

OXIDATION – REDOX REACTIONS

Name ----- date----- group -----

1. Of the following, which will most likely be an reducing agent: Na⁺, Ag⁺, K ?

- a. Na⁺
- b. Ag⁺
- c. K
- d. Ca²⁺

2. Of the following, which will most likely oxidized: F₂, Cu²⁺, K ?

- a. Cl₂
- b. Cu²⁺
- c. K
- d. Ca

3. Of the following, which will most likely reduced: Cu²⁺, Na, Ca ?

- a. Ca
- b. Ag⁺
- c. Na
- d. Cu²⁺

4. For the following example identify oxidizing agent: $4\text{Fe}^0 + 3\text{O}_2 \rightarrow 2\text{Fe}^{+3}\text{O}^{-2}_3$

- a. O₂
- b. Fe⁺³
- c. both
- d. neither

5. For the following example identify reducing agent: $4\text{Fe} + 3\text{O}_2 \rightarrow 2\text{Fe}_2\text{O}_3$

- a. O₂
- b. both
- c. neither
- d. Fe

6. Which of the following transformation corresponds to the redox reaction?

- a. $4\text{P} + 5\text{O}_2 \rightarrow 2\text{P}_2\text{O}_5$
- b. $\text{AlCl}_3 + 3\text{NaOH} \rightarrow \text{Al}(\text{OH})_3 + 3\text{NaCl}$
- c. $\text{Cu}(\text{OH})_2 \rightarrow \text{CuO} + \text{H}_2\text{O}$
- d. $\text{NaOH} + \text{HCl} \rightarrow \text{NaCl} + \text{H}_2\text{O}$

7. What type of reaction is given? $\text{Fe} + \text{CuSO}_4 \rightarrow \text{FeSO}_4 + \text{Cu}$

- a. synthesis
- b. decomposition
- c. precipitation
- d. redox

8. $\text{MnO}_2 + \text{HCl} \rightarrow \text{MnCl}_2 + \text{Cl}_2 + \text{H}_2\text{O}$

When the following equation is balanced, what is the sum of all the coefficients?

- a. 9
- b. 16
- c. 32
- d. 44

9. $2\text{KClO}_3 \rightarrow 2\text{KCl} + 3\text{O}_2$

What type of redox reaction is given?

- a. inner molecular redox reaction
- b. disproportionation redox reaction
- c. redox reactions between atoms and molecules
- d. neutralization reaction.

10. $4\text{KCl}^{+5}\text{O}_3 \rightarrow 3\text{KCl}^{+7}\text{O}_4 + \text{KCl}^-$

What type of redox reaction is given?

- a. inner molecular redox reaction
- b. disproportionation redox reaction
- c. redox reactions between atoms and molecules
- d. neutralization reaction.

ANSWERS:

1	2	3	4	5	6	7	8	9	10
c	c	d	a	d	a	d	a	a	b