**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_**

**Monster Cell Test: Study Guide**

**VOCABULARY to Define:**

1. Prokaryote
2. Eukaryote
3. Organelle
4. Cytoplasm
5. Nucleus
6. Endoplasmic reticulum
7. Ribosome
8. Golgi body
9. Mitochondria
10. Vacuole
11. Cell wall
12. Chloroplast
13. Cell membrane
14. Phospholipid
15. Diffusion
16. Concentration gradient
17. Passive transport
18. Active transport
19. Mitosis
20. Cytokinesis
21. ATP/ADP
22. C6H12O6
23. Chlorophyll
24. Glycolysis
25. Aerobic
26. Anaerobic

**QUESTIONS TO ANSWER:**

1. Which is correct? Products 🡪 reactants OR reactants 🡪 products?
2. Is bacteria a prokaryote or a eukaryote?
3. Is a tree a prokaryote or a eukaryote?
4. What is an organelle?
5. When water moved into and out of the plant cell in our lab, was this passive transport or active transport?
	1. Was it diffusion?
	2. Was it osmosis?
	3. Was there a concentration gradient?
6. Why does an unwrapped carrot or piece of celery get soft or floppy after it is stored in the refrigerator? Use the word “osmosis” in your answer.
7. Describe why the words “selectively permeable” refer to a tea bag.
8. What is the main function of a cell membrane?
9. What is the cell cycle?
10. What happens during each phase of the cell cycle?
11. How is mitosis different from cytokinesis?
12. Why do we need to make ATP instead of just using glucose as energy for our cells?
13. Does not require oxygen (aerobic or anaerobic)
14. Requires oxygen (aerobic or anaerobic)
15. What is the main goal of photosynthesis?
16. What is the equation for photosynthesis? What **two** molecules go **into** the photosynthesis equation? What are the products?
17. What is the main goal of cellular respiration?
18. What is the equation for cellular respiration?
19. Glycolysis means to split sugar, what process is it a part of?
20. What is the name of this reaction? **C6H12O6 + 6O2** 🡪 **6H2O + 6CO2 + energy**
	1. What are the reactants?
	2. What are the products?
	3. On what organelle does this happen?
21. What is it called when your muscles do not have enough oxygen?
22. What is it called when yeast do not have oxygen (like in the brewing of wine or root beer)?
23. Eukaryotes contain structures that act as if they are specialized organs. These structures are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
24. Molecules tend to move from an area where they are more concentrated to an area where they are less concentrated. This process is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.



1. What is shown in Diagram 1?
2. What is shown in Diagram 2?
3. Give the label letters and full names of two structures that are found **in a plant** cell but **not in an animal** cell. State the function of each of these structures.
4. Which diagram above contains a structure that captures sunlight and converts it into chemical energy? What is the name of the structure described?
5. Which organelle in Diagram 1 does cellular respiration?
6. Does Diagram 2 do cellular respiration? If so, which letter represents the organelle where it happens?
7. Identify which phrase describes the following processes:
*cellular respiration, glycolysis, lactic acid fermentation, or alcoholic fermentation*
	1. builds up in muscles after intense activity
	2. requires oxygen and glucose
	3. Important in brewing wine or beer
	4. almost the opposite process of photosynthesis
	5. the reason why runners breathe heavily after a race