



Chemical Reactions and Equations

Grade 10

Question Bank

Answer the following questions

1. What is a chemical reaction?
2. What are the different ways to identify if a chemical reaction has happened or not?
3. What is a chemical equation?
4. Why do we need to balance a chemical equation?
5. Balance the following:
 - a. Lead (IV) oxide reacts with HCl to give lead (II) chloride, chlorine gas, and water.
 - b. Solid potassium chlorate decomposes on heating to form solid KCl and oxygen gas.
 - c. Hydrogen reacts with nitrogen to give ammonia.
 - d. Iron(III) oxide reacts with chlorine gas to give iron(III) chloride and oxygen gas.
6. What does one mean by exothermic and endothermic reactions? Give examples.
7. Why is respiration considered an exothermic reaction? Explain.
8. Why are decomposition reactions called the opposite of combination reactions? Write equations for these reactions.
9. Write one equation each for decomposition reactions where energy is supplied in the form of heat, light or electricity.
10. What is the difference between displacement and double displacement reactions? Write equations for these reactions.
11. In the refining of silver, the recovery of silver from silver nitrate solution involved displacement by copper metal. Write down the reaction involved.
12. What do you mean by a precipitation reaction? Explain by giving examples.
13. Explain the following in terms of gain or loss of oxygen with two examples each.
 - (a) Oxidation
 - (b) Reduction
14. A shiny brown coloured element 'X' on heating in air becomes black in colour. Name the element 'X' and the black coloured compound formed.
15. Why do we apply paint on iron articles?
16. Oil and fat containing food items are flushed with nitrogen. Why?
17. Explain the following terms with one example each.
 - (a) Corrosion
 - (b) Rancidity