

REVIEW QUESTIONS

Chapter 5

1. If the temperature in a room is 290 K, what is the value in Celsius and Fahrenheit?
2. How many calories are needed to raise the temperature of 100 g of copper from 20°C to 90°C? The specific heat of copper is 0.093 cal/g°C.
3. Why is water such a good coolant?
4. How much heat is required to convert 30 g of ice at 0°C to water at 20°C? (Specific heat of water is 1 cal/g°C; heat of fusion of ice is 80 cal/g)

5. Explain why steam at  $100^{\circ}\text{C}$  can burn more than water at  $100^{\circ}\text{C}$ .

6. Complete each statement below with a suitable word or phrase:

A) A \_\_\_\_\_ difference is necessary for heat transfer.

B) The latent heat of vaporization of water is almost \_\_\_\_\_ times greater than its latent heat of fusion.

C) The \_\_\_\_\_ phase of matter has a definite volume but no definite shape.

D) When comparing a cup of hot coffee to a frozen lake, the cup has a higher \_\_\_\_\_ while the lake possesses more \_\_\_\_\_

E) When sunbathing on the deck of a pool, heat transfer is occurring by \_\_\_\_\_ and \_\_\_\_\_

F) The addition of heat does not change temperature during \_\_\_\_\_