ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

FOR GOD AND COUNTRY

SOLUTION-01(CLASS-11)

TOPIC- SOME BASIC CONCEPT OF CHEMISTRY

SUBTOPIC-MOLE CONCEPT

SUBJECT – CHEMISTRY **F.M. - 15**

DURATION – 30 mins **DATE -15.06.20**

1.1 **16 g of oxygen has same number of molecules as in-**

(a) 16 g of CO (b) 28 g of N_2 (c) 14 g of N_2 (d) 2.0 g of H_2

Ans. c

1.2 **Number of significant Figures in the number 1.065-**

(a) 3 (b) 4 (c) 2 (d) 1

Ans. b

1.3 **How many moles of atom are contained in 32.7 g of Zn?**

(a) 0.200 (b) 0.500 (c) 1.50 (d) 0.0118

Ans.b

1.4 **The percentage of Carbon is Ca $(HCO_3)_2$is-**

(a) 15% (b) 1.8% (c) 14.8% (d) 15.2%

Ans.c

1.5 **Which of the following statements about a compound is incorrect?**

(a) A molecule of a compound has atoms of different elements.

(b) A compound cannot be separated into its constituent elements by physical methods of separation.

(c) A compound retains the physical properties of its constituent elements.

(d) The ratio of atoms of different elements in a compound is fixed

Ans.c

1.6 **Calculate the standard molar volume of oxygen gas. The density of O_2gas at NTP is 1.429g/L.**

(a) 22.39litres (b) 21.2 L (c) 24 L (d) None of the above

Ans.a

1.7 **Calculate the number of oxygen atoms in 50 g of $CaCO_3$.**

(a) 6.033×10^{23} atoms (b) 9.033×10^{23}atoms (c) 8.033×10^{23}atoms(d) 3.033×10^{23}atoms

Ans.a

1.8 **The mass of 2.044×10^{23} carbon atoms-**

(a) 12 g (b) 36 g (c) 24 g (d) 48 g

Ans.c

1.9 **Which of the following has the largest number of atoms-**

(a)0.5 g-atoms of Cu (b)0.635 g Cu (c) 0.25moles of Cu atoms (d)1g of Cu

Ans.a

1.10**1 Mole of CH_4contains-**

a)6.02×10^{23}atoms of Hb) 4 gm-atoms of hydrogen

b) $1.81\text{x } 10^{23}$ molecules of CH_4 d)3g of Carbon

Ans.b

1.11**Which of the following pairs have the same number of atoms?**

a) 16 g of O_2 (g) and 4 g of H_2(g) b) 16 g of O_2 and 44 g of CO_2

c) 28 g of N_2 and 32 g of O_2d) 12 g of C(s) and 25 g of Na(s)

Ans.c

1.12**What is the average molecular weight of a gas containing 20% N_2 (molecular wt. = 28) and 80% SO_2 (molecular wt. = 64)?**

a) 28.4 b) 56.8 c) 24.4 d) 48.8

Ans.b

1.13 **Select the correct statement:**

a)1 mole of SO_2 and 64 g of Ethyl Chloride have same number of moles

b)1 mole of SO_2 and 64 g of Ethyl Chloride don`t have same molecular weights

c)Both a and b d)Neither a nor b

Ans.a

1.14 **The number of water molecules is maximum in-**

a) 18 molecules of water b) 1.8 g of water c) 18 g of water d) 18 moles of water

Ans.d

1.15**1.0 g of magnesium is burnt with 0.56 g O_2 in a closed vessel. Which reactant is left in excess and how much? (Atomic weight: Mg=24; O=16):**

a)Mg, 0.16 gb)O_2, 0.16 gc)Mg, 0.44 g d) O_2, 0.28 g

Ans.a

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