.2 molar potassium sulphate solution is mixed with 250cm of 0.2 molar KCl solution. The molar concentration of K ions is:	A. 0.2 molar B. 0.25 molar C. 0.3 molar D. 0.35 molar
33	Combustion analysis is performed for the determination of	A. Molar mass of the compound B. Empirical formula of the compound C. Structural formula of the substance D. Mass of halogens present in organic compounds
34	The height of the peak in the mass spectrum shows	A. Number of isotopes B. Relative abundance C. Mass number D. Number of protons
35	Molecular ions are produced in mass spectrometer. Which type of molecular ion formed more abundantly.	A. Negatively charged B. H^+ ions C. Positively charged D. equal positive and negative ions
36	During combustion analysis, which one is used for absorbing carbon dioxide:	A. 50% KOH B. 5% KOH C. Mg(ClO4)2 D. Silica gel
37	Which of the following contains I mole of the stated particles	A. Chlorine molecules in 35.5 g of chlorine gas B. Electrons in 1 g of hydrogen gas C. Hydrogen ions in 1 dm^3 of 1 mol dm^{-3} aqueous sulfuric acid D. Oxygen atoms in 22.4 dm^3 of oxygen gas at STP
38	Gram atoms of hydrogen in 5.5 g H2	A. 5.50 B. 2.25 C. 5.45 D. 2.20
39	Number of moles present in 0.6 gram of silica is (Atomic mass Si = 28, O=16)	A. 0.01 mole B. 0.064 mole C. 0.044 mole D. 0.054 mole
40	5604 cm3 of H2 gas at STP contains atoms of hydrogen	A. 6.02×10 (23) B. 2.6x10(22) C. 3.01x10(23) D. 1. 50x 10(23)
41	Mg(s) + 2HCl(aq). ---------- MgCl2(aq)+ H2(g) Given that; Mg=21g and HCl=21g, the excess reactant is	A. Mg B. HCl C. Both are in stoichiometric amounts D. None of these
42	One mole of SO2 contains	A. 6.022 x 10(23) atoms of oxygen B. 6.022x 10 è23 atoms of sulfur C. 18.1x 10 (23) molecules of SO2 D. 4 g molecule of SO2
43	How many electrons have to be removed to ionize 1.0 x 10(-6) moles of Ne atoms to Ne+ ions in a neon advertising tube:	A. 6.02x10ê23/1.0x10ê-6 B. 1.0x 10ê-6 x 6.02x 10ê23 C. 1.0x10ê-6 x 6.02×10ê23/20.2 D. 1.0x10ê-6 x 6.02x10ê23/9.65x10ê-1
44	1 gram formula refers to	A. Amount in grams equivalent to 1 mole of a atom B. Amount in grams equivalent to 1 mole of a covalent compound C. Amount in grams equivalent to 1 mole of a ionic compound D. Amount in grams equivalent to 1 mole of an ion
45	Number of H+ ions when 0.1 mole of sulfuric acid is completely ionized in water	A. 4x6.022x10ê23 B. 1×6.022x10ê23 C. 2x6.022 x10ê23 D. 2x6.022x10ê22
46	1 gram molecule refers to amount in grams	A. Equivalent to 1 mole of an atom B. Equivalent to 1 mole of a molecule C. Equivalent to 1 mole of an ionic species D. Of an ionic compound
47	The stoichiometric calculations for a chemical reaction results in	A. Actual yield B. Percentage yield

47	The stoichiometric calculations for a chemical reaction results in	C. Theoretical yield D. Selectivity
48	Mass spectrometry is used to determine the	A. Number of isotopes of an element B. Relative abundance of isotopes C. Relative isotopic masses D. All of these
49	Inside every fluorescent lamp there is present a:	A. Gas B. Plasma C. Liquid D. Solid
50	Most of the universe consists of the matter in :	A. Gaseous state B. Liquid state C. Plazma state D. Solid state
51	The basic distinction between solids, liquids and gases lies in difference between.	A. Strength of the bonds B. Size of molecules C. space which the molecules occupy D. All of above
52	At 100 atm, CH_4 develops:	A. Ideal attitude B. Non-ideal attitude C. Serious attitude D. Laughing attitude
53	The gas which obey's the gas laws at all conditions of temperature and pressure is called:	A. Perfect gas B. Super gas C. Ideal gas D. Real gas
54	Absolute zero is equal to:	A. -273.15K B. -273.15^oC C. -237.15K D. -273 ^oC
55	The critical temperature of NH_3 is greater than CO_2 due to its:	A. Greater polarity B. Stable polarity C. Lesser polarity D. None of above
56	When a compressed gas is allowed to expand into a region of low pressure, it produce:	A. Vapours B. Cooling effect C. Heating effect D. None of above
57	During sudden expansion of a gas energy is needed to overcome the intermolecular:	A. Vibrations B. Attractions C. Repulsions D. All of above
58	The non polar gases of low polarizability have a very:	A. Low critical temperature B. Stable critical temperature C. High critical temperature
59	The value of critical temperature of a gas depends upon its:	A. Size B. Intermolecular forces in it C. Shape D. All of above
60	An ideal gas cannot be liquefied because:	A. It solidify before becoming a liquid B. Its critical temperature is always above 0^oC C. It is molecule are relatively smaller in size. D. Forces operative between its molecules are negligible