DELHI PUBLIC SCHOOL, JAMMU

SESSION (2019-20)

ASSIGNMENT

CLASS:-XITH   **SUB:-CHEMISTRY**

Q.1   The law of multiple proportions was proposed by

    (a) Lavoisier   (b) Dalton

    (c) Proust   (d) Gay-Lussac

Q.2 Chemical equation is balanced according to the law of

    (a) Multiple proportion   (b) Reciprocal proportion

    (c) Conservation of mass   (d) Definite proportions

Q.3 1 L of N_2 combines with 3 L of H_2 to form $2L$ of NH_3 under the same conditions. This illustrates the

    (a) Law of constant composition   (b) Law of multiple proportions

    (c) Law of reciprocal proportions   (d) Gay-Lussac's law of gaseous volumes

Q.4 Avogadro number is

    (a) Number of atoms one gram of element

    (b) Number of millilitres which one mole of a gaseous substances occupies at NTP

    (c) Number of molecules present in one gram molecular mass of a substance

    (d) All of these

Q.5 Different propartions of oxygen in the various oxides of nitrogen prove the

    (a) Equivalent proportion   (b) Multiple proportion

    (c) Constant proportion   (d) Conservation of matter

Q.6 After a chemical reaction, the total mass of reactants and products

    (a) Is always increased   (b) Is always decreased

    (c) Is not changed   (d) Is always less or more

Q.7 A sample of pure carbon dioxide, irrespective of its source contains 27.27% carbon and 72.73% oxygen. The data support

    (a) Law of constant composition   (b) Law of conservation of mass

    (c) Law of reciprocal proportions   (d) Law of multiple proportions

Q.8 Which property of an element is always a whole number

    (a) Atomic weight   (b) Equivalent weight

    (c) Atomic number   (d) Atomic volume

Q.9 Define molarity of solution.

Q.10 Define molality of solution.

Q.11 What is the difference between the empirical and molecular formula of compound?

Q.12 Define the term absolute mass of atom.

Q.13 Define 1 a.m.u.

Q.14 Calculate the molecular mass for: (a) H_2O (b) H_2SO_4(c) CH_3COOH

Q.15 Calculate the percentage for oxygen in NaOH.

Q.16 Calculate the percentage for oxygen in 20 gm NaOH.

Q.17 Calculate the molar mass of water if it contains 50% heavy water.

Q.18 A hydrocarbon only contains carbon & hydrogen. Burning a small sample of it in oxygen gives 8.8 gm of CO_2 & 3.6 gm of H_2O. Determine the %age of C and H in sample.

Q.19 How many gram-atoms are present in 4 gm of calcium?

Q. 20 How many g-atoms of S are present in 4.9 gm of H_2SO_4?

Q.21 H_2SO_4 used in lead acid storage battery is 38% by mass and has density of 1.30 gcm^{-3}. Calculate molarity of solution.

Q.22 Calculate the molality and mole fraction of solute in solution containing 3 gm of urea per 250 gm of water.

Q.23 A compound containing carbon, hydrogen and oxygen have the following analytical data:
$$C = 40.0\% \text{ and } H = 6.67\%$$
Calculate the molecular formula of the compound if its molecular mass is 180.

Q.24 Calculate the number of moles present in 2.56 gm of urea.

Q.26 A 3 M NaCl solution has density 1.25 g/mL. Calculate the molalaity of solution.

Q.27 How many grams of H_2SO_4 needs to be dissolved in 200 mL solution to make it semi-molar?