**Types of Bonds** Name Key - Mr. Sudbury Period____

**Define the following:**

- *Ionic Bond -* A chemical bond resulting in the electrical attraction between large numbers of cations and anions.
- *Covalent Bond -* Alchemical bond resulting in the sharing of an electron pair between two atoms.
- *Polyatomic Ion –* A charged group of covalently bonded atoms.

Classify the following compounds as either ***ionic*** (metal + nonmetal), ***covalent*** (nonmetal + nonmetal), or ***both*** (containing a polyatomic ion, or three or more types of atoms).

1. ionic $CaCl_2$
2. Covalent $CO_2$
3. both $BaSO_4$ – polyatomic ion
4. ionic $K_2O$
5. ionic NaF
6. both $Na_2CO_3$ – polyatomic ion
7. Covalent $CH_4$
8. Covalent $SO_3$
9. ionic LiBr
10. ionic MgO
11. both $NH_4Cl$ Polyatomic ion
12. Covalent HCl
13. ionic KI
14. both NaOH – Polyatomic ion
15. Covalent $NO_2$
16. both $AlPO_4$ – polyatomic ion
17. ionic $FeCl_3$
18. Covalent $P_2O_5$
19. Covalent $N_2O_3$
20. Covalent $H_2O$ * or both $H(OH)$ – Polyatomic ion
21. ionic NaCl
22. both $H_2SO_4$ – polyatomic ion
23. both $KNO_3$ polyatomic ion
24. Covalent $C_2H_6$
25. Covalent $H_2O_2$
26. Covalent $CCl_4$
27. ionic $Li_2O$
28. Covalent $NF_3$
29. both $CaSO_4$ – Polyatomic ion
30. Covalent $SO_2$
31. both $Mg(OH)_2$ – polyatomic ion
32. ionic SrO
33. ionic $Fe_2O_3$
34. Covalent $NO_2$
35. Covalent CO
36. ionic $K_2S$
37. ionic $BaBr_2$
38. Covalent $CO_2$
39. both $Na_2SO_4$ – polyatomic ion
40. ionic $Ag_2O$