

SECTION 4-2 REVIEW**PARTS OF THE EUKARYOTIC CELL**

VOCABULARY REVIEW Distinguish between the terms in each of the following pairs of terms.

1. peripheral protein, integral protein _____

2. cytoplasm, cytosol _____

3. cilia, flagella _____

MULTIPLE CHOICE Write the correct letter in the blank.

- _____ 1. The cell membrane
- a. allows all substances to pass into and out of the cell.
 - b. prevents all substances from passing into and out of the cell.
 - c. is composed mainly of a protein bilayer.
 - d. is composed mainly of a lipid bilayer.
- _____ 2. Substances produced in a cell and exported outside of the cell would pass through the
- a. endoplasmic reticulum and Golgi apparatus.
 - b. mitochondria and Golgi apparatus.
 - c. nucleus and lysosomes.
 - d. vacuoles and lysosomes.
- _____ 3. Cells that have a high energy requirement generally have many
- a. nuclei.
 - b. flagella.
 - c. mitochondria.
 - d. microfilaments.
- _____ 4. Viruses, bacteria, and old organelles that a cell ingests are broken down in
- a. ribosomes.
 - b. lysosomes.
 - c. the rough endoplasmic reticulum.
 - d. the smooth endoplasmic reticulum.
- _____ 5. Organelles that are surrounded by two membranes and contain DNA are the
- a. nucleus, the endoplasmic reticulum, and lysosomes.
 - b. nucleus, the endoplasmic reticulum, and chloroplasts.
 - c. nucleus, chloroplasts, and mitochondria.
 - d. endoplasmic reticulum, mitochondria, and the Golgi apparatus.

SHORT ANSWER Answer the questions in the space provided.

1. What roles do membrane proteins play in making the cell membrane selectively permeable?

2. What are ribosomes made of? _____

What cellular function are they involved in? _____

3. What is the cytoskeleton, and what are two of its major components? _____

4. Describe the structural organization shared by cilia and flagella. _____

5. What are plant cell walls made of? _____

What is the function of cell walls? _____

6. **Critical Thinking** When lipid is added to a solution of a detergent in water, the detergent breaks up large globules of the lipid into much smaller globules. What effect do you think a detergent would

have on the integrity of cells? Explain your answer. _____

STRUCTURES AND FUNCTIONS Label each part of the figure in the spaces provided.

This diagram represents a typical plant cell.

