Test Review: Test 2: Biochemistry and Cells

1. Give 3 reasons water is important to life and tell why it is important
2. The 2 elements found in all organic compounds are \_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_.
3. Bonds are broken by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in which water is added to split the larger molecule
4. Bonds are formed by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in which water is subtracted from 2 molecules to put them together.
5. Glucose’s formula is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and its job is to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Match the structural formula to the correct organic compound.

Label each one





1. Contrast glycogen and starch and cellulose
2. Why is it better to eat foods that have a low glycemic index?
3. When you look at the structure of a fatty acid, how can you tell if it is saturated or unsaturated?
4. Why is the order of amino acids so important?
5. How do structural and fibrous proteins differ? Name 2 proteins each can form
6. How do enzymes keep us alive?
7. What happens to a protein when it denatures? What is the result? What can cause it? Is it reversible?
8. What is the difference between cytoplasm and cytosol?
9. What 3 parts do all cells have?
10. Discuss stem cell use. The different kinds, its uses, controversies, etc
11. Discuss how cancer cells typically behave (progression)
12. What parts do the following move through to get either in or out of a cell?

O2/CO2, glucose, H2O

1. Draw a cell in a hypertonic solution. What happens to it?
2. Draw a cell in a hypotonic solution. What happens to it?
3. Draw a cell in an isotonic solution. What happens to it?
4. Discuss the importance of the HayFlick number and how it is determined