

CHEMICAL BONDING WORKSHEET

A. Answer the following questions.

1. Draw the Lewis structure of each of the following atoms and determine the bonding capacity of each one?

- a) ${}_6\text{C}$
- b) ${}_7\text{N}$
- c) ${}_8\text{O}$
- d) ${}_9\text{F}$
- e) ${}_{10}\text{Ne}$
- f) ${}_{15}\text{P}$
- g) ${}_{16}\text{S}$

2. Element Y has second valence shell, and it can form a stable compound with element ${}_{11}\text{X}$. If the formula of the compound is X_2Y , what is the atomic number of Y.

3. An element X with an atomic number of 17 and element Y with an atomic number of 20 forms a compound. What is the formula of this compound.

4. Write the Lewis structures of the following molecules. (${}_1\text{H}$, ${}_6\text{C}$, ${}_7\text{N}$, ${}_9\text{F}$, ${}_{17}\text{Cl}$)

- a) C_2Cl_2
- b) N_2H_4
- c) HF