Dr. Taylor **Naming Compounds Practice** **Fall 2007**

1. Give the name for the following ionic compounds containing **fixed** charge metals:

A.	Li_2O	B.	K_2CrO_4
C.	CsCl	D.	$RbCH_3CO_2$
E.	MgS	F.	Mg_3N_2
G.	$CaBr_2 \cdot 4\ H_2O$	H.	Ca_3P_2
I.	BaI_2	J.	Al_2S_3
K.	KH	L.	AgSCN
M.	$Na_2S_2O_3$	N.	$NaClO_3$

2. Name the following binary ionic compounds containing **variable charge** metals:

A.	$FeCl_2$	B.	Cr_2O_3
C.	$Co(MnO_4)_3$	D.	CoS
E.	$Mn(SO_4)_2$	F.	$MnCr_2O_7$
G.	$NiBr_2 \cdot 6\ H_2O$	H.	NiS
I.	HgO	J.	Hg_2O
K.	$Cu(NO_3)_2$	L.	$Mn_3(PO_4)_5$
M.	$SnCl_4$	N.	CuI

3. Give the molecular formula for the following ionic compounds (note both fixed and variable charged metals)

A.	Aluminum nitride penta hydrate	B.	Calcium oxylate
C.	Silver permanganate	D.	Sodium dichromate
E.	Zinc bisulfate	F.	Lithium hydride
G.	Cadmium Iodide	H.	Mercury (II) dihydrogen phosphate
I.	Barium nitride	J.	Zinc chloride trihydrate
K.	Lithium hypochlorite	L.	Cesium Cyanide
M.	Iron (III) phosphide	N.	Tin (II) bromide
O.	Mercury (I) sulfide	P.	Chromium (III) Sulfide
Q.	Lead (II) oxide	R.	Gold (III) Nitrate
S.	Gold (I) phosphate	T.	Nickel (I) Nitrite dihydrate
U.	Tin (IV) chromate	V.	Iron (II) Fluoride
W.	Iron (III) iodide	X.	Lead (IV) hydroxide

4. Name the following binary **molecular** compounds:

A.	CS_2	B.	PCl_3
C.	SO_2	D.	CO
E.	PCl_5	F.	NCl_3
G.	CCl_4	H.	SiO_2
I.	BCl_3	J.	SF_4
K.	N_2O_5	L.	HBr
M.	SF_6	N.	CBr_4

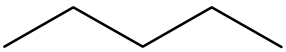
5. Give the molecular formula for the following molecular compounds

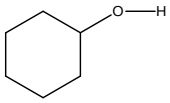
A.	sulfur trioxide	B.	phosphorous trihydride (phosgene)
C.	ammonia (nitrogen trihydride)	D.	Oxygen difluoride
E.	dinitrogen pentasulfide	F.	tetrasulfiur dinitride
G.	nitrogen dioxide	H.	Water (dihydrogen oxide)
I.	tetraphosphorous decaoxide	J.	tetra phosphorous hexaoxide
K.	Oxygen dichloride	L.	Peroxide (dihydrogen dioxide)

6. Give the name for the following organic compounds.

A. $C_4H_{10}O$ B. $C_{10}H_{22}$

C. C_6H_6 D. C_7H_{16}

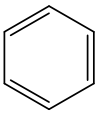
E. 

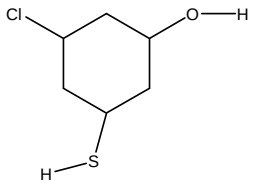
F. 

7. Write the molecular formula for the following organic compounds

A. methane B. propanol

C. cyclopentane D. octane

E. 

F. 

8.Draw the structural and line formulas for the following organic compounds.

A. ethane B. cyclobutanol

C. C_3H_8 D. $C_5H_{10}O$ (cyclic alcohol)

Answers

Question 1

A. lithium oxide
B. potassium chromate
C. cesium chloride
D. Rhubidium acetate
E. Magnesium sulfide
F. Magnesium nitride
G. Calcium bromide tetrahydrate
H. Calcium phosphide
I. Barium iodide
J. Aluminum sulfide
K. potassium hydride
L. silver thiocyanate
M. Sodium thiosulfite
N. sodium chlorate

Question 2

A. Iron (II) chloride
B. Chromium (III) oxide
C. Cobalt (III) permanganate
D. Cobalt (II) sulfide
E. Manganese (IV) sulfate
F. Manganese (II) dichromate
G. Nickel (II) bromide hexahydrate
H. Nickel (II) sulfide
I. Mercury (II) oxide
J. Mercury (I) oxide
K. Copper (II) nitrate
L. Manganese (V) phosphate
M. Tin (IV) chloride
N. Copper (I) iodide

Question 3

A. $AlN \cdot 5\ H_2O$
B. CaC_2O_4
C. $AgMnO_4$
D. $Na_2Cr_2O_7$
E. $Zn(HSO_4)_2$
F. LiH
G. CdI_2
H. $Hg(H_2PO_4)_2$
I. Ba_3N_2
J. $ZnCl_2 \cdot 3\ H_2O$
K. $LiClO$
L. $CsCN$
M. FeP
N. $SnBr_2$
O. Hg_2S
P. Cr_2S_3
Q. PbO
R. $Au(NO_3)_3$
S. Au_3PO_4
T. $NiNO_2 \cdot 2\ H_2O$
U. $Sn(CrO_4)_2$
V. FeF_2
W. FeI_3
X. $Pb(OH)_4$

Question 4

A. Carbon disulfide
B. Phosphorous trichloride
C. sulfur dioxide
D. Carbon monoxide
E. phosphorous pentachloride
F. nitrogen trichloride
G. Carbon tetrachloride
H. Silicon dioxide
I. Boron trichloride
J. Sulfur tetrafluoride
K. dinitrogen pentaoxide
L. Hydrogen bromide
M. Sulfur hexafluoride
D. Carbon tetrabromide

Question 5

A. SO_3
B. PH_3
C. NH_3
D. OF_2
E. N_2S_5
F. S_4N_2
G. NO_2
H. H_2O
I. P_4O_{10}
J. P_4O_6
K. OCl_2
L. H_2O_2

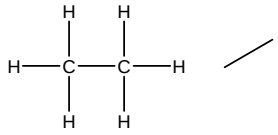
Question 6

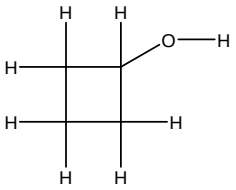
A. butanol
B. Decane
C. benzene
D. heptane
E. pentane
F. cyclohexanol

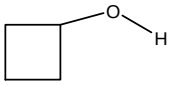
Question 7

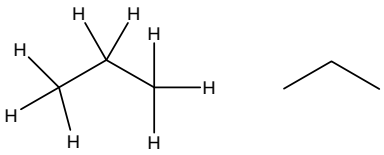
A. CH_4
B. C_3H_8O
C. C_5H_{10}
D. C_8H_{18}
E. C_6H_6
F. $C_6H_{11}ClOS$

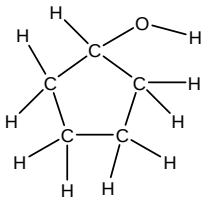
Question 8

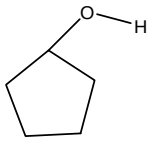
A. 

B 



C. 

D 



33.What is the charge on the cation in $(NH_4)_3PO_4$?

34. What is the charge on the anion in $K_2Cr_2O_7$?

35. An ionic compound has the formula M_2CO_3. What is the charge on M?

36. Give the name for the following compounds and state whether they are ionic or not

A. $Ba(NO_3)_2$ _____
B. NaH _____
C. PCl_5 _____
D. CO _____
E. NH_4OH _____
F. $Ca(MnO_4)_2$ _____
G. N_2O_4 _____
H. $NaHSO_4$ _____
I. $CuSO_4 \cdot 5H_2O$ _____
J. $SnCl_4$ _____
K. KCH_3CO_2 _____
L. CaS _____
M. $AlBr_3$ _____
N. $CH_3CH_2CH_3$ _____
O. CuO _____
P. PbS _____

37. Give the chemical formula for the following named compounds.

A. gold(III)nitrate _____
B. barium acetate _____
C. potassium dihydrogen phosphate _____
D. Calcium oxylate _____
E. Tetraphosphous heptasulfide _____
F. Tin(IV) chloride _____
G. Lithium hydride _____
H. Ethanol _____
I. Aluminum Nitrate nonahydrate _____
J. Ammonium bromide _____
K. Iron(III)dichromate _____
L. Ethene _____
M. Sodium Hydrogen sulfite _____

Answers:

1. Mn **2. Fe** **3. tin** **4. A**
5. A **6. D** **7. C** **8. A**
9. A **10. E** **11. 9 protons, 10 neutrons, and 9 electrons**
12. 92, 92, and 143 **13. B** **14. D**
15. D **16. B** **17. D** **18. D**
19. the same number of electrons **20. D** **21. 20**
22. A **23. A** **24. A** **25. B**
26. D **27. 16** **28. B** **29. E**
30. A **31. E** **32. C** **33. +1**
34. -2 **35. +1** **36. A. Barium nitrate (I)** **B. Sodium hydride (I)**
C. Phosphorous pentachloride **D. Carbon monoxide** **E. Ammonium hydroxide (I)**
F. Calcium permanganate (I) **G. Dinitrogen tetraoxide** **H. Sodium hydrogen sulfate (I)**
I. Copper (II) sulfate pentahydrate (I) **J. Tin(IV) chloride (I)** **K. Potassium acetate (I)**

L. Calcium sulfide (I) **M. Aluminum bromide (I)** **N. Propane**
O. Copper(II) oxide (I) **P. Lead (II) sulfide (I)**

37. A. $Au(NO_3)_3$ **B. $Ba(CH_3CO_2)_2$** **C. KH_2PO_4**
D. CaC_2O_4 **E. P_4S_7** **F. $SnCl_4$**
G. LiH **H. CH_3CH_2OH** **I. $Al(NO_3)_3 \cdot 9H_2O$**
I. NH_4Br **K. $Fe_2(Cr_2O_7)_3$** **L. C_2H_4**
M. H_2SO_3