

SNC 1D**SAMPLE TEST 6.1-6.3****PART A - MATCH**

Match each description in column A with the correct term in column B. Write the letter from the term on the line beside the description.

[NOTE: Some terms may be used more than once. Some terms may not be used at all.]

_____ 1.	A positively or negatively charged atom.	(a)	covalent bond
_____ 2.	A chemical bond that forms between oppositely charged ions	(b)	ionic bond
_____ 3.	A chemical bond in which one or more pairs of electrons are shared by two atoms.	(c)	molecular compound
_____ 4.	The outer shell of an atom.	(d)	ionic compound
_____ 5.	A compound made of oppositely charged ions.	(e)	molecule
_____ 6.	A compound formed when atoms of two or more different elements share electrons.	(f)	solution
_____ 7.	The smallest particle of a pure substance, which has one or more shared pairs of electrons.	(g)	ion
_____ 8.	H_2	(h)	metal
_____ 9.	OBr_2	(i)	atom
_____ 10.	$NaCl$	(j)	valence

PART B - MULTIPLE CHOICE

Circle the letter of the correct response.

1. How does calcium obey the octet rule when reacting to form compounds?

A) It gains electrons. B) It gives up electrons.
C) It does not change its number of electrons. D) Calcium does not obey the octet rule.

2. How do atoms achieve noble-gas electron configurations in single covalent bonds?

A) One atom completely loses two electrons to the other atom in the bond.
B) Two atoms share two pairs of electrons.
C) Two atoms share two electrons.
D) Two atoms share one electron.

3. When sulfur forms an ionic compound, it must _____ electrons.

A) lose 1 B) lose 2 C) gain 1 D) gain 2

4. What is the formula of the potassium ion when achieves noble-gas electron arrangement?

A) K^{2+} B) K^{1-} C) K^+ D) K^{2-}

5. Which of the following compounds is not an ionic compound?

A) sulfur dioxide B) calcium bromide
C) potassium nitrate D) copper (I) sulfide

6. Which prefix is NOT correctly paired with its number equivalent?

A) penta, 5 B) hexa, 7
C) di, 2 D) tri, 3

7. Non-metals like to _____ electrons to become _____ ions.

A) gain, negative B) lose, positive
C) gain, positive D) lose, negative

8. Which of the following is NOT a property of most ionic compounds?

A) conducts electricity when dissolved in water
B) high solubility in water
C) a crystalline solid at room temperature
D) low melting point

PART C: LONG ANSWER: Answer the following in the space provided.

1. For each ion,

- Is there a loss or gain of electrons?
- How many electrons were lost or gained?



2. Write the chemical formula for each compound.



3. Write the chemical name for each compound.



4. Compare ionic and molecular compounds by filling in the chart below.

[use terms such as: high, low, solid, liquid, gas, yes, no]

physical property	ionic compound	molecular compound
melting point		
solubility in water		
conducts electricity		
state at room temperature		

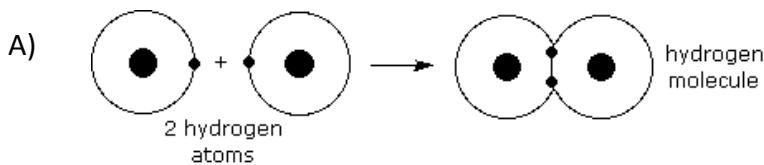
5. For each substance,

- Identify as an ionic compound, a molecular compound or a molecular element.
- Draw a Bohr-Rutherford model.

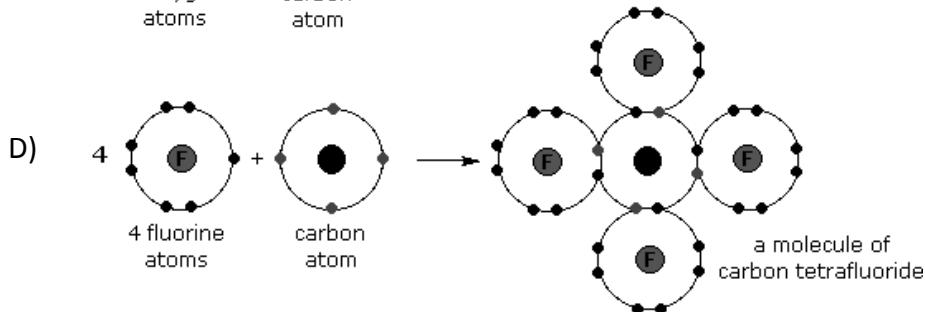
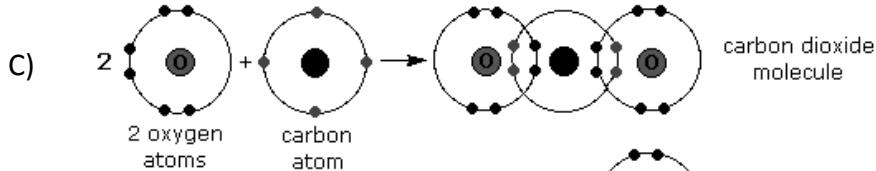
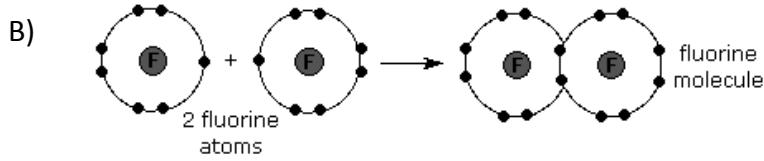


6. For each molecule (only valence shell shown), state the number of electrons that are...

- used in bonds between the atoms.
- valence electrons not in bonds.



ANSWER TO (A):
2 electrons in bond
0 electrons not in bond



7. Salt is used on many roads to make the roads safe for driving in icy conditions.

A) Name 2 physical properties that make salt valuable for de-icing.

B) Name 2 negative effects of using road-salt.

8. Plastics are made of very large molecules called polymers. They are a large class of human-made molecular compounds.

A) Name 2 uses of polymers.

B) What environmental problem do polymers cause and what can be done to help solve the problem?