BSC 1005: Life Science

Activity 2: Chapter 2 *Name(s)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

Complete the following problems. Use your class notes to help find the answers.

1. Explain why a dog is considered living but a rock is not.
2. Draw a simple atom and label the key parts. Indicate the charge associated with each component.
3. What is the difference between a molecule and an element?
4. Electrons:
   1. Are negatively charged
   2. Are found in the nucleus with neutrons
   3. Are attracted to the negatively charged nucleus
   4. All of the above
5. Water \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
   1. Is a good solvent
   2. Is acidic
   3. Makes strong covalent bonds with other molecules
   4. Is a good solute
6. Draw 2 water molecules performing hydrogen bonds with each other. Label the individual atoms and their associated charges.
7. List and explain 4 important characteristics of water:
8. Different proteins are composed of different sequences of:
   1. Sugars
   2. Glycerol
   3. Fats
   4. Amino acids
9. A fat molecule consists of \_\_\_\_\_\_\_\_\_\_\_\_\_\_
   1. A carbohydrate and a protein
   2. Protein tail and sugar head
   3. Glycerol and fatty acids
   4. None of the above
10. Define Eukaryote and Prokaryote.
11. Identify the following as Eukaryote or Prokaryote and single celled, multicellular or both:
    1. Animals
    2. Plants
    3. Bacteria
    4. Fungi
    5. Yeasts
    6. Insects

***Know the basic function of each of the cellular components!***

**Plasma membrane:**

**Nucleus:**

**Lysosome:**

**Chloroplast:**

**Ribosome:**

**ER:**

**Golgi apparatus:**

**Centrioles:**

**Cytoskeleton:**

**Cell Wall:**

**Central Vacuole:**

**Mitochondria:**

1. What are characteristics or components found in all cell types?