

## Part II Short Answer

1. (10 Points) Writing formulas and naming compounds. Complete the following table.

Cation	Anion	Formula	Name
Mg <sup>2+</sup>	NO <sub>3</sub> <sup>-</sup>		
		(NH <sub>4</sub> ) <sub>3</sub> PO <sub>4</sub>	
			Copper (I) Sulfide
N <sup>4+</sup>			Nitrogen (IV) Oxide

2. (5 Points) Correctly draw the Lewis Dot Structures in each box.

Na	O	C	CO	Na <sub>2</sub> O

3. (5 Points) The following questions test your ability to use significant figures.

How many significant figures are in each of the following numbers?

- a) 3.650 \_\_\_\_\_                      b) 0.0606 \_\_\_\_\_                      c)  $5.40 \times 10^4$  \_\_\_\_\_

Express your answer using the correct number of significant figures.

- d)  $45.9 + 1.256 =$  \_\_\_\_\_                      e)  $54.73 \times .31794 =$  \_\_\_\_\_

4. (5 Points) The final question is based on the experimental determination of an element's density.

a) To determine the volume you place the element in a graduated cylinder containing water. The picture to the right shows the volume of water before and after the element was added. Record the volume of the element.

\_\_\_\_\_ mL

b) Determine the density of the element using a mass of 38.9 grams.  
(show the formula, substitution, and the answer with units).

c) Using your reference tables select the element which best matches your density.

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