Name: Period: Due:

CELL STRUCTURE STUDY GUIDE

1. Identify the cell structures.



1. Describe two ways you can tell this cell is NOT a plant cell.
2. Describe two ways you can tell this cell is NOT a bacterial cell.
3. What are cells called that have no nucleus and no organelles?
4. What are cells called that have a nucleus and organelles?
5. What kinds of cells are eukaryotes?
6. What kinds of cells are prokaryotes?
7. A structure surrounded by a membrane that performs a specialized function within a cell is known as?
8. List 3 ways in which a plant cell differs from an animal cell. Be sure to indicate what belongs to the plant and what belongs to the animal cell.
9. Describe the differences between the structure and functions of the rough and the smooth ER.
10. What organelle is responsible for modifying and packaging proteins for distribution?
11. What organelle is responsible for storing water inside a plant cell?
12. List the organelles involved in the process of protein production.
13. What is the gel-like material inside the cell and inside organelles called?
14. Where does photosynthesis occur in a cell?
15. What is the dark spot in the nucleus called?

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1. If a cell is very active, like muscle cells and needs more energy, what type of organelle will it need more of?
2. What is the purpose of DNA inside the nucleus?
3. What structure surrounds the DNA and controls what enters and leaves the nucleus?
4. What is the job of the nucleolus?
5. How do materials get to & from the Golgi?
6. Centrioles are found ONLY in which kind of cells?
7. What is the function of centrioles?
8. Where are ribosomes found?
9. What is the function of ribosomes?
10. What do lysosomes do?
11. Which organelle manufactures ATP in the cell?
12. What is the only kind of cells that have chloroplasts?
13. Where is the cell wall located?
14. What kinds of cells have cell walls?
15. What is the function of cell walls?
16. Which structure is most directly responsible for maintaining homeostasis (balance) in all cells?
17. Identify the parts of the cell membrane.

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A:

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1. What is the function of the cell membrane?
2. Define homeostasis and give an example.
3. Why is the cell membrane said to be “semi- permeable”?
4. Define “concentration gradient”.

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1. What kind of transport DOES NOT require energy?
2. During diffusion molecules tend to move from to .
3. When the concentration of a solute is the same throughout a system, the system has reached?
4. Which kinds of transport are passive?
5. Facilitated diffusion with aquaporins is also called?
6. In a solution, the such as sugar, dissolves into the , like water.
7. tonic means there is a GREATER concentration of solute molecules OUTSIDE the cell than inside. Draw a picture to the right and label the movement of water.
8. tonic means there is a LOWER concentration of solute molecules OUTSIDE the cell than inside. Draw a picture to the right and label the movement of water.
9. tonic means there is the SAME concentration of solute molecules outside the cell as inside. Draw a picture to the right and label the movement of water.
10. Active transport requires?
11. Which kinds of transport are active? (Hint: There are 3!)
12. Diagram exocytosis and endocytosis to the right and label which is which.
13. Small membrane sacs used for transport of large substances are called?

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1. What are the parts of the Cell Theory 51. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Name the scientist
	* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_came up with the name cells (looked at cork)
	* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ determined all animals are made of cells
	* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ looked at pond water, father of microbiology
	* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_determined all plants are made of cells
	* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_determined cells come from other cells