QUIZIZZ Worksheets

Name

Exploring Redox Reactions

Total questions: 15

Worksheet time: 8mins

Instructor name: Dr. Ramanathan Saitechinfo

Class

Date

1. What is the oxidation number of sulfur in H2SO4?

a) 0

b) +6

c) +4

d) +2

2. Identify the oxidation number of nitrogen in NH3.

a) -1

b) +3

c) -3

d) +1

3. What type of redox reaction involves the transfer of electrons between two species?

a) Combustion reaction

b) Decomposition reaction

c) Oxidation-reduction reaction

d) Synthesis reaction

4. In a redox reaction, what is the substance that gets reduced called?

a) Reducing agent

b) Electrolyte

c) Oxidizing agent

d) Catalyst

5. Which of the following is a common oxidising agent: H2O2, NaCl, or CH4?

a) H2O

b) C2H6

c) NaOH

d) H2O2

6. What is the role of a reducing agent in a redox reaction?

a) The reducing agent increases the oxidation state of another substance.

b) The role of a reducing agent is to donate electrons and cause the reduction of another substance.

c) The reducing agent is oxidized during the reaction.

d) The reducing agent accepts electrons from another substance.

7. How do you determine the oxidation state of an element in a compound?

a) The oxidation state is always zero in compounds.

b) Oxidation states can only be determined through experimental data.

c) The oxidation state of an element in a compound is determined by applying oxidation state rules and ensuring the sum equals the compound's overall charge.

d) The oxidation state is the same as the element's atomic number.

8. What is the oxidation number of chlorine in NaClO?

a) +1

b) -1

c) 0

d) +3

9. Which of the following represents a redox reaction: $2H_2 + O_2 \rightarrow 2H_2O$ or $NaCl \rightarrow Na + Cl_2$?

a) $2H_2 + Cl_2 \rightarrow 2HCl$

b) $2Na + Cl_2 \rightarrow 2NaCl$

c) $H_2 + O_2 \rightarrow H_2O$

d) $2H_2 + O_2 \rightarrow 2H_2O$

10. What is the oxidation state of carbon in CO_2?

a) 0

b) +4

c) -4

d) +2

11. How do you balance the redox equation for the reaction of zinc with copper(II) sulfate?

a) $Cu + ZnSO_4 \rightarrow CuSO_4 + Zn$

b) $Zn + CuSO_4 \rightarrow ZnSO_4 + Cu$

c) $Zn + CuSO_4 \rightarrow Cu + ZnSO_4$

d) $ZnSO_4 + Cu \rightarrow Zn + CuSO_4$

12. What are cations and anions in the context of redox reactions?

a) Cations are neutral particles; anions are charged particles.

b) Cations are found in the nucleus; anions are found in the electron cloud.

c) Cations are negatively charged ions; anions are positively charged ions.

d) Cations are positively charged ions; anions are negatively charged ions.

13. Identify the reducing agent in the reaction: $Fe_2O_3 + 3CO \rightarrow 2Fe + 3CO_2$.

a) O_2

b) CO_2

c) CO

d) Fe_2O_3

14. What is the oxidation number of phosphorus in H_3PO_4?

a) +5

b) 0

c) +3

d) +1

15. Explain the difference between a cation and an anion in terms of charge.

a) Cations have a negative charge, while anions have a positive charge.

b) Cations are neutral, and anions are positively charged.

c) Cations have a positive charge, while anions have a negative charge.

d) Both cations and anions have no charge.

Answer Keys

1. b) +6
2. c) -3
3. c) Oxidation-reduction reaction
4. a) Reducing agent
5. d) H_2O_2
6. b) The role of a reducing agent is to donate electrons and cause the reduction of another substance.
7. c) The oxidation state of an element in a compound is determined by applying oxidation state rules and ensuring the sum equals the compound's overall charge.
8. a) +1
9. d) $2H_2 + O_2 \rightarrow 2H_2O$
10. b) +4
11. b) $Zn + CuSO_4 \rightarrow ZnSO_4 + Cu$
12. d) Cations are positively charged ions; anions are negatively charged ions.
13. c) CO
14. a) +5
15. c) Cations have a positive charge, while anions have a negative charge.