DATE: NAME: Class:

[redacted]

Goal	• Check your understanding of Chapter 1.

What to Do

Circle the letter of the best answer.

1. Which of the following is NOT one of the five characteristics of living things?
   A. Living things respond to their environment.
   B. Living things grow.
   C. Living things produce water.
   D. Living things must get rid of waste.

2. Plants have the ability to produce sugar by combining carbon dioxide and water in the presence of sunlight. What characteristic of living things does this represent?
   A. Living things respond to their environment.
   B. Living things need energy.
   C. Living things grow.
   D. Living things require gases.

3. Bacterial cell are prokaryotic; in comparison to a typical eukaryotic cell they would
   a. be smaller.
   b. have a smaller nucleus.
   c. lack a plasma membrane.
   d. have fewer internal membranous compartments.
   e. have a greater variety of organelles

4. Which of the following correctly matches an organelle with its function?
   a. mitochondrion . . . photosynthesis
   b. nucleus . . . cellular respiration
   c. ribosome . . . manufacture of lipids
   d. lysosome . . . movement
   e. central vacuole . . . storage

5. What part of the compound microscope supports the eyepiece?
   A. arm
   B. revolving nosepiece
   C. base

D. stage

6. Most compound light microscopes have three or four
   A. coarse focus knobs
   B. fine focus knobs
   C. revolving nosepieces
   D. objective lenses

7. What part of the microscope is equipped with clips or another mechanism for holding the slide in place?
   A. stage
   B. base
   C. arm
   D. eyepiece

8. Which of the following statements regarding resolving power is true?
   A. The human eye has zero resolving power.
   B. Increasing magnification reduces resolving power.
   C. The compound microscope has a greater resolving power than the human eye.
   D. The resolving power of human eyes allows them to distinguish dots 1 micron apart.

9. Because of the arrangement of lenses in a compound microscope, the specimen being viewed appears
   A. upside down and backward
   B. upside down
   C. backward
   D. right side up

10. To enter or leave a cell, substances must pass through
   a. a microtubule.
   b. the Golgi apparatus.
   c. a ribosome.
   d. the nucleus.
   e. the plasma membrane

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Match the Term on the left with the best Descriptor on the right. Each Descriptor may be used only once.	
Term	Descriptor
____11. endoplasmic reticulum ____12. ribosome ____13. Golgi body ____14. vacuole ____15. lysosome ____16. chloroplast	A. manufactures proteins B. network of membrane-covered channels C. sorts proteins and packs them D. creates chemical energy E. temporary storage compartments F. carries hereditary material G. breaks down food particles and cell wastes

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Short Answer Questions

17. Fill in the three missing parts of the magnification chart for a compound light microscope.

Lens Name	Magnification Power of Lens	Magnification Power of Microscope
Low Power Objective		40
Medium Power Objective	10	
High Power Objective	40	

18. While you are blowing up a balloon, your little brother hits it playfully and yells, "It's alive!" The balloon seems to grow, and it seems to respond when it is played with. How would you explain to your little brother that the balloon is not alive?

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