**Quiz 1A**

# Directions: Answer each of the following questions. Be sure to use complete sentences where appropriate. For full credit be sure to show all of your work. Where appropriate answers should be boxed for clarity, written to the correct number of significant figures, and, include the proper units.

1. Complete the following sentences with the terms a hypothesis, an experiment, a measurement, or a theory (3 points):
   1. A possible solution to a problem is known as \_\_\_\_\_a hypothesis\_\_\_\_\_\_\_\_\_.
   2. Another name for a scientific test is \_\_\_\_an experiment\_\_\_\_\_\_\_\_\_\_\_.
   3. \_\_\_A theory\_\_\_\_\_\_\_ is a probable explanation for a set of observations or a set of tested hypotheses.
2. Are the following statements true or false (4 points)?

|  |  |  |
| --- | --- | --- |
|  | If a glass beaker drops on the floor and shatters, you should immediately pick up all of the large pieces with unprotected hands. | False |
|  | You should never look directly down into a container being heated because some of the material may splatter onto your face and clothing. | True |
|  | If a chemical smells good, it must taste good and therefore it can be eaten. | False |
|  | If a chemical gets into your eyes, you should immediately go to the eyewash station and flush both eyes for at least 15 minutes. | True |

1. Refer to a periodic table. Circle main group elements (3 points):

Cr (Z =24); Be (Z=4); Al (Z=13); V (Z=23); Br (Z = 35)

1. Complete the following table (5 points) :

|  |  |
| --- | --- |
| Element Name | Elemental Symbol |
| Lithium | Li |
| Carbon | C |
| Hydrogen | H |
| Nitrogen | N |
| Neon | Ne |

1. How many significant figures are there in each of the following number (3 points)?
   1. 0.587 m\_\_\_3 sf\_\_\_
   2. 34.766 L\_\_\_5 sf\_\_\_
   3. 3.2 x 10-2 g\_\_2 sf\_\_\_
2. Write the mass of an electron, 0.000548579909 amu, in scientific notation (2 points).

5.48579909 x 10-4 amu