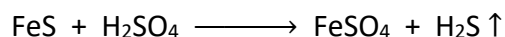


CHEMICAL REACTIONS & EQUATIONS

- Q.1 $\text{AgNO}_3 (\text{aq}) + \text{NaCl} (\text{aq}) \longrightarrow \text{AgCl} (\text{s}) \downarrow + \text{NaNO}_3 (\text{aq})$ [1]
 $\text{FeS} + \text{H}_2\text{SO}_4 \longrightarrow \text{FeSO}_4 + \text{H}_2\text{S} \uparrow$
Consider the above mention two chemical equations with two different kinds of arrows (\uparrow and \downarrow) along with product. What do these two different arrows indicate?
- Q.2 State the main difference between an Endothermic reaction and an exothermic reaction. [1]
- Q.3 On what basis is a chemical equation balanced? [1]
- Q.4 Write balanced chemical equation for the following reactions : [2]
a) Silver bromide on exposure to sunlight decomposes into silver and bromine.
b) Sodium metal reacts with water to form sodium hydroxide and hydrogen gas.
- Q.5 What is meant by : (a) displacement reaction (b) Combination reaction. [2]
Write balanced chemical equation for each reaction.
- Q.6 Using a suitable chemical equation justify that some chemical reaction are determined by : [2]
(i) Change in colour (ii) Change in temperature
- Q.7 Write the balanced chemical equation for the following and identify the type of reaction in each case. [1 x 3 = 3]
a) potassium bromide (aq) + Barium iodide (aq) \longrightarrow Potassium iodide (aq) + barium bromide (s)
b) Zinc Carbonate (s) \longrightarrow Zinc oxide (s) + Carbon dioxide (g)
c) Hydrogen (g) + Chlorine (g) \longrightarrow Hydrogen chloride (g)
- Q.8 Balance the following chemical equation : [1 x 4 = 4]
a) $\text{BaCl}_2 + \text{H}_2\text{SO}_4 \longrightarrow \text{BaSO}_4 + \text{HCl}$
b) $\text{Ca}(\text{OH})_2 + \text{HNO}_3 \longrightarrow \text{Ca}(\text{NO}_3)_2 + \text{H}_2\text{O}$
c) $\text{Pb}(\text{NO}_3)_2 \longrightarrow \text{PbO} + \text{NO}_2 + \text{O}_2$
d) $\text{MnO}_2 + \text{HCl} \longrightarrow \text{MnCl}_2 + \text{H}_2\text{O} + \text{Cl}_2$
- Q.9 Classify each of the following as combination , decomposition , displacement or double displacement reaction : [1 x 4 = 4]
i. $2 \text{KNO}_3 (\text{s}) \longrightarrow 2 \text{KNO}_2 (\text{s}) + \text{O}_2 (\text{g})$
ii. $\text{Zn} (\text{s}) + 2 \text{AgNO}_3 (\text{aq}) \longrightarrow \text{Zn}(\text{NO}_3)_2 + 2 \text{Ag} (\text{s})$
iii. $\text{Ni}(\text{NO}_3)_2 (\text{aq}) + 2 \text{NaOH} \longrightarrow \text{Ni}(\text{OH})_2 \downarrow + 2 \text{NaNO}_3 (\text{aq})$
iv. $\text{N}_2 (\text{g}) + 3 \text{H}_2 (\text{g}) \longrightarrow 2 \text{NH}_3 (\text{g})$

CHEMICAL REACTIONS & EQUATIONS

Q.1 $\text{AgNO}_3 (\text{aq}) + \text{NaCl} (\text{aq}) \longrightarrow \text{AgCl} (\text{s}) \downarrow + \text{NaNO}_3 (\text{aq})$ [1]



Consider the above mention two chemical equations with two different kinds of arrows (\uparrow and \downarrow) along with product. What do these two different arrows indicate?

Q.2 State the main difference between an Endothermic reaction and an exothermic reaction. [1]

Q.3 What is balanced chemical equation? Why should the chemical equation be balanced ? [2]

Q.4 Why should a magnesium ribbon be cleaned before burning in air ? [2]

Q.5 What is meant by : (a) decomposition reaction (b) Combination reaction. [2]

Write balanced chemical equation for each reaction.

Q.6 Using a suitable chemical equation justify that some chemical reaction are determined by : [2]

(i) Change in colour (ii) Change in temperature

Q.7 Write the balanced chemical equation for the following and identify the type of reaction in each case. [1 x 5 = 5]

a) potassium bromide (aq) + Barium iodide (aq) \longrightarrow Potassium iodide (aq) + barium bromide (s)

b) Zinc Carbonate (s) \longrightarrow Zinc oxide (s) + Carbon dioxide (g)

c) Hydrogen (g) + Chlorine (g) \longrightarrow Hydrogen chloride (g)

d) Calcium hydroxide + Carbon dioxide \longrightarrow Calcium carbonate + Water

e) Barium chloride + Potassium sulphate \longrightarrow Barium sulphate + Potassium chloride

Q.8 Balance the following chemical equation : [1 x 5 = 5]

a) $\text{BaCl}_2 + \text{H}_2\text{SO}_4 \longrightarrow \text{BaSO}_4 + \text{HCl}$

b) $\text{Ca}(\text{OH})_2 + \text{HNO}_3 \longrightarrow \text{Ca}(\text{NO}_3)_2 + \text{H}_2\text{O}$

c) $\text{Pb}(\text{NO}_3)_2 \longrightarrow \text{PbO} + \text{NO}_2 + \text{O}_2$

d) $\text{MnO}_2 + \text{HCl} \longrightarrow \text{MnCl}_2 + \text{H}_2\text{O} + \text{Cl}_2$

e) $\text{Al}(\text{OH})_3 \xrightarrow{\Delta} \text{Al}_2\text{O}_3 + \text{H}_2\text{O}$