

M = Molecular (covalent) compounds  
I = Ionic compounds

Honors Chemistry  
Problem Set

Name Pratt  
Date 4/19/15 Period     

Give the names of the compounds listed below indicate either ionic or molecular

- |   |   |                   |
|---|---|-------------------|
| 1. I MgO <u>Magnesium oxide</u>   | 26. M H <sub>2</sub> O <u>Water</u>   | HYDROGEN MONOXIDE |
| 2. I BaS <u>Barium sulfide</u>  | 27. I Mg <sub>3</sub> N <sub>2</sub> <u>Magnesium nitride</u>                   |                   |
| 3. M CO <u>Carbon monoxide</u>  | 28. I NaOH <u>Sodium hydroxide</u>  |                   |
| 4. M N <sub>2</sub> H <sub>4</sub> <u>Dinitrogen tetroxide</u>                  | 29. M HCl <u>Hydrogen chloride</u>  |                   |
| 5. I K <sub>3</sub> P <u>potassium phosphide</u>                                | 30. I FeCl <sub>3</sub> <u>Iron(III) chloride</u>                               |                   |
| 6. I Na <sub>3</sub> N <u>Sodium nitride</u>                                    | 31. I MnO <u>Manganese oxide</u>  |                   |
| 7. M SO <sub>2</sub> <u>Sulfur dioxide</u>                                      | 32. I AlF <sub>3</sub> <u>Aluminum fluoride</u>                                 |                   |
| 8. M SO <sub>4</sub> <sup>2-</sup> <u>Sulfate ion</u>                           | 33. I MgSe <u>Magnesium selenide</u>  |                   |
| 9. I BaSO <sub>4</sub> <u>Barium sulfate</u>                                    | 34. M Br <sub>2</sub> <u>Bromine</u>  |                   |
| 10. I (NH <sub>4</sub> ) <sub>3</sub> PO <sub>4</sub> <u>Ammonium phosphate</u> | 35. I TiO <sub>2</sub> <u>Titanium oxide</u>                                    |                   |
| 11. M SiO <sub>2</sub> <u>Silicon dioxide</u>                                   | 36. I P <sub>2</sub> S <sub>5</sub> <u>Phosphorus pentasulfide</u>              |                   |
| 12. I NaClO <sub>3</sub> <u>Sodium chlorate</u>                                 | 37. I CSF <sub>6</sub> <u>Carbon hexafluoride</u>                               |                   |
| 13. M CCl <sub>4</sub> <u>Carbon tetrachloride</u>                              | 38. I AgNO <sub>3</sub> <u>Silver nitrate</u>                                   |                   |
| 14. I BaSO <sub>3</sub> <u>Barium sulfite</u>                                   | 39. I Mo(PO <sub>4</sub> ) <sub>3</sub> <u>Molybdenum(III) phosphate</u>        |                   |
| 15. I HgO <u>Mercury(II) oxide</u>  | 40. I CuCl <u>Copper(I) chloride</u>  |                   |
| 16. I Fe <sub>2</sub> S <sub>3</sub> <u>Iron(III) sulfide</u>                   | 41. M CO <sub>2</sub> <u>Carbon dioxide</u>                                     |                   |
| 17. I PbS <u>Lead(II) sulfide</u>   | 42. I (NH <sub>4</sub> ) <sub>3</sub> PO <sub>4</sub> <u>Ammonium phosphate</u> |                   |
| 18. I Cu <sub>2</sub> O <u>Copper(I) oxide</u>                                  | 43. I Hg <sub>2</sub> Cl <sub>2</sub> <u>Mercury(I) dichloride</u>              |                   |
| 19. M P <sub>2</sub> O <sub>5</sub> <u>Diphosphorus pentoxide</u>               | 44. I Na <sub>3</sub> AsO <sub>4</sub> <u>Sodium arsenate</u>                   |                   |
| 20. I Al <sub>2</sub> O <sub>3</sub> <u>Aluminum oxide</u>                      | 45. I KHCO <sub>3</sub> <u>Potassium bicarbonate</u>                            |                   |
| 21. M PCl <sub>3</sub> <u>Phosphorus trichloride</u>                            | 46. M PCl <sub>5</sub> <u>Phosphorus pentachloride</u>                          |                   |
| 22. I NH <sub>4</sub> OH <u>Ammonium hydroxide</u>                              | 47. M SO <sub>2</sub> <u>Sulfur dioxide</u>                                     |                   |
| 23. I Li <sub>3</sub> N <u>Lithium nitride</u>                                  | 48. Kr <u>Krypton</u>   |                   |
| 24. I CoSO <sub>4</sub> <u>Cobalt(II) sulfate</u>                               | 49. I Ca <sub>2</sub> <u>Calcium</u>  | DIATOMIC          |
| 25. I FeS <u>Iron(II) sulfide</u>   | 50. I Be <sub>3</sub> P <sub>2</sub> <u>Beryllium phosphide</u>                 |                   |

Give the formula for each compound.

