Unit 6 Part 2 Molecular Compounds and Covalent Bonding Quiz Review

1 – Quick Review – Compounds to Bond Types

Match the following **compounds** to the three bond types.

Each answer may be used once, more than once, or not at all.

**C) Covalent Bond (nonmetal to non) I) Ionic Bond (metal to non) M) Metallic Bond (metals only)**

|  |  |  |
| --- | --- | --- |
| \_\_\_1. KBr  \_\_\_2. Cu  \_\_\_3. CO2  \_\_\_4. Pb  \_\_\_5. CH4 | \_\_\_6. CaCl2  \_\_\_7. Br2  \_\_\_8. Na2O  \_\_\_9. SiO2  \_\_\_10. brass (Cu + Zn) | \_\_\_11. ZnI2  \_\_\_12. Ag  \_\_\_13. NaCl  \_\_\_14. C(graphite)  \_\_\_15. C3H8 |

2 – Lewis Dots of Elements & Ions

Draw Lewis Dot Symbols of the following elements and ions:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Na  Na | Cl  Cl | O  O | I  I | Al  Al |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| K+  K | F-  F | S2-  S | Br-  Br | Ca2+  Ca |

3 – Electronegativity & Bond Type

Given the following pairs of elements and their electronegativities, decide on the type of bond the two atoms will exhibit.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| elements | Higher Electro-negativity | Lower  Electro-negativity | Difference | Bond Type |
| C-O |  |  |  |  |
| Li-N |  |  |  |  |
| N-I |  |  |  |  |
| H-Cl |  |  |  |  |
| N-N |  |  |  |  |
| B-F |  |  |  |  |
| O-H |  |  |  |  |

Molecular Compounds - How Do Atoms Stick Together?

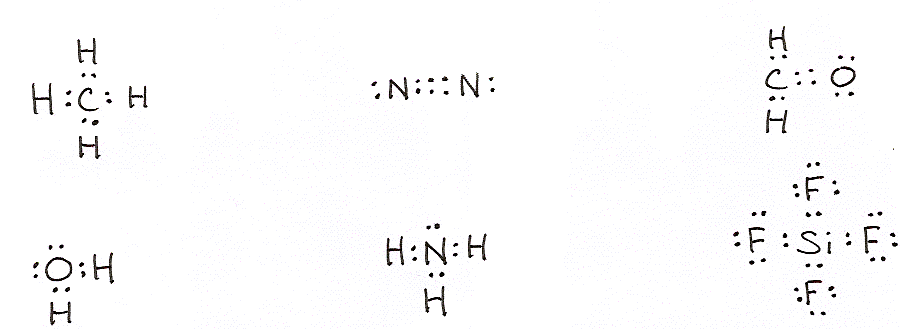
4 – Lewis Dots of Molecules

Draw the Lewis Symbols of the following molecules. Only single bonds are used.

|  |  |  |
| --- | --- | --- |
| Br2 | CBr4 | H2O2 |
| H2S | PH3 | SiH4 |

5 – Polar or Non-polar Molecule?

State whether each molecule below is polar or non-polar. Explain to each other why you made your choice.



6 – Lewis Dots of Molecules

Draw the Lewis Symbols of these molecules that include double and triple bonds.

|  |  |  |
| --- | --- | --- |
| P2 | Se2 | C2Cl2 |

Unit 7 – How Do Atoms Stick Together?

Station 5 – Intermolecular Forces of Attraction

For each substance, state the type of IMF that holds the solid together. Place an 🗷 below the box.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Substance | London  Forces | Dipole-  Dipole | Hydrogen  Bonding | Metallic  Bonds | Ionic  Bonds | Covalent  Bonds |
| C(graphite) |  |  |  |  |  |  |
| Au |  |  |  |  |  |  |
| KBr |  |  |  |  |  |  |
| H2O |  |  |  |  |  |  |
| CH3OH |  |  |  |  |  |  |
| SiO2 |  |  |  |  |  |  |
| CO2 |  |  |  |  |  |  |
| SF2 |  |  |  |  |  |  |
| brass  (Zn + Cu) |  |  |  |  |  |  |
| He |  |  |  |  |  |  |

Unit 7 – How Do Atoms Stick Together?

Station 7 – Quick Quiz – Properties of Types of Bonds

Match the following **statements** to the three bond types.

Each answer may be used once, more than once, or not at all.

**C) Covalent Bond I) Ionic Bond M) Metallic Bond**

|  |  |
| --- | --- |
| \_\_\_1. the strongest bond  \_\_\_2. conducts electricity as a solid  \_\_\_3. alternating positive and negative particles  \_\_\_4. sharing electrons between two atoms  \_\_\_5. positive ions in a “sea of electrons” | \_\_\_6. malleable and ductile  \_\_\_7. conducts electricity when dissolved in water  \_\_\_8. involves a transfer of electrons  \_\_\_9. involved in molecules and in network solids  \_\_\_10. does not usually conduct electricity  Exception?: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |