Unit A • Chapter 1

Name _____
Date _____

Chapter Assessment

Cells to Body Systems

Vocabulary 4 points each

Match each term in Column B with its meaning in Column A.

	Column A	Column B
F	1. A group of tissues that work together to perform a certain function	A. circulatory system
B	2. The system that turns food into nutrients that body cells need	B. digestive system
A	3. The heart, blood vessels, and blood	C. tissue
G	4. A group of organs and tissues that exchange oxygen and carbon dioxide	D. muscular system
H	5. The bones that give the body structure	E. nervous system
D	6. The muscles and tendons that move bones	F. organ
E	7. The system that directs activities of all other body systems	G. respiratory system
C	8. A group of cells that work together to perform a certain function	H. skeletal system

Science Concepts 4 points each

Write the letter of the best choice.

A 9. What is the basic unit of structure and function of all living things?
- A. cell
- B. cork
- C. organ
- D. tissue

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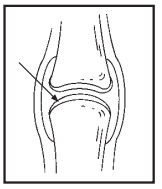
H 10. Which organelle directs a cell's activities?
- F. cytoplasm
- G. mitochondrion
- H. nucleus
- J. vacuole

A 11. Which is found only in plant cells?
- A. cell wall
- B. chromosomes
- C. cytoplasm
- D. vacuoles

F 12. Which type of tissue forms bones, tendons, and ligaments?
- F. connective tissue
- G. epithelial tissue
- H. muscle tissue
- J. nerve tissue

A 13. What is the liquid part of blood called?
- A. plasma
- B. platelets
- C. red blood cells
- D. white blood cells

Use the diagram to answer Questions 14–15.



F 14. What structure is shown in the diagram?
- F. joint
- G. muscle
- H. nerve
- J. synapse

A 15. What type of tissue does the arrow point to?
- A. connective tissue
- B. epithelial tissue
- C. muscle tissue
- D. nerve tissue

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J 16. Which type of muscle tissue forms the walls of the heart?
- F. skeletal muscle
- G. voluntary muscle
- H. smooth muscle
- J. involuntary muscle

Inquiry Skills 8 points each

17. **Compare** the organelles in a cell to organs in a human body. How are organelles similar to organs?

Possible answer: Both organelles and organs have specific functions to perform. Organelles do their jobs within cells, while organs carry out their functions for the body as a whole.

18. Nick read that the skin is the largest organ of the human body. What could Nick **infer** about the number and kinds of tissues that make up the skin?

Possible answer: Because the skin is the body's largest organ and carries out multiple functions, such as protection, sensation, and excretion, Nick can infer that the skin contains most or all of the basic tissue types: epithelial tissue, connective tissue, muscle tissue, and nerve tissue.

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Critical Thinking 10 points each

19. Why are cells specialized to carry out specific functions?

Possible answer: It is more efficient to have cells perform only specific functions. This way, organisms can become very complex.

20. Exchange of oxygen and carbon dioxide occurs in the alveoli of the lungs. In certain diseases of the lungs, fluid or other material can build up in the alveoli.

Part A How would the buildup of material inside the alveoli affect lung function?

Possible answer: Gas exchange in the lungs occurs across the very thin alveolar walls. Fluid or other materials in the lungs would interfere with gas exchange. This would affect the levels of oxygen and carbon dioxide in the body.

Part B What symptoms might a person who has this problem exhibit?

Possible answer: If the buildup of material was severe, the person might be short of breath. The buildup of carbon dioxide in the blood might cause other problems.

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