

**11 Biology Unit #1- The Cellular Biology**  
**Test Review**

The following are the objectives for this test:

1. Identify the structure and functions of carbohydrates (mono-, di-, and polysaccharides), lipids, proteins (and enzymes), and nucleic acids (identify them when shown their diagrams)
2. Identify the differences between saturated and unsaturated fatty acids.
3. Describe the structure of phospholipids.
4. Identify the cell theory
5. Label an animal and plant cell (diagrams)
6. Provide the functions of all the cell organelles
7. Explain with a diagram the three types of transport. Passive and Active transport.
8. Isotonic, hypotonic, and hypertonic.
9. Describe the process of photosynthesis and of aerobic and anaerobic cellular respiration. What are their reactions?
10. Describe why we get muscle fatigue (muscle soreness) and how it can be helped.

**Review Questions** - These are only selected questions and not the only material you need to know for the test.

1. Glucose is an example of a \_\_\_\_\_.
2. What is the difference between a polysaccharide and a disaccharide?
3. What is DNA made of?
4. Complete the chart

	Different Types	What is it made up of? Describe it's structure. Consider a diagram.	Function
CARBOHYDRATE			
PROTEIN			
LIPID			
NUCLEIC ACID			

5. What happens to proteins when they are exposed to high temperatures or harsh chemicals (explain)? What term can be used to describe this?
6. Which fatty acids are less healthy for us? What can they cause? Which fatty acid does butter mainly contain?
7. What is the proper function of the following cell organelles: mitochondria, golgi, vesicle, chromatin, ribosome.
8. What part of the cell stores food and water?
9. Which organelle of a plant cell is responsible for photosynthesis? Is it found in animal cells? What is the name of the pigment responsible for photosynthesis?
10. Which part of the cell controls what goes in and out? Do animals cell have it? Do plant cells have it?
11. What is passive transport and what is active transport?
12. Give one similarity and one difference between diffusion and osmosis.
13. Complete the following chart

<b>TERM</b>	<b>Meaning</b>	<b>Direction of water movement</b>	<b>What happens to the cell?</b>
<b>ISOTONIC</b>			
<b>HYPOTONIC</b>			
<b>HYPERTONIC</b>			

14. Draw the process of exocytosis.
15. What is the difference between and permeable and semi permeable membrane? What kind is a cell membrane?
16. Why is it dangerous to have a really high fever?
17. What do plants need to accomplish photosynthesis? Draw a diagram showing how plants get the needed components and deal with its products.
18. Go to page 85 of your text. Of the terms listed we have covered about 35 of them. Write down all the ones we have covered and define/describe 10 of them.