

Chapters 5 Study Questions

- Give an example of
 - an element made of molecules
 - a compound made of molecules
 - a compound made of ions
- Which of the following are ionic compounds? Which are covalent compounds? Provide the formula

#	NAME	Ionic or Covalent?	Formula
a)	dinitrogen monoxide		
b)	potassium oxide		
c)	phosphorus trichloride		
d)	aluminum phosphate		
e)	hydrochloric acid		
f)	ammonium fluoride		
g)	lead(II) nitrate		
h)	sulfuric acid		

- Give the formulas of the following ionic compounds:
 - calcium carbonate
 - titanium (IV) sulfide
 - copper(I) oxide
 - magnesium hydroxide
 - silver bromide
 - potassium phosphate
 - ammonium sulfate
 - cobalt(II) hydroxide
 - iron(III) nitride
- Provide the formulas for the following covalent compounds:
 - phosphorus triiodide
 - dinitrogen pentoxide
 - nitric acid

Summary of Chapter 5: Molecules and Compounds

Elements: atomic & molecular

Ionic and Covalent Compounds

Polyatomic ions

Writing formulas from name for ionic compounds

Writing formulas from name for binary covalent compounds

Writing formulas from name for acids

Answers to Chapters 5 Study Questions

1. a) Elements made of molecules: O_2 , N_2 , Cl_2 , or any other diatomic element.
- b) Compounds made of molecules: CO_2 , H_2O , NH_3 , or any other covalent compound.
- c) Compounds made of ions: $NaCl$, $MgSO_4$, or any other ionic compound.

2.

#	NAME	Ionic or Covalent?	Formula
a)	dinitrogen monoxide	covalent	N_2O
b)	potassium oxide	ionic	K_2O
c)	phosphorus trichloride	covalent	PCl_3
d)	aluminum phosphate	ionic	$AlPO_4$
e)	hydrochloric acid	covalent	HCl
f)	ammonium fluoride	ionic	NH_4F
g)	lead(II) nitrate	ionic	$Pb(NO_3)_2$
h)	sulfuric acid	covalent	H_2SO_4

3. a) $CaCO_3$ b) TiS_2 c) Cu_2O d) $Mg(OH)_2$ e) $AgBr$
 f) K_3PO_4 g) $(NH_4)_2SO_4$ h) $Co(OH)_2$ i) FeN
4. a) PI_3 b) N_2O_5 c) HNO_3