**Oxford High School**

**Chemistry**

**Chapter 1-5 Cumulative Review**

1. What is the average atomic mass of an unknown element if 92.21% of its atoms have a mass of 27.977 amu, 4.70% have a mass of 28.976 amu, and 3.09% have a mass of 29.974 amu?
2. Einsteinium-252 was bombarded by a beryllium-9 atom, producing a new element and three neutrons.
3. Write the chemical symbol for the ion with 29 protons and 27 electrons.
4. How many protons, neutrons, and electrons are present in the 59Ni2+ ion?

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**Write electron configurations with orbital diagram for the following**

1. Mg
2. O
3. Write out the electron configuration for
   1. Silicon
   2. Lithium
   3. How many unpaired electrons are there in each atom?
4. Briefly describe where (and why) certain types elements can be found on the periodic table
5. Elements with small radius
6. Most metallic elements
7. Elements with high ionization energies

**II. Calculate the following**

1. A student fins the 6.62 g of a substance occupies a volume of 12.3 cm3. What is the density of the material?

10. Convert the following

A. 775 mL to microliters

B. -65oC to K

C.8.32mg to cg