NAME _____ DATE _____ CLASS _____

CHAPTER REVIEW

Chapter 6

Thermal Energy

I. Vocabulary Review

In the blank, write the word or words that best complete the sentence.

1. Fluids transfer heat by _____.
2. Poor conductors are good _____.
3. Materials that flow, such as water, are _____.
4. Thermal energy reaches us from the sun by means of _____.
5. On the _____ scale, 180 degrees separate the melting and boiling points of water.
6. Two objects in thermal equilibrium have _____ temperatures.
7. The process by which heat moves through a material or from one material to another is _____.
8. When two items are in contact and the temperature of one is the same as the temperature of the other, they are said to be in thermal _____.
9. The energy transferred from something of higher temperature to something of lower temperature is _____.
10. A measure of how much thermal energy is contained in an object is _____.

II. Concept Review

In the blank at the left, write the letter of the choice that best completes the statement or answers the question.

_____ **11.** Compressing a gas _____.
- **a.** decreases its conduction
- **b.** decreases its temperature
- **c.** increases its temperature
- **d.** turns it into a liquid

_____ **12.** Refrigerators use _____.
- **a.** convection
- **b.** conduction
- **c.** radiation
- **d.** all of the above

_____ **13.** Convection can occur in _____.
- **a.** a solid only
- **b.** a solid, liquid, or gas
- **c.** a liquid or gas
- **d.** across space

_____ **14.** Your wrist feels cool when you put alcohol on it because the alcohol _____.
- **a.** gains thermal energy
- **b.** loses thermal energy
- **c.** produces thermal energy
- **d.** turns to water

Chapter Review 6 (continued)

_____ **15.** Why are wood handles used on pots and pans?

a. They are good conductors of heat.
b. They are good insulators of heat.
c. They assist heat transfer by conduction.
d. They assist heat transfer by radiation.

_____ **16.** Which is the least effective insulator?

a. styrofoam **b.** feathers **c.** air **d.** glass

III. Skills/Process Review

Answer the following questions in phrases or complete sentences.

Beaker 1		Beaker 2	
Depth	**Temp (°C)**	**Depth**	**Temp (°C)**
surface	21	surface	21
2 cm	20	2 cm	20.5
4 cm	19	4 cm	20.5
6 cm	18	6 cm	20.5
bottom	16	bottom	20.5

A student fills two beakers with equal amounts of warm water. An ice cube is placed in each beaker. After 2 minutes, temperatures are taken at various water depths. The temperatures are recorded in the table.

17. Which beaker has the greatest temperature variation between depths? _____

18. What conclusion could explain the reason for the temperature differences between beakers?

_____

_____

19. Why do you think the thermistor thermometer has become popular as a fever thermometer?

_____

_____

IV. EYV Review

20. **Science and Society: Thermal Pollution** Explain how researchers use satellite photographs to detect thermal pollution. _____

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