**QUESTIONS TO HAND IN – EXPERIMENT 15**

**NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**LAB INSTRUCTOR\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_LAB DAY/TIME\_\_\_\_\_\_\_\_\_\_ \_ \_\_**

**1.** What are the three main processes of heat transfer?

**2.** Which of the three processes above requires *matter* to be present to transfer heat?

**3.** Equation (1) tells us that the larger the difference between the sample's temperature and that of its surroundings, the (circle one) **GREATER/SMALLER** is the absolute value of the rate of change in its temperature.

**4.** The quantity *K* in Equation (2) would be (circle one) **LARGER/SMALLER** for a body immersed in a liquid compared to when it is in a gaseous environment.

**5.** The time constant for the cool-down process, as expressed in Equation **(3)**, is a measure of how long it takes for the object to reach the temperature of its environment. After 2 time constants (2**) have elapsed, the body's temperature should be within (circle one)

 **63% / 14% / 5%** of its initial value.