

- Work with a classmate or two to complete these tables. *Check all your answers with at least one classmate before you turn this in.*
- HINTS: See sections 2.6-2.8 (especially tables 2.3-2.8) in your text. (*Chemistry 7th ed.*, Zumdahl & Zumdahl, Houghton Mifflin)
- Your instructor will help you if you can't agree on an answer or your group is stumped.

PART 1

Identify each of the following compounds as ionic (**I**), molecular (**M**), or acid (**A**).

	<u>Formula or Name</u>	<u>Compound Type</u> (I , M or A)
1.	CO ₂	_____
2.	K ₂ O	_____
3.	tin(IV) bromide	_____
4.	HC ₂ H ₃ O ₂	_____
5.	H ₃ PO ₄	_____
6.	sodium chromate	_____
7.	N ₂ O	_____
8.	ammonium bromide	_____
9.	Cu ₂ SO ₄	_____
10.	hydrofluoric acid	_____
11.	MgH ₂	_____
12.	phosphorus pentachloride	_____
13.	CaI ₂	_____
14.	iron(III) carbonate	_____
15.	HClO	_____
16.	nickel(II) acetate	_____
17.	CCl ₄	_____
18.	barium carbonate	_____
19.	Fe ₂ (CO ₃) ₃	_____
20.	nitrous acid	_____
21.	Ni(C ₂ H ₃ O ₂) ₂	_____
22.	sulfur dioxide	_____
23.	Na ₃ PO ₄	_____
24.	oxygen difluoride	_____

PART 2

Complete the following table. For ionic compounds or acids, identify the cation and anion.

	<u>Formula</u>	<u>Cation</u>	<u>Anion</u>	<u>Name</u>
25.	MgI ₂	<u>Mg²⁺</u>	<u>I⁻</u>	<u>magnesium iodide</u>
26.	_____	Na ⁺	S ²⁻	_____
27.	<u>Al₂O₃</u>	_____	_____	aluminum oxide
28.	OF ₂	_____	_____	_____
29.	_____	H ⁺	Cl ⁻	_____
30.	_____	_____	_____	lithium fluoride
31.	FeBr ₂	_____	_____	_____
32.	_____	Pb ⁴⁺	I ⁻	_____
33.	_____	_____	_____	dinitrogen tetroxide
34.	SnO ₂	_____	_____	<u>tin(IV) oxide</u>
35.	_____	Co ³⁺	S ²⁻	_____
36.	_____	_____	_____	iron(II) sulfide
37.	SF ₆	_____	_____	_____
38.	_____	Fe ³⁺	O ²⁻	_____
39.	_____	_____	_____	tin(II) oxide
40.	Pb(NO ₃) ₂	_____	_____	_____
41.	_____	Na ⁺	HPO ₄ ²⁻	_____
42.	_____	_____	_____	cobalt(III) sulfate
43.	HNO ₃	_____	_____	_____
44.	_____	Fe ³⁺	OH ⁻	_____
45.	_____	_____	_____	xenon hexafluoride
46.	P ₄ O ₁₀	_____	_____	_____
47.	_____	H ⁺	SO ₄ ²⁻	_____
48.	_____	_____	_____	phosphoric acid
49.	Al ₂ (Cr ₂ O ₇) ₃	_____	_____	_____
50.	_____	K ⁺	ClO ₃ ⁻	_____
51.	_____	_____	_____	silver nitrite
52.	Ag ₃ N	_____	_____	_____
53.	_____	Ti ³⁺	CN ⁻	_____
54.	_____	_____	_____	ammonium permanganate

PART 3

Complete the following table.

	<u>Formula</u>	<u>Name</u>
55.	CS ₂	_____
56.	_____	silver sulfate
57.	Fe(C ₂ H ₃ O ₂) ₂	_____
58.	_____	hydrosulfuric acid
59.	HI	_____
60.	_____	calcium chlorate
61.	Ca(HSO ₄) ₂	_____
62.	_____	tin(II) nitrite
63.	KMnO ₄	_____
64.	_____	iron(III) bromide
65.	KHCO ₃	_____
66.	_____	iron(III) bromate
67.	(NH ₄) ₂ HPO ₄	_____
68.	_____	nitrous acid
69.	OF ₂	_____
70.	_____	sodium phosphate
71.	Al ₂ O ₃	_____
72.	_____	chloric acid
73.	CoO	_____
74.	_____	vanadium(V) phosphate
75.	MnO	_____
76.	_____	manganese(III) phosphide
77.	H ₂ CO ₃	_____
78.	_____	manganese(IV) oxide
79.	MnO ₃	_____
80.	_____	manganese(VII) carbide