RAKESH SIR
(Chemistry expert)
"Cultivating excellence in every student"
9814516618

Answer the following questions briefly (2 mark)

1. Write down the observations which indicate the occurence of a chemical reaction.
2. Why is respiration considered as an exothermic reaction? Explain.
3. Transfer the following statements into Chemical equations and then balance them.
   a) Hydrogen gas combines with nitrogen to form ammonia.
   b) Potassium metal reacts with water to give potassium hydroxide and hydrogen gas.
4. Identify the substances that are oxidised and the substances that are reduced to the folllowing reactions.

RAKESH SIR
(Chemistry expert)
"Cultivating excellence in every student"
9814516618

   1. $Na_{(s)} + O_{2(g)} \longrightarrow Na_2O_{(s)}$

   $CuO_{(s)} + H_{2(g)} \longrightarrow Cu_{(s)} + H_2O_{(l)}$

5. What happens when silver chloride is exposed to sunlight? Give one practical application of this reaction. Write the equation also.
6. Why is the bag used for potato chips flushed with nitrogen gas?

Answer the following questions in detail (3 marks)

1. Write down the balanced chemical equations for the following reactions.
   a) $\text{Zinc Carbonate}_{(s)} \longrightarrow \text{Zinc Oxide} + \text{Carbon Dioxide}_{(g)}$
   b) $\text{Aluminium}_{(s)} + \text{Chlorine}_{(g)} \longrightarrow \text{Aluminium Chloride}_{(s)}$
   c) $\text{Magnesium}_{(s)} + \text{Water}_{(l)} \xrightarrow{\text{Heat}} \text{Magnesium Hydroxide}_{(l)} + \text{Hydrogen}_{(g)}$
2. Choose combination, displacement and double displacement reactions out of the given reactions.
   i) $MnO_{2(s)} + 4HCl_{(l)} \longrightarrow MnCl_{2(s)} + Cl_{2(g)} + 2H_2O_{(l)}$
   ii) $CaO_{(s)} + CO_{2(g)} \longrightarrow CaCO_{3(s)}$
   iii) $2AgCl_{(s)} \longrightarrow 2Ag_{(s)} + Cl_{2(g)}$

RAKESH SIR
(Chemistry expert)
"Cultivating excellence in every student"
9814516618

RAKESH SIR
(Chemistry expert)
"Cultivating excellence in every student"
9814516618

3. What happens when $CO_{2(g)}$ is passed through slaked lime? Write the balanced chemical equation. Write the type of reaction that has occured.

Explain the following questions detail (5 marks)

1. Balance the following chemical equation and identify the type of reaction they represent

RAKESH SIR
(Chemistry expert)
"Cultivating excellence in every student"
9814516618

$KClO_3 \longrightarrow KCl + O_2$

$NH_3 + O_2 \longrightarrow NO + H_2O$

$Na_2O + H_2O \longrightarrow NaOH$

$Na + H_2O \longrightarrow NaOH + H_2$

$FeCl_3 + NaOH \longrightarrow Fe(OH)_3 + NaCl.$

2. Define various types of chemical reactions. Write one chemical equation for each type.

RAKESH SIR
(Chemistry expert)
"Cultivating excellence in every student"
9814516618

RAKESH SIR
(Chemistry expert)
"Cultivating excellence in every student"
9814516618