**Chemical Reactions Test Review Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Mega-Matching-select the choice that best matches the numbered description***

|  |  |
| --- | --- |
| **\_\_\_\_\_ 1. Phenolphthalein or bromothymol blue** **indicators are used to** | **a. coefficients** |
| **\_\_\_\_\_ 2. CaO + H2O 🡪 ?** | **b. to the right of 🡪** |
| **\_\_\_\_\_ 3. The only halogen that will replace Cl2** | **c. synthesis equation** |
| **\_\_\_\_\_ 4. Ba + HCl type** | **d. Al2(SO4)3** |
| **\_\_\_\_\_ 5. Barium acetate** | **e. (aq)** |
| **\_\_\_\_\_ 6. Carbon tetrachloride** | **f. confirms the presence of an acid or base** |
| **\_\_\_\_\_ 7. You balance equations with** | **g. definition of a precipitate** |
| **\_\_\_\_\_ 8. NaClO3 🡪 ??** | **h. Ba(C2H3O2)2** |
| **\_\_\_\_\_ 9. Symbol for dissolved in water** | **i. Ca(OH)2** |
| **\_\_\_\_\_10. In an equation, the products are found** | **j. the products of a single replacement** **equation** |
| **\_\_\_\_\_11. Ammonium carbonate** | **k. single replacement equation** |
| **\_\_\_\_\_12. Mg + O2 🡪 MgO type** | **l. NaCl + O2** |
| **\_\_\_\_\_13. Aluminum sulfate** | **m. NF3** |
| **\_\_\_\_\_14. Nitrogen gas** | **n. CO2 + H2O** |
| **\_\_\_\_\_15. A sign that a reaction has occurred** | **o. (NH4)2CO3** |
| **\_\_\_\_\_16. Nitrogen trifluoride** | **p. Law of Conservation of Mass** |
| **\_\_\_\_\_17.**  | **q. CCl4** |
| **\_\_\_\_\_18. Potassium chlorate** | **r. test for carbon dioxide gas**  |
| **\_\_\_\_\_19. H2O 🡪 H2 + O2 type** | **s. CoCl2** |
| **\_\_\_\_\_20. Products of the combustion of C4H10** | **t. ZnSO4** |
| **\_\_\_\_\_21. Zinc sulfate** | **u. evolution of heat or light** |
| **\_\_\_\_\_22. Total mass of reactants = products** | **v. N2** |
| **\_\_\_\_\_23. Cobalt (II) chloride** | **x. decomposition equation** |
| **\_\_\_\_\_24. A burning splint is extinguished** | **w. symbol - heat must be added** |
| **\_\_\_\_\_25. The activity series predicts** | **y. KClO3** |
| **\_\_\_\_\_26. Insoluble solid formed from the reaction of** **2 aqueous solutions** | **z. F2** |

**Use your Reference sheets to answer the following questions.**

***Short Answer and Fill in the Blank***

**27. What happens when CO2 (g) is bubbled into limewater?**

**28. Compare and contrast the splint tests for O2 (g) and H2(g).**

**29. Metals, like iron, can replace \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from acids or from steam.**

**30. The only elements that can replace Cu on the Activity Series are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**31. You could determine if NaNO3 would react with FeCl3 by using \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**32. Nickel reacts with an acid to form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ gas.**

**33. An active metal reacts with hydrochloric acid to yield a metallic compound and \_\_\_\_\_\_\_\_\_\_\_\_**

**34. A chemical equation in which is called a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_ equation.**

**35. Use your Reference sheets to find ANY reaction types that will form CO2 + H2O (with or without other products). What types of reactions will form these 2 products?**

***Use the correct physical state symbol, (s) or (aq), to indicate which of the following is soluble in water.***

**36. calcium fluoride \_\_\_\_\_ 37. Silver chloride \_\_\_\_\_ 38. K2S \_\_\_\_\_**

**39. HgS \_\_\_\_\_ 40. NH4NO3 \_\_\_\_\_ 41. Ag2S \_\_\_\_\_**

***Write a balanced equation for each of these reactions (if they occur)***

**42. aluminum reacts with copper (II) sulfate**

**43. zinc is added to cold water**

**44. calcium metal is added to a solution of magnesium chloride**

**45. calcium chloride and silver nitrate react**

**46. C5H12 + O2 🡪**

**47. NaOH + H2SO4 🡪**

**48. synthesis reaction between aluminum and bromine**

**49. Mg(HCO3)2 🡪**

**50. magnesium bromide reacts with chlorine to yield…**

***Review full ionic or net ionic equations***

**51. Write the full ionic equation for Ca(s) + MgCl2 (aq) 🡪 CaCl2(aq) + Mg(s)**

**52. Write the net ionic equation for Pb(NO3)2 (aq) + 2 KI (aq) 🡪 PbI2 + 2 KNO3**

***Color Change is one indication that a reaction has occurred. Which of these color changes represents a chemical reaction? Explain.***

**53. Phenolphthalein turns pink when a base is mixed with an acid.**

**54. A deep red solution of a cobalt salt turns a lighter color when water is added.**

**55. An iron grill left outside develops a reddish residue on it over time.**