

ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

WORKSHEET-04(CLASS-11)

**<u>TOPIC</u>- SOME BASIC CONCEPT OF CHEMISTRY** 

**SUBTOPIC-LAWS OF CHEMICAL COMBINATION** 

<u>SUBTOPIC</u>-LAWS OF CF SUBJECT – CHEMISTRY DURATION – 30 mins

F.M. - 15 DATE -18.06.20

## 1.1 The law of definite composition was proposed by-

a) Lomonosov b) Antoine Lavoisier c) Joseph Proust d) Dalton

1.2 \_\_\_\_\_ law of combining volumes states that "Whenever gases combine, they do so in simple ratio by volumes" -

a) Avogadro's b) Gay Lussac's c) Dalton's d) Thomson's

1.3 The sum of the masses of reactants and products is equal in any physical or chemical reaction. This is in accordance with-

a) Law of multiple proportion b) Law of definite composition c) Law of conservation of mass d) Law of reciprocal proportion

1.4 Pure water can be obtained from various sources, but it always contains hydrogen and oxygen, combined in a ratio of 1:8 by weight. This is an example of –

a) Law of conservation of mass b) Avogadro's law c) Law of definite composition d) Gay Lussac's law

1.5 In SO<sub>2</sub> and SO<sub>3</sub>, the ratio of the masses of oxygen which combine with a fixed mass of Sulphur is 2:3. This is an example of the law of-

a) Constant proportion b) Multiple proportion c) Reciprocal proportion d) Gay Lussac

1.6 Among the following pairs of compounds, the one that illustrates the law of multiple proportions is-

a) NH<sub>3</sub> and NCl<sub>3</sub> b) H<sub>2</sub>S and SO<sub>2</sub> b) CuO and Cu<sub>2</sub>O d) CS<sub>2</sub> and FeSO<sub>4</sub>

## 1.7 In the chemical reaction, the ratio of volumes of nitrogen, hydrogen and ammonia is 1 : 3:2. These figures illustrate the law of-

a) Law of conservation of mass b) Law of constant composition c) Law of multiple proportion d) law of constant volume

## 1.8 The law of multiple proportions is illustrated by-

a) Carbon monoxide and carbon dioxide b) Potassium bromide and potassium chloride c) Ordinary water and heavy water d) Calcium hydroxide and barium hydroxide. 1.9 Two elements, X (Atomic mass 16) and Y (Atomic mass 14) combine to form compounds A, B and C. The ratio of different masses of Y which combine with fixed mass of X in A, B and C is 1:3:5. If 32 parts by mass of X combine with 84 parts by mass of Y in B, then in C, 16 parts by mass of X will combine with-

(A) 14 parts by mass of Y (B) 42 parts by mass of Y (C) 70 parts by mass of Y (D) 82 parts by mass of Y

1.10The volume of oxygen required for complete combustion of 0.25 cm<sup>3</sup> of CH<sub>4</sub> at S.T.P is-(A) 0.25 cm<sup>3</sup> (B) 0.5 cm<sup>3</sup> (C) 0.75 cm<sup>3</sup> (D) 1 cm<sup>3</sup>

- 1.11Hydrogen and oxygen combine to form  $H_2O_2$  and  $H_2O$  containing 5.93% and 11.29% of hydrogen respectively. The data illustrates-
- (A) Law of conservation of mass (B) Law of constant proportions (C) Law of reciprocal proportions (D) Law of multiple proportions

1.12An unbalanced chemical reaction represents a violation of which law?

a) Law of conservation of mass b) Law of constant composition c) Law of multiple proportion (d) law of reciprocal proportion

- 1.13 How many litres of ammonia will be formed when 2 L of  $N_2$  and 2 L of  $H_2$  are allowed to react?
- (A) 0.665 (B) 1.0 (C) 4.00 (D) 1.33
- 1.14 **1.0** g of an oxide of A contained 0.5 g of A. 4.0 g of another oxide of A contained 1.6 g of A. The data indicate the law of –
- (A) Reciprocal proportions (B) Constant proportions (C) Conservation of energy (D) Multiple proportions
- 1.15 One unit volume of N<sub>2</sub> reacts with 3 unit volumes of H<sub>2</sub> to form 2 unit volumes of NH<sub>3</sub>. This is in accordance with-
- a) Avogadro's law b) Gay Lussac's law c) Law of conservation of mass d) Law of chemical combination

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