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:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NaNa | ClCl | OO | II | AlAl |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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 | LowerElectro-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 | LondonForces | Dipole-Dipole | HydrogenBonding | MetallicBonds | IonicBonds | CovalentBonds |
| 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?: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |