## /28

## Chapter 4.2 & 4.3 Practice Test

- 1. Which one of the following elements is multivalent?
  - **a.** lithium
  - **b.** fluorine
  - c. nitrogen
  - **d.** nickel
- 2. What is the name of the ionic compound, BeBr<sub>2</sub>?
  - **a.** beryllium bromine
  - **b.** beryllium bromide
  - **c.** beryllium dibromide
  - **d.** monoberyllium dibromide
- **3.** What is the name of the covalent compound,  $SiO_2$ ?
  - **a.** silicon dioxide
  - **b.** silicon (II) oxide
  - c. monosilicon dioxide
  - **d.** silicon oxide (II)
- 4. What is the name of the ionic compound,  $K_3P$ ?
  - **a.** tripotassium phosphide
  - **b.** potassium (III) phosphide
  - **c.** potassium phosphate
  - d. potassium phosphide
- **5.** What is the name of the covalent compound,  $N_2O_3$ ?
  - **a.** nitrogen oxide
  - **b.** nitrous oxide
  - **c.** dinitrogen trioxide
  - d. nitrogen (II) trioxide
- 6. What is the name of the compound, PbCl<sub>2</sub>?
  - **a.** lead chloride
  - **b.** lead (II) chloride
  - c. lead (IV) chloride
  - **d.** lead dichloride
- 7. What is the name of the compound, NaNO<sub>2</sub>?
  - **a.** sodium nitrite
  - **b.** sodium nitrate
  - **c.** sodium nitrogen oxide
  - **d.** sodium nitrogen dioxide
- **8.** What is the formula of the compound, diphosphorous trisulphide?
  - a. PS
  - **b. PS**<sub>3</sub>
  - $c. P_3S_2$
  - **d.**  $P_2S_3$

- **9.** What is the formula for the compound, manganese (III) oxide?
  - a. MnO
  - **b.** Mn<sub>3</sub>O
  - $\mathbf{c.} \quad \mathrm{MnO}_2$
  - $\mathbf{d.} \quad \mathrm{Mn_2O_3}$
- **10.** What is the formula for the compound, potassium phosphite?
  - **a.** K<sub>3</sub>PO<sub>3</sub>
  - **b.** K<sub>3</sub>PO<sub>4</sub>
  - **c.** KP
  - **d.** K(PO<sub>3</sub>)<sub>3</sub>
- **11.** Why is the name monocarbon monooxide incorrect for the formula CO?
  - **I.** CO is an ionic compound which means no prefixes when naming
  - **II.** Mono is never used before the first name
  - **III.** Monocarbon should be written as monocarbide
  - IV. Monooxide should be written as monoxide
  - a. I and III
  - **b.** I and IV
  - c. II and III
  - d. II and IV
- **12.** Which of the following correctly classifies each formula as an ionic compound, a polyatomic compound or a covalent compound?

	Ionic	Polyatomic	covalent
a.	CuCl <sub>2</sub>	KNO <sub>3</sub>	CCl <sub>4</sub>
b.	CCl <sub>4</sub>	CuCl <sub>2</sub>	KNO <sub>3</sub>
c.	KNO <sub>3</sub>	CCl <sub>4</sub>	CuCl <sub>2</sub>
d.	CuCl <sub>2</sub>	CCl <sub>4</sub>	KNO <sub>3</sub>

**13.** Which set of ordered coefficients correctly balances the following equation?

$$\underline{\qquad} K_3PO_4 + \underline{\qquad} ZnSO_4 \rightarrow \underline{\qquad} K_2SO_4 + \underline{\qquad} Zn_3(PO_4)_2$$

a. 1, 2, 3, 2
b. 2, 3, 3, 1
c. 2, 1, 3, 2
d. 2, 2, 1, 3

## Name:

## PART 2: WRITTEN RESPONSE (15 marks)

1. Please complete the following table. Hint: you will need to use your data sheet to complete the formulas for the ionic and polyatomic compounds. (7 marks)

Scientific Name	Formula
silver phosphide	
	NH4NO2
manganese (II) sulphide	
	CuCl <sub>2</sub>
nitrogen tribromide	
lead (II) perchlorate	
	Cl <sub>2</sub> O

- 2. Balance the following equations (8 marks)
  - a.  $H_2O_2 \rightarrow H_2O + O_2$
  - **b.**  $BiCl_3 + H_2S \rightarrow Bi_2S_3 + HCl$
  - c.  $C_2H_6 + O_2 \rightarrow CO_2 + H_2O$  Tricky!! Do  $O_2$  last. Consider doubling all coefficients in the last step
  - **d.** \_\_Pb(NO<sub>3</sub>)<sub>2</sub> + \_\_K<sub>2</sub>CrO<sub>4</sub>  $\rightarrow$  \_\_PbCrO<sub>4</sub> + \_\_KNO<sub>3</sub>
  - e. iron(III) oxide + hydrogen → water + iron
    (2 marks 1 for correctly writing the equation, 1 for balancing)
  - **f.** Aluminum carbide + water  $\rightarrow$  methane + aluminum hydroxide **\*\*\*aluminum carbide is Al<sub>4</sub>C<sub>3</sub> \*\*\*** (2 marks 1 for correctly writing the equation, 1 for balancing)