

This quiz is take-home and open book, and it is intended that all members of the group contribute to completing it. It is a violation of the Academic Honor Code to sign a quiz that you did not work on. **The quiz is due at the end of class on Thursday, October 19.**

List names in alphabetical order, and print them clearly!
Put names on all pages, and staple pages together

Points

- (4) 1. Give the **empirical formulas** for the following ionic compounds.
 (a) magnesium phosphate (b) aluminum bicarbonate

0.5 pts each



- (c) iron (III) carbonate

- (d) zinc perchlorate



- (e) ammonium bromite

- (f) copper (II) cyanide

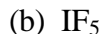


- (g) sodium hypochlorite

- (h) potassium dihydrogen phosphate



- (3) 2. Name the following inorganic covalent compounds.



0.5 pts. each

sulfur hexafluoride

iodine pentafluoride

phosphorus pentachloride



tetraphosphorus hexasulfide

xenon trioxide

carbon tetrabromide

- (2) 3. Name the following ionic compounds.



0.5 pts. each

copper (II) bromide (or cupric bromide) Iron (III) chloride (or ferric chloride)



ammonium cyanide

potassium nitrite

List names in alphabetical order. **Be sure to staple pages together!**

- (6) 4. For the following covalent compounds, draw the **Lewis dot structure**. Indicate the **geometrical shape** of the molecule in the blank, (while drawing the shape as best you can for the Lewis structure). Draw an **arrow** over each bond in the Lewis dot structure, showing the direction of polarity of the bond (arrow pointing to the more electronegative atom), and tell whether the molecule as a whole will be **polar** or **non-polar**.

Molecular Formula	Lewis Structure 0.3 structure 0.3 arrows	Geometrical Shape 0.5 shape	Polar Molecule? 0.4 based on shape
NF ₃		trigonal pyramid	yes
BF ₃		trigonal planar	no
SO ₂		bent	yes
CO ₂		linear	no