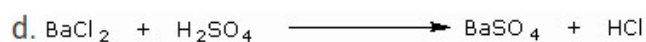
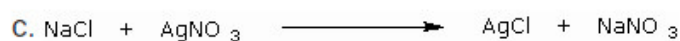
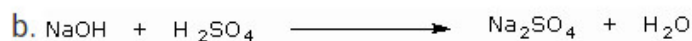


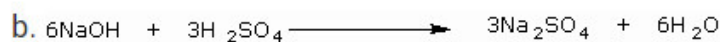


Question-6

Balance the following chemical equations.

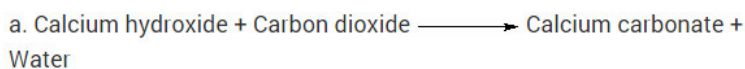


Solution:

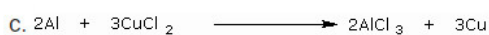


Question-7

Write the balanced chemical equations for the following reactions:

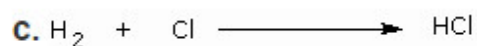


Solution:



Question-8

Write the balanced chemical equation for the following and identify the type of reaction of each case.



Solution:

a. $2\text{KBr} + \text{BaI}_2 \rightarrow 2\text{KI} + \text{BaBr}_2$ (Double Displacement reaction)

b. $\text{ZnCO}_3 \rightarrow \text{ZnO} + \text{CO}_2$ (Decomposition reaction)

c. $\text{H}_2 + \text{Cl}_2 \rightarrow 2\text{HCl}$ (Combination reaction)

d. $\text{Mg} + 2\text{HCl} \rightarrow \text{MgCl}_2 + \text{H}_2$ (Displacement reaction)

Question-9

What is meant by exothermic and endothermic reactions? Give examples.

Solution:

An exothermic reaction is one that releases heat.

If 1 mole of N_2 molecule reacts with 1 mole of O_2 molecule, the heat of 184 KJ has to be supplied to initiate the reaction to give 1 mole of NO molecule. This means that the bonds between $\text{N} - \text{N}$ and $\text{O} - \text{O}$ are so strong that they do not break easily. N_2 has triple covalent bond between the two N atoms. O_2 has a double covalent bond.

Thus energy has to be put into the reaction to break the strong bonds. Thus the above reaction is a good example of an endothermic reaction.

Question-10

Why is respiration considered an exothermic reaction?

Solution:

During respiration, glucose combines with oxygen in the cells of our body to form carbon dioxide and water along with the production of energy.

Glucose + oxygen \rightarrow carbon dioxide + water + energy

It is an exothermic reaction, because energy is produced during this process.

***** END *****