

SECTION 4-3 REVIEW**CELL ORGANELLES AND FEATURES**

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

1. nucleoplasm, nuclear envelope _____

2. cytoskeleton, microtubule _____

3. cilia, flagella _____

MULTIPLE CHOICE Write the correct letter in the blank.

- _____ 1. The plasma 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 and mitochondria.
 - d. endoplasmic reticulum and the Golgi apparatus.

SHORT ANSWER Answer the questions in the space provided.

1. What roles do membrane proteins play in transporting only certain substances into a cell?

2. What are ribosomes made of? _____

What cellular function are they involved in? _____

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

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

5. **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 This diagram represents a typical animal cell. Label each part of the figure in the spaces provided.

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____
- f. _____

