FLINN SCIENTIFIC

Name_____

# Prelab Questions

Read the lab *Procedure* before beginning. All chemicals used have been written in word form so that the formulas of the reagents must be determined. In all cases, a chemical reaction will occur. Write the formulas for all reactants, followed by their physical states—(g), (l), (s), or (aq)—for each step in the procedure. Predict the type of reaction (reaction class) for each step, and write an equation for each predicted reaction. Do not balance the reaction equations. (Reacting ionic species should be written as ions and reacting molecular species should be written as molecules.)

## Part I

| | Reactant Formula | Reactant Formula | Predicted Reaction Classification | Predicted Equation |
|---|---|---|---|---|
| 1. | _____ | _____ | _____ | _____ |
| 2. | _____ | _____ | _____ | _____ |
| 3. | _____ | _____ | _____ | _____ |
| 4. | _____ | _____ | _____ | _____ |

## Part II

| | | | | |
|---|---|---|---|---|
| 5. | _____ | _____ | _____ | _____ |
| 6. | _____ | _____ | _____ | _____ |
| 7. | _____ | _____ | _____ | _____ |
| 8. | _____ | _____ | _____ | _____ |
| 9. | _____ | _____ | _____ | _____ |
| 10. | _____ | _____ | _____ | _____ |

## Part III

| | | | | |
|---|---|---|---|---|
| 11. | _____ | _____ | _____ | _____ |
| 12. | _____ | _____ | _____ | _____ |
| 13. | _____ | _____ | _____ | _____ |
| 14. | _____ | _____ | _____ | _____ |

## Part IV

| | | | | |
|---|---|---|---|---|
| 15. | _____ | _____ | _____ | _____ |
| 16. | _____ | _____ | _____ | _____ |
| 17. | _____ | _____ | _____ | _____ |
| 18. | _____ | _____ | _____ | _____ |

Name_____

# Data Tables

## Predicting Reactions

### Part I

| | Reactant Formula | Reactant Formula | Observations |
|---|---|---|---|
| 1. | _____ | _____ | _____ |
| 2. | _____ | _____ | _____ |
| 3. | _____ | _____ | _____ |
| 4. | _____ | _____ | _____ |

### Part II

| | | | |
|---|---|---|---|
| 5. | _____ | _____ | _____ |
| 6. | _____ | _____ | _____ |
| 7. | _____ | _____ | _____ |
| 8. | _____ | _____ | _____ |
| 9. | _____ | _____ | _____ |
| 10. | _____ | _____ | _____ |

### Part III

| | | | |
|---|---|---|---|
| 11. | _____ | _____ | _____ |
| 12. | _____ | _____ | _____ |
| 13. | _____ | _____ | _____ |
| 14. | _____ | _____ | _____ |

### Part IV

| | | | |
|---|---|---|---|
| 15. | _____ | _____ | _____ |
| 16. | _____ | _____ | _____ |
| 17. | _____ | _____ | _____ |
| 18. | _____ | _____ | _____ |

Name_____

## Classification and Results

For each reaction, classify the reaction as oxidation–reduction, acid–base, decomposition, precipitation or complex ion. If the predicted classification or equation for the reaction is correct, write *no change* on the equation line. If the observations give a new insight, write a new classification and/or equation. Do not balance the equations at this time.

## Part I

| | Classification | Equation |
|---|---|---|
| 1. | _____ | _____ |
| 2. | _____ | _____ |
| 3. | _____ | _____ |
| 4. | _____ | _____ |

## Part II

| | | |
|---|---|---|
| 5. | _____ | _____ |
| 6. | _____ | _____ |
| 7. | _____ | _____ |
| 8. | _____ | _____ |
| 9. | _____ | _____ |
| 10. | _____ | _____ |

## Part III

| | | |
|---|---|---|
| 11. | _____ | _____ |
| 12. | _____ | _____ |
| 13. | _____ | _____ |
| 14. | _____ | _____ |

## Part IV

| | | |
|---|---|---|
| 15. | _____ | _____ |
| 16. | _____ | _____ |
| 17. | _____ | _____ |
| 18. | _____ | _____ |

## Disposal

Dispose of all reactant solutions and products as directed by the instructor.