

## CHAPTER REVIEW

# Chapter 18

### Transfer of Thermal Energy

#### I. Vocabulary Review

*Underline the word or phrase that does not belong and explain why in the space provided.*

1. conduction, convection, condensation, radiation \_\_\_\_\_  
\_\_\_\_\_

2. thermal conductor, evaporation, condensation, compression, expansion \_\_\_\_\_  
\_\_\_\_\_

3. wool, feathers, copper, styrofoam \_\_\_\_\_  
\_\_\_\_\_

4. collector, refrigerant, water, active solar heating \_\_\_\_\_  
\_\_\_\_\_

5. condenser, evaporator, capillary tube, cold air return \_\_\_\_\_  
\_\_\_\_\_

#### II. Concept Review

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

\_\_\_\_\_ 6. Dark colors reflect radiant energy.

\_\_\_\_\_ 7. Thermal insulators spread heat through a solid.

\_\_\_\_\_ 8. Condensation means a liquid turns into a gas.

\_\_\_\_\_ 9. Solar heaters do not use electricity for energy.

\_\_\_\_\_ 10. Water has a high specific heat.

\_\_\_\_\_ 11. When a heat pump transfers heat from the cool outside air to inside, it heats a house.

*Answer the following in complete sentences.*

12. Why are R-values for ceilings higher than those for walls in colder climates? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Chapter Review 18 (continued)

13. Why do liquids and gases transfer heat by convection and not conduction? \_\_\_\_\_

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14. Which insulation is a better buy: one with an R-value of 88 and a cost of \$1 per square meter or one with an R-value of 44 and a cost of \$.75 per square meter? \_\_\_\_\_

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15. Which room heated by a forced-air furnace would probably feel warmer: one with warm air vents on the floor or one with warm air vents one foot from the ceiling? Why? \_\_\_\_\_

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16. Why should you open a refrigerator as seldom as possible? \_\_\_\_\_

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17. How does room temperature affect the operation of a refrigerator? \_\_\_\_\_

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### III. Skills/Process Review

*Answer the following in complete sentences.*

18. Why are wooden handles used on cooking pots? \_\_\_\_\_

19. Why must an air conditioning system have one part outside? \_\_\_\_\_

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### IV. Feature Review

20. **Science and Society: Oil Prices—A Roller Coaster Ride** How does the world economy, organizations, and political crises affect the price of oil? \_\_\_\_\_

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