**QUESTIONS TO HAND IN – EXPERIMENT 6**

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

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

**1.** An automobile travels at a constant velocity of 30 m/s toward the East. In 10 seconds, how much distance does it cover?

An automobile starts at rest moving along a straight line, and increases its velocity to 30 m/s in 10 seconds as shown in the plot of distance *vs.* time below:



**2.** Points *A* and *B* are centered about the 5 second mark. What is the average velocity: from the start to point *A*? from the start to point *B*?

**3.** Draw a straight line connecting the two points and determine its slope. This is the average velocity in the interval *A-B*.

**4.** Points *C* and *D* are also centered about the 5 second mark. What is the average velocity over this interval?

**5.** What is your best estimate of the value of the instantaneous velocity at the 5 second mark?