

**CLASS X- CHEMISTRY**  
**CHEMICAL REACTIONS & EQUATION**

**ASSIGNMENT-1**

**MULTIPLE CHOICE QUESTION-1.1**

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- In the balanced equation -  
 $a\text{Fe}_2\text{O}_3 + b\text{H}_2 \longrightarrow c\text{Fe} + d\text{H}_2\text{O}$   
The value of a,b,c,d are respectively -  
(A) 1,1,2,3                      (B) 1,1,1,1                      (C) 1,3,2,3                      (D) 1,2,2,3
- Which of the following reactions is not balanced \   
(A)  $2\text{NaHCO}_3 \longrightarrow \text{Na}_2\text{CO}_3 + \text{H}_2\text{O} + \text{CO}_2$       (B)  $2\text{C}_4\text{H}_{10} + 12\text{O}_2 \longrightarrow 8\text{CO}_2 + 10\text{H}_2\text{O}$   
(C)  $2\text{Al} + 6\text{H}_2\text{O} \longrightarrow 2\text{Al}(\text{OH})_3 + 3\text{H}_2$       (D)  $4\text{NH}_3 + 5\text{O}_2 \longrightarrow 4\text{NO} + 6\text{H}_2\text{O}$
- The equation -  $\text{Cu} + x\text{HNO}_3 \rightarrow \text{Cu}(\text{NO}_3)_2 + y\text{NO}_2 + 2\text{H}_2\text{O}$   
The values of x and y are-  
(A) 3 and 5                      (B) 8 and 6                      (C) 4 and 2                      (D) 7 and 1
- Neutralization reaction is an example of -  
(A) exothermic reaction                      (B) endothermic reaction  
(C) oxidation                      (D) none of these
- Which of the following statements is/are true \   
(A) The total mass of the substance remains same in a chemical change.  
(B) A chemical change is permanent and irreversible.  
(C) A physical change is temporary and reversible.  
(D) All the these.
- Which of the following statements is correct  
(A) A chemical equation tells us about the substances involved in a reaction.  
(B) A chemical equation informs us about the symbols and formulae of the substances involved in a reaction.  
(C) A chemical equation tells us about the atoms or molecules of the reactants and products involved in a reaction.  
(D) All are correct.
- $\text{Zn}(\text{s}) + \text{H}_2\text{SO}_4(\text{aq}) \longrightarrow \text{ZnSO}_4(\text{aq}) + \text{H}_2(\text{g})$  is an example of-  
(A) precipitation reaction                      (B) endothermic reaction  
(C) evolution of gas                      (D) change in colour
- When dilute hydrochloric acid is added to iron fillings -  
(A) hydrogen gas and ferric chloride are produced.  
(B) chlorine gas and ferric hydroxide are produced.  
(C) no reaction takes place.  
(D) iron salt and water are produced.
- In the reaction  $x\text{Pb}(\text{NO}_3)_2 \xrightarrow{\text{Heat}} y\text{PbO} + z\text{NO}_2 + \text{O}_2$  x,y and z are -  
(a) 1,1,2                      (B) 2,2,4                      (C) 1,2,4                      (D) 4,2,2
- In the reaction  $\text{FeSO}_4 + x \longrightarrow \text{Na}_2\text{SO}_4 + \text{Fe}(\text{OH})_2$ , x is -  
(A)  $\text{Na}_2\text{SO}_4$                       (B)  $\text{H}_2\text{SO}_4$                       (C)  $\text{NaOH}$                       (D) None of these

## SUBJECTIVE QUESTION-1.2

1. Balance the following equations -
  - (i)  $\text{HgO} \longrightarrow \text{Hg} + \text{O}_2$
  - (ii)  $\text{C}_4\text{H}_{10}(\text{g}) + \text{O}_2(\text{g}) \longrightarrow \text{CO}_2(\text{g}) + \text{H}_2\text{O}(\ell)$
2. What are chemical equations? Give significance and limitations of chemical equations ?
3. What information do we get from a chemical equation ? Explain with the help of examples.
4. Write the balanced chemical equations for the following chemical reactions -
  - (i) Aqueous solution of sulphuric acid and sodium hydroxide reacts to form aqueous sodium sulphate and water.
  - (ii) Phosphorus burns in chlorine gas to form phosphorus pentachloride.
5. Write the balanced chemical equations for the following reactions -
  - (i) Zinc carbonate (s)  $\longrightarrow$  Zinc oxide (s) + Carbon dioxide (g)
  - (ii) Potassium bromide (aq) + Barium iodide (aq)  $\longrightarrow$  Potassium iodide (aq) + Barium bromide (aq)
6. What happens when electric current is passed through slightly acidic water ?
7. What happens when silver nitrate is mixed with a solution of sodium chloride ?
8. What do you mean by exothermic reactions ? Explain with an example.
9. What do you mean by endothermic reactions ? Explain with an example .

Prerna Education