NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ GRADED: COMPOUNDS: BUILDING THAT VOCABULARY

DIRECTIONS: I want you to identify key terms and ***re-interpret them with simple phrases or symbols*** … and then answer the question. But first, let’s pull all of the terms together.

could be ionic compounds OR molecular compounds

inorganic

compounds

might have or might NOT has carbon. But if it is does, have Carbon, the symbol C (for carbon) WON’T be the first element of the formula.

*tend* not to combust (burn) in oxygen

could exist at STP in the solid, liquid or gas phase

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

almost always classified also as a molecular compound

really important recognition skill

organic

compounds

C is the central atom, and found as the 1st symbol of the formula

some are soluble in water, most are NOT

but

when one is soluble, there will NOT be electrolytes produced, & no conductivity

With the C will often be H, O, or N…

Bonds are covalent (shared electrons)

can be solid, liquid or gas, at STP

Combust (burn) in oxygen

regardless of the phase, there is probably an odor

Each C will have 4 covalent bonds

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

ionic

compounds

definition

2 or more different elements bonded with ionic bonds, and has an overall charge of 0

The solids have high melting points, over 200 °C

really important recognition skill

probably **INORGANIC**

as well

ionic bond is electro-static, due to a transfer of electrons

made of Metal + ions

& Nonmetal - ions

compounds have virtually **no odor**

when soluble, they produce electrolytes and conduct an

electrical current

inorganic ionic compounds are often soluble in water

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

The solids have low melting points, less than 200 °C

2 or more different elements bonded with COVALENT bonds, and has an overall charge of 0

Molecular

compounds

made of Nonmetal atom

& a second Nonmetal atom

Covalent Bond is a sharing of at least 2 electrons

could be solid, liquid or gas at STP

could be INORGANIC

or ORGANIC

Some are soluble in water. Some are NOT soluble

when soluble, they DO NOT produce electrolytes and DO NOT conduct an

electrical current

NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ GRADED: COMPOUNDS: BUILDING THAT VOCABULARY

DIRECTIONS: Rip off the front page. Take out your periodic table. Use the summary of information and the periodic table to help interpret and then answer each of the following questions. **Engage … circle terms … reinterpret with short interpretations ….**

\_\_\_\_1) Given: C6H12O6(s) which of the following correctly describe(s) the substance?

I) organic compound II) has covalent bonds III) probably conducts an electrical

current in water

1) only I is correct

2) only II is correct

3) only I and II are correct

4) only II and III are correct

5) I, II, and III are each correct

\_\_\_2) Given: NaCl(s) which of the following correctly describe(s) the substance?

I) organic compound II) has ionic bonds between Na and Cl III) has a melting point over 200°C

1) only I is correct

2) only II is correct

3) only I and II are correct

4) only II and III are correct

5) I, II, and III are each correct

\_\_\_3) Given: H2O(l) which of the following correctly describe(s) the substance?

I) organic compound II) is molecular III) has ionic bonds between H and O

1) only I is correct

2) only II is correct

3) only I and II are correct

4) only II and III are correct

5) I, II, and III are each correct

\_\_\_4) Given: C35H72 (paraffin or candle wax) … which of the following correctly describe(s) the substance?

I) organic compound II) molecular compound III) has a melting point over 200°C

1) only I is correct

2) only II is correct

3) only I and II are correct

4) only II and III are correct

5) I, II, and III are each correct

\_\_\_5) Given: CuSO4(s) which of the following correctly describe(s) the substance?

I) has ionic bonds II) molecular compound III) organic compound

1) only I is correct

2) only II is correct

3) only I and II are correct

4) only II and III are correct

5) I, II, and III are each correct

\_\_\_6) Given: H2S(g) which of the following correctly describe(s) the substance?

I) has ionic bonds II) molecular compound III) inorganic compound

1) only I is correct

2) only II is correct

3) only I and II are correct

4) only II and III are correct

5) I, II, and III are each correct

\_\_\_7) Given: C8H11NO2 (dopamine, a neurotransmitter): which of the following correctly describe(s) the substance?

I) has covalent bonding II) molecular compound III) organic compound

1) only I is correct

2) only II is correct

3) only I and II are correct

4) only II and III are correct

5) I, II, and III are each correct

\_\_\_8) Which of the following is a /are reasonable inference(s) given the work of our course?

I) Metal ions bonded to Nonmetal ions produce an ionic compound

II) Nonmetals bonded to Nonmetals produce a molecule

III) All ionic compounds have covalent bonds

1) only I is correct

2) only II is correct

3) only I and II are correct

4) only II and III are correct

5) I, II, and III are each correct

\_\_\_9) Which of the following is a /are reasonable inference(s) given the work of our course?

I) A substance is soluble in water, and the resulting solution conducts an electrical current. The

substance is probably an ionic compound.

II) A substance is soluble in water, but there is absolutely NO electrical conductivity. The substance

must be an ionic compound

III) A substance melts at 62°C. It is NOT soluble in water. It is probably an ionic compound.

1) only I is correct

2) only II is correct

3) only I and II are correct

4) only II and III are correct

5) I, II, and III are each correct

\_\_\_10) Given: NaHCO3(s)  (baking soda): which of the following correctly describe(s) the substance?

I) organic compound II) ionic compound III) has a strong odor

1) only I is correct

2) only II is correct

3) only I and II are correct

4) only II and III are correct

5) I, II, and III are each correct

\_\_\_11) Which of the following correctly describe(s) an ORGANIC MOLECULAR compound?

I) probably has an odor II) probably burns in oxygen III) probably has ionic bonding

1) only I is correct

2) only II is correct

3) only I and II are correct

4) only II and III are correct

5) I, II, and III are each correct