**QUESTIONS TO HAND IN – EXPERIMENT 4**

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

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

**1.** As one approaches a point charge, the electric field *E* gets (circle one): **stronger / weaker**.

**2.** The electric field *E* surrounding a positive point charge falls off in inverse proportion to the square of the distance. If the field at 10 cm is 200 V/m, what is the field at 100 cm?

**3.** We often describe the electric field between two parallel conductors as “uniform”. What, exactly, does this term mean and how would you represent this situation using electric field lines?

**4.** The electric potential around a positive point source charge goes from a large positive value nearby, and falls off to zero at an infinite distance. Would a positive test charge gain or lose electric potential energy as it moves away from the source?

**5.** The electric potential around a negative point source charge goes from a large negative value nearby, and falls off to zero at an infinite distance. Would a positive test charge gain or lose electric potential energy as it moves away from the source?