## U1W1 Homework Honors Biology 2016

1. The three particles of an atom are: 2. The respective charges of each particle are:

a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_

b. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ b. \_\_\_\_\_\_\_\_\_\_\_\_\_\_

c.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. In the image below indicate the location for each of the subatomic particles:

4. Use the periodic table to complete the following table below

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Name of Element | Symbol of element | Atomic Number | Atomic Mass  (rounded) | # of Protons | # of neutrons | # of electrons |
| Gold |  |  |  |  |  |  |
|  | Si |  |  |  |  |  |
|  |  | 6 |  |  |  |  |
|  |  |  | 22.99 (23) |  |  |  |
|  |  |  |  |  |  | 17 |
|  |  |  |  | 53 |  |  |

5. What is a valence electron? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. Give the valence electrons for the following elements:

a. Carbon: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

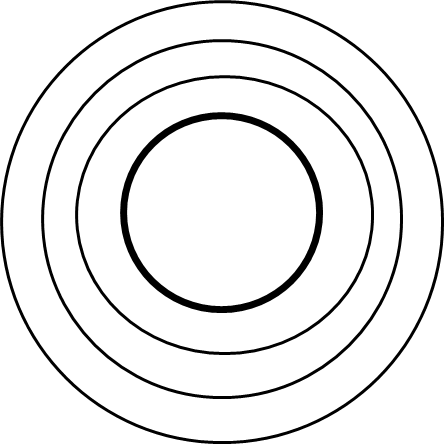
b. Hydrogen:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

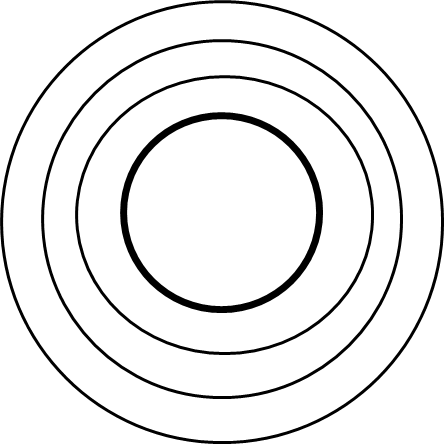
c. Sodium: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

d. Neon: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

e. Oxygen: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. Show the distribution of electrons for each of the following elements in the images below:





CARBON CHLORINE

8. What is an isotope? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. Using your periodic table and the information given in the chart below, complete the chart below. The first one has been done for you as an example.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Element** | **Symbol** | **# of protons** | **# of neutrons in the isotope** | **Mass of isotope** | **Mass from periodic table** | **Name of isotope** |
| **Uranium** | **U** | **92** | **143** | **235** | **238** | **Uranium-235** |
| Uranium |  |  | 146 |  |  |  |
| Carbon |  |  | 8 |  |  |  |
| Iodine |  |  | 78 |  |  |  |