ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

WORKSHEET-06(CLASS-11)

TOPIC- SOME BASIC CONCEPT OF CHEMISTRY

SUBTOPIC-LAWS OF CHEMICAL COMBINATION, MOLE CONCEPT AND EQUIVALENT MASS

SUBJECT – CHEMISTRY
DURATION – 30 mins

F.M. - 15
DATE -20.06.20

1.1 **Two elements, A and B, combine to form a compound in which 'a' g of A combines with 'b_1' and 'b_2'g of B respectively. According to law of multiple proportion _____.**

a) $b_1 = b_2$ b) b_1 and b_2 bear a simple whole number ratio c) a_1 and b_1 bear a whole number ratio d) No relation exists between b_1 and b_2

1.2 **_____ proposed some symbols for some common atoms and molecules.**

a) Democritus b) Newton c) Thompson d) Dalton

1.3 **Which one of the following properties of an element is variable?**

a) Valency b) Atomic weight c) Equivalent weight d) Both a and c

1.4 **The mass of 1×10^{22} molecules of $CuSO_4.5H_2O$ is-**

a) 41.59 g b) 415.9 g c) 4.159 g d) 42.2 g

1.5 **The number of molecules in 22.4 dm^3 of nitrogen gas at STP is-**

a) 6.023×10^{20} b) 6.023×10^{23} c) 22.4×10^{20} d) 22.4×10^{23}

1.6 **Which pair of species have same percentage of carbon?**

a) CH_3COOH and $C_6H_{12}O_6$ b) CH_3COOH and C_2H_5OH b) $HCOOCH_3$ and $C_{12}H_{22}O_{11}$ d) $C_6H_{12}O_6$ and $C_{12}H_{22}O_{11}$

1.7 **Two elements X (Atomic mass 75) and Y (Atomic mass 16) combine to give a compound having 75.8% X. The formula of the compound is-**

a) XY b) XY_2 c) X_2Y_2 d) X_2Y_3

1.8 **The empirical formula of a compound is CH_2O. 0.0835 moles of the compound contains 1.0 g of hydrogen. Molecular formula of the compound is-**

a) $C_2H_{12}O_6$ b) $C_5H_{10}O_5$ c) $C_4H_8O_8$ d) $C_3H_6O_3$

1.9 **What volume of ammonia would be formed when 0.36 dm^3 of nitrogen reacts with sufficient amount of hydrogen? (All volumes are measured under same conditions of temperature and pressure)**

a) 0.36 dm^3 b) 0.72 dm^3 c) 0.18 dm^3 d) 0.12 dm^3

1.10 **Which one of the following pairs of compounds illustrates the law of multiple proportion?**

a) H_2O, Na_2O b) MgO, Na_2O c) Na_2O, BaO d) $SnCl_2$, $SnCl_4$

1.11 **The percentage of Se in peroxidase anhydrous enzyme is 0.5% by weight (atomic mass = 78.4). Then minimum molecular mass of peroxidase anhydrous enzyme is –**

a) 1.568×10^4 b) 1.568×10^3 c) 15.68 d) 3.136×10^4

1.12 **The sulphate of a metal M contains 9.87% of M. This sulphate is isomorphous with $ZnSO_4.7H_2O$. The atomic weight of M is –**

a) 40.3 b) 36.3 c) 24.3 d) 11.3

1.13 **Hydrogen reacts with nitrogen to form ammonia as: N_2 (g) + $3H_2$ (g) $\longrightarrow$ $2NH_3$ (g).The amount of ammonia that would be produced if 200 g of H_2 reacts with N_2 is-**

a) 1032.2 g b) 11332 g c) 1133.3 g d) 8692.6 g

1.14 **Equivalent mass of $KMnO_4$ is the minimum in-**

a) Acidic medium b) neutral medium c) alkaline medium d) both a and c

1.15 **Which of the following acid has the least basicity-**

a) H_3BO_3 b) H_3PO_3 c) H_2SO_3 d) $HClO_2$

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