Molecular Compounds Questions

1. How can you tell the difference between ionic compounds and molecular compounds?

2. a) What kinds of atoms form molecular compounds?

b) How do the atoms in molecular compounds form stable electron configurations?

c) What type of bond holds atoms together in molecules?

3. What is the relationship between combining capacity of an atom and the number of electrons it needs to share to be like the nearest noble gas?

4. a) How many valence electrons are there in a fluorine atom?

b) How many electrons does a fluorine atom need to share to become stable?

c) Draw a sketch to show how two fluorine atoms could form a stable molecule.

5. Name the following compounds:

a) CBr_4

b) NI_3

c) OF_2

d) $SiCl_4$

6. Write chemical formulas for and name the molecular compounds forms by the following pairs of elements:

a) silicon and oxygen

b) nitrogen and hydrogen

c) phosphorus and chlorine

d) sulfur and bromine

e) oxygen and fluorine

f) carbon and chlorine

7. Why can't two metal atoms form a covalent bond?