

CHAPTER REVIEW**Chapter 19****How Cells Do Their Jobs****I. Vocabulary Review**

Match each item in Column I with the most appropriate item in Column II. Write the letter for that item in the blank at the left.

- | Column I | Column II |
|---|------------------------|
| _____ 1. movement of water through a cell membrane | a. respiration |
| _____ 2. group of organs that performs a particular job | b. organism |
| _____ 3. process that uses glucose as a fuel and releases stored energy in the presence of oxygen | c. diffusion |
| _____ 4. made up of several different kinds of tissue | d. osmosis |
| _____ 5. process that releases energy by breaking down glucose in the absence of oxygen | e. fermentation |
| _____ 6. the movement of molecules from a higher to a lower concentration | f. organ system |
| _____ 7. similar cells working together to perform the same function | g. organ |
| _____ 8. made up of several organ systems | h. tissue |

II. Concept Review

If the underscored word or phrase makes the sentence true, write "TRUE" in the space provided. If the underscored word or phrase makes the sentence false, write the correct term or phrase in the space provided.

- _____ 9. Cells that have an arrow-like head and a long, thin tail are shaped for transmitting nerve impulses.
- _____ 10. The cell membrane allows cells to let some substances in and keep others out.
- _____ 11. Once equilibrium is reached, molecules stop moving into and out of the cell at an equal rate.
- _____ 12. Each layer of the cell membrane is made of fat molecules.
- _____ 13. Energy from cellular respiration is released from the cell nucleus.

Chapter Review 19 (continued)

Answer the following questions in phrases or complete sentences.

14. What is the original source of energy for the activities of living things? Explain. _____

15. How does molecular motion explain diffusion? _____

III. Skills/Process Review

Answer the following questions in complete sentences.

In the Investigate! you observed the effect of temperature on respiration in yeast. The table below shows the results of an experiment in which the temperature is held constant in two tubes of yeast, one of which has a 25% sucrose solution added to it.

| Test tube | Starting height | 5 min | 10 min | 15 min | 20 min |
|-----------------------|-----------------|--------|--------|--------|--------|
| Tube A. no sucrose | 3 cm | 3 cm | 3 cm | 4 cm | 4.5 cm |
| Tube B. 20 mL sucrose | 3 cm | 3.5 cm | 5 cm | 7 cm | 8 cm |

16. Which tube, A or B, contains more gas after 20 minutes? How can you tell, and what gas is produced? _____

17. Infer how sucrose influences the rate of respiration. _____

18. Before baking bread, it is a good idea to make sure the yeast cultures are active. Using what you've learned about the influence of temperature and sucrose on respiration, how would you test yeast cultures to be certain they are still active? _____

IV. EYV Review

19. **How It Works: The Artificial Kidney Machine** In what ways does the artificial kidney machine function like a cell membrane? _____