Date \_\_\_\_\_ Per \_\_\_\_\_

- |                             |   |                             |   |
|-----------------------------|---|-----------------------------|---|
| 1. sodium bicarbonate       | $\text{NaHCO}_3$                            | 2. calcium phosphate        | $\text{Ca}_3(\text{PO}_4)_2$                |
| 3. barium fluoride          | $\text{BaF}_2$                              | 4. zinc (II) oxide          | $\text{ZnO}$                                |
| 5. iron (III) oxide         | $\text{Fe}_2\text{O}_3$                     | 6. iron (II) oxide          | $\text{FeO}$                                |
| 7. magnesium selenide       | $\text{MgSe}$                               | 8. sodium sulfide           | $\text{Na}_2\text{S}$                       |
| 9. carbon dioxide           | $\text{CO}_2$                               | 10. silicon dioxide         | $\text{SiO}_2$                              |
| 11. dinitrogen tetrahydride | $\text{N}_2\text{H}_4$                      | 12. ammonium acetate        | $\text{NH}_4\text{C}_2\text{H}_3\text{O}_2$ |
| 13. sodium sulfite          | $\text{Na}_2\text{SO}_3$                    | 14. ammonium carbonate      | $(\text{NH}_4)_2\text{CO}_3$                |
| 15. hydrogen hydroxide      | $\text{HOH}$ $\text{H}_2\text{O}$           | 16. hydrogen sulfate        | $\text{H}_2\text{SO}_4$                     |
| 17. ammonium cyanide        | $\text{NH}_4\text{CN}$                      | 18. nitrogen monoxide       | $\text{NO}$                                 |
| 19. sodium nitride          | $\text{Na}_3\text{N}$                       | 20. potassium hydroxide     | $\text{KOH}$                                |
| 21. lithium acetate         | $\text{Li}_2\text{C}_2\text{H}_3\text{O}_2$ | 22. barium nitride          | $\text{Ba}_3\text{N}_2$                     |
| 23. aluminum oxide          | $\text{Al}_2\text{O}_3$                     | 24. magnesium oxide         | $\text{MgO}$                                |
| 25. dinitrogen trioxide     | $\text{N}_2\text{O}_3$                      | 26. phosphorous trichloride | $\text{PCl}_3$                              |
| 27. sulfur triiodide        | $\text{SI}_3$                               | 28. tin (II) phosphate      | $\text{Sn}_3(\text{PO}_4)_2$                |
| 29. ammonium oxide          | $(\text{NH}_4)_2\text{O}$                   | 30. hydrogen acetate        | $\text{HC}_2\text{H}_3\text{O}_2$           |
| 31. silicon tetrabromide    | $\text{SiBr}_4$                             | 32. dicarbon dihydride      | $\text{C}_2\text{H}_2$                      |
| 33. cobalt (II) cyanide     | $\text{Co(CN)}_2$                           | 34. potassium oxide         | $\text{K}_2\text{O}$                        |
| 35. copper (I) sulfide      | $\text{Cu}_2\text{S}$                       | 36. lithium bromide         | $\text{LiBr}$                               |
| 37. tin (IV) phosphate      | $\text{Sn}_3(\text{PO}_4)_4$                | 38. copper (II) sulfide     | $\text{CuS}$                                |
| 39. tin (IV) sulfate        | $\text{Sn(SO}_4)_2$                         | 40. tin (II) sulfate        | $\text{SnSO}_4$                             |
| 41. strontium phosphide     | $\text{Sr}_3\text{P}_2$                     | 42. sodium nitride          | $\text{Na}_3\text{N}$                       |
| 43. calcium iodide          | $\text{CaI}_2$                              | 44. carbon tetrafluoride    | $\text{CF}_4$                               |
| 45. dinitrogen trioxide     | $\text{N}_2\text{O}_3$                      | 46. potassium phosphide     | $\text{K}_3\text{P}$                        |
| 47. iron (III) chlorate     | $\text{Fe(ClO}_3)_3$                        | 48. iron (II) chlorate      | $\text{Fe(ClO}_3)_2$                        |
| 49. barium hydroxide        | $\text{Ba(OH)}_2$                           | 50. lead (II) chromate      | $\text{PbCrO}_4$                            |