

GROUP QUIZ UNIT 07

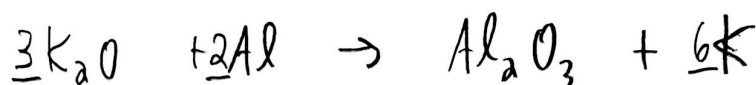
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|--------------|--------------|--------------|--------------|--------------|
| 1. <u>C</u> | 2. <u>D</u> | 3. <u>A</u> | 4. <u>A</u> | 5. <u>D</u> |
| 6. <u>B</u> | 7. <u>D</u> | 8. <u>C</u> | 9. <u>A</u> | 10. <u>D</u> |
| 11. <u>B</u> | 12. <u>A</u> | 13. <u>D</u> | 14. <u>C</u> | 15. <u>D</u> |

Reaction Predictions: state the type of reaction (S, D, C, SR, DR, DR₂), write the balanced chemical equation, and finish the word equation for the following (7 pts. each).

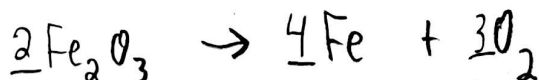
C 16. Pentane (C₅H₁₂) + oxygen →



SR 17. Potassium oxide + aluminum →



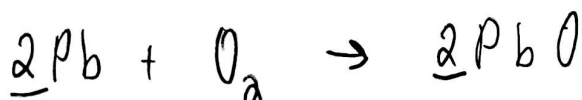
D 18. Iron (III) oxide →



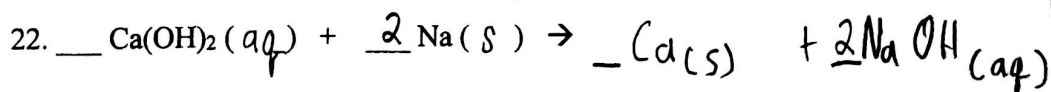
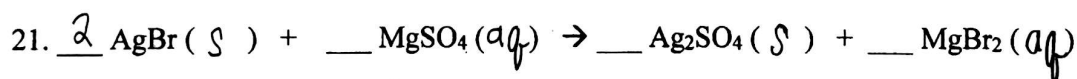
DR 19. In the following reaction: Magnesium chloride reacts with sodium phosphate.



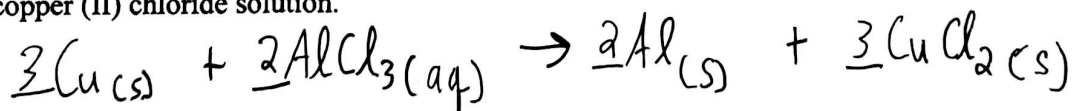
S 20. In the following reaction lead combines with oxygen to form lead (II) oxide.



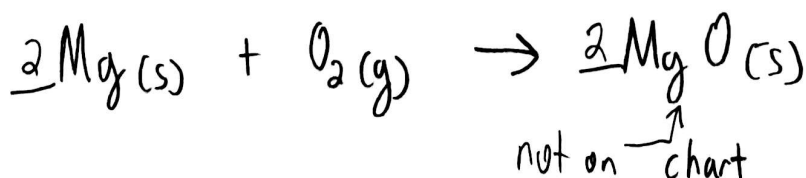
Solubility reaction: predict (if needed), write the balanced chemical equation, and determine the phase notation for the following (7 pts. each).



23. Solid copper metal reacts with aluminum chloride solution to produce aluminum metal and copper (II) chloride solution.



24. Write the balanced chemical equation with phase notations for the following: magnesium metal reacts with oxygen.



Name:

For each question, write the letter of the best answer to the left of the question (2 pts each).

- The combustion reaction of any hydrocarbon will always yield _____.
 - water and oxygen
 - carbon dioxide
 - carbon dioxide and water
 - carbon dioxide and oxygen
- A reaction in which the ions of two compounds exchange places to form two new compounds is called a(n) _____.
 - synthesis reaction
 - decomposition reaction
 - single replacement reaction
 - double replacement reaction
- If a substance is insoluble, then the phase notation will be _____.
 - solid = (s)
 - liquid = (l)
 - gas = (g)
 - aqueous = (aq)
- What is the purpose of a catalyst?
 - It is needed to start the reaction
 - It is needed to stop the reaction
 - slows down a reaction
 - it does nothing
- The decomposition of a compound typically results in the production of _____.
 - an oxide
 - an acid
 - a ternary compound
 - two different elements
- Which of the following is soluble in a solution?
 - PbSO₄
 - CdSO₄
 - CuCl
 - AgBr
- The equation $2\text{AlCl}_3 \rightarrow 4\text{Al} + 3\text{Cl}_2$ is an example of a _____.
 - synthesis reaction
 - double replacement reaction
 - single replacement reaction
 - decomposition reaction
- Predict what will happen when lithium metal is added to a solution of magnesium chloride.
 - No reaction will occur.
 - lithium magnesium will be formed.
 - Lithium chloride will be formed.
 - chlorine gas will form
- To balance a chemical equation, you are only allowed to adjust the _____.
 - coefficients
 - subscripts
 - formulas of products
 - number of products
- What set of coefficients will balance the following reaction?
 $\underline{2} \text{CdO}(\text{s}) + \underline{2} \text{Cl}_2(\text{g}) \rightarrow \underline{2} \text{CdCl}_2(\text{aq}) + \underline{1} \text{O}_2(\text{g})$
 - 1, 2, 2, 2
 - 1, 2, 1, 2
 - 2, 1, 2, 1
 - 2, 2, 2, 1
- How do you identify a synthesis reaction?
 - a single reactant
 - a single product
 - a reaction between two ionic compounds
 - a reaction between an element and a compound
- How do you identify a decomposition reaction?
 - a single reactant
 - a single product
 - a reaction between two ionic compounds
 - a reaction between an element and a compound
- According to the law of conservation of mass, the total mass of the reacting substances is _____.
 - always more than the total mass of the products
 - always less than the total mass of the products
 - sometimes more and sometimes less than the total mass of the products
 - always equal to the total mass of the products

14. What is the identifying characteristic of a typical double replacement reaction?
- a single reactant
 - a single product
 - a reaction between two compounds
 - a reaction between an element and a compound
15. An equation is NOT balanced unless _____.
- the reactants and products remain unchanged
 - the reaction has been carried out in a laboratory
 - all chemicals have coefficients greater than 1
 - there are the same number of atoms for reactants and products

Reaction Predictions: state the type of reaction (S, D, C, SR, DR,), write the balanced chemical equation, and finish the word equation for the following (7 pts. each).

_____ 16. Pentane (C₅H₁₂) + oxygen →

_____ 17. Potassium oxide + aluminum →

_____ 18. Iron (III) oxide →

_____ 19. In the following reaction: Magnesium chloride reacts with sodium phosphate.

_____ 20. In the following reaction lead combines with oxygen to form lead (II) oxide.

Solubility reaction: predict (if needed), write the balanced chemical equation, and determine the phase notation for the following (7 pts. each):

21. ___ AgBr () + ___ MgSO₄ () → ___ Ag₂SO₄ () + ___ MgBr₂ ()

22. ___ Ca(OH)₂ () + ___ Na () →

23. Solid copper metal reacts with aluminum chloride solution to produce aluminum metal and copper (II) chloride solution.

24. Write the balanced chemical equation with phase notations for the following: magnesium metal reacts with oxygen.