ARJUNA (NEET)

Some Basic Concepts of Chemistry

DPP-2

1. When 200 g of lime stone is strongly heated, it undergoes thermal decomposition to form 112 g of lime an unknown mass of carbon dioxide gas as

$$\underset{200\ g}{CaCO_3} \longrightarrow \underset{112g}{CaO} + CO_2$$

What will be the mass of CO_2 formed?

(A) 88 g (B) 24 g
(C) 64 g (D) 40 g

2. Carbon and oxygen react in ratio of 3:8 by mass to form CO_2. What weight of carbon should be used to react completely with 32 g of oxygen?

(A) 10 g (B) 15 g
(C) 12 g (D) 7 g

3. Cu forms two oxides cuprous and cupric oxides, which law can be proved by the weights of Cu and O?

(A) Constant composition
(B) Multiple proportions
(C) Reciprocal proportions
(D) Definite proportions

4. The law of conservation of mass is valid for all the following, except

(A) All chemical reactions
(B) Nuclear reactions
(C) Endothermic reactions
(D) Exothermic reactions

5. Equal volume of different gases at any definite temperature and pressure have

(A) Equal atoms
(B) Equal masses
(C) Equal densities
(D) Equal molecules

6. Which of the following pairs of compound illustrate law of multiple proportions?

(A) KOH, CsOH
(B) H_2O, D_2O
(C) Ethane, benzene
(D) KCI, KBr

7. Gay Lussac's law is not valid in the chemical reaction:

(A) $H_2(g) + Cl_2(g) \rightarrow 2HCl(g)$
(B) $3H_2(g) + N_2(g) \rightarrow 2NH_3(g)$
(C) $2SO_2(g) + O_2(g) \rightarrow 2SO_3(g)$
(D) $CaCO_3(s) \xrightarrow{\Delta} CaO(s) + CO_2(g)$

8. The percentage of hydrogen in water and hydrogen peroxide is 11.1 and 5.9 respectively. These figures illustrate

(A) Law of multiple proportions
(B) Law of conservation of mass
(C) Law of constant proportions
(D) Law of combining volumes

9. Element X forms five stable oxides with oxygen of formula X_2O, XO, X_2O_3, X_2O_4, X_2O_5. The formation of these oxides explains

(A) Law of definite proportions
(B) Law of partial pressures
(C) Law of multiple proportions
(D) Law of reciprocal proportions

10. Which of the following represents Avogadro's hypothesis?

(A) Gases react together in volumes which bear a simple ratio to one another
(B) Equal volumes of all gases under same conditions of temperature and pressure contain equal number of molecules
(C) Equal volumes of all gases under same conditions of temperature and pressure contain equal number of atoms

(D) The rates of diffusion of gases are inversely proportional to the square root of their densities

ANSWERS KEY

1. (A)
2. (C)
3. (B)
4. (B)
5. (D)
6. (C)
7. (D)
8. (A)
9. (C)
10. (B)

Note - If you have any query/issue

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