MDCAT Chemistry Chapter 1 Introduction to fundamental concepts of chemistry Online Test

Sr	Questions	Answers Choice
1	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
2	The stoichiometric calculations for a chemical reaction results in	A. Actual yield B. Percentage yield C. Theoretical yield D. Selectivity
3	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
4	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
5	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
6	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
7	One mole of SO2 contains	A. 6.022 x 10(23) atoms of oxygen B. 6.022x 10 ê23 atoms of sulfur C. 18.1x 10 (23) molecules of SO2 D. 4 g molecule of SO2
8	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
9	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)
10	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
11	Gram atoms of hydrogen in 5.5 g H2	A. 5.50 B. 2.25 C. 5.45 D. 2.20
12	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
13	During combustion analysis, which one is used for absorbing carbon dioxide:	A. 50% KOH B. 5% KOH C. Mg(ClO4)2 D. Silica gel
		A. Negatively charged

14	Molecular ions are produced in mass spectrometer. Which type of molecular ion formed more abundantly.	B. H^+ ions C. Positively charged D. equal positive and negative ions
15	The height of the peak in the mass spectrum shows	A. Number of isotopes B. Relative abundance C. Mass number D. Number of protons
16	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
17	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
18	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
19	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
20	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
21	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
22	The number of moles of CO2 which contain 16g of oxygen	A. 0.25 B. 1.00 C. 1.50 D. 0.50
23	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
24	The molarity of 2% W/V NaOH solution is	A. 2 B. 0.25 C. 0.05 D. 0.5
25	The best concentration unit used for K^+ ions present in potable water is	A. ppm B. Mole fraction C. Molarity D. Molality
26	Haemoglobin molecule is how many times heavier than helium atom	A. 68000 times B. 17000 times C. ,34000 times D. , 1700 times
27	Which of the following is pure substance	A. Distilled water B. , Sea water C. , NaCl (aq) D. Brass
28	How many isotopes are present in palladium	A. Two B. Four C. Six D. nine
29	Naturally occurring isotopes of silver are	A. ,Two B. , Four C. , Forty seven D. , sixteen
30	Atoms having same mass number but different atomic numbers are called.	A. Isotopes B. isobars C. Isotones D. isomers
31	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

		D. C4H6
32	Which of the following compound have empirical formula, but no molecular formula	A. H20 B. C6H6 C. H₂O₂ D. NaCl
33	Moles of protons in 20g of SO3	A. 10 B. 20 C. 40 D. 80
34	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)
35	6Na+ Fe2O3 -------- 3 Na2O+2Fe For above reaction, if you are provided with 230g Na and 320g Fe2O3, then limiting reactant is	A. , Na B. Na2O C. Fe2O3 D. none of these
36	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
37	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
38	The B.P of H2O at Murree Hills is	A. 99.8C B. 98°C C. 100C° D. 89°C
39	Water may boil at 120 °C when external pressure is:	A. 100 mm of Hg B. 700 mm of Hg C. 760 mm of Hg D. 1489 mm of Hg
40	Cholestryl benzoate tums into milky liquid at	A. 140°C B. 145°C C. 148C° D. 149°C
41	Which of the following is not the property of liquid crystal	A. anisotropic B. isotropic C. three dimensional arrangement D. fluidity
42	Point out that which is not an application of liquid crystals?	A. Source of energy B. In display of electrical devices C. For skin thermography D. As temperature sensor
43	The hydrocarbon with maximum B.P is	A. CH4 B. C6H14 C. C4H10 D. C2H6
44	What s the boling point of H2O at the peak of Mount Everest?	A. 101 C° B. 69°C C. 100 C° D. 98° C
45	Evaporation occurs at all temperatures and is effected by	A. surface area B. temperature C. intermolecular forces D. all of these
46	The value of the vapour pressure of water at its boiling point at Karachi and Murree is	A. same B. different C. depends upon the environmental conditions in both cities D. greater at Murree and less at Karachi
47	CO2 and SO2 are both triatomic molecules, but heat of vaporization of SO2 is greater than that of CO2. This is due to	A. greater electronegative character of sulphur B. greater size of SO2 molecule C. SO2 is polar and CO2 is non-polar D. SO2 is more acidic in nature than CO2
		A. the temperature at the top of the mountain is low

48	To cook the food at a high mountain is difficult as compared to at sea level. The reason is that:	B. the density of water decreases at the mountains C. the boiling point of water decreases at the mountain D. the hydrogen bonding in water changes with the change of height
49	Glycerine is a polar compound. It boils at 290°C under one atmospheric pressure. It should be distilled under reduced pressure due to reason that	A. there are strong intermolecular forces between molecules of glycerine B. it decomposes at 290°C C. low pressure makes the liquid to boil at high temperature D. the reduced pressure decreases the boiing point of liquids