PART 1

10 k ohm

Expected: 5/10,000

Calculated: .05mA

PART 2

1. i) the longer side of the LED goes to +5 volts and the shorter goes to ground

Voltage drop: 4.8V

LED drop: 4.6V

2. LED is much brighter than before. As expected.
3. Smaller resistance = brighter, bigger resistance = dimmer
    a. 150: 2V 10k ohm: 5.5V 1k ohm: 3.8V
4. We expect it to be dimmer. It is dimmer.
5. As we dial up the step-up the LED gets brighter.
6. If we can measure power we would use that to quantify the brightness.
7. Blue : 2.3V Middle Red: 1.67 Dimmest Green: 2.22V Middle

PART 3

1k ohm

2. 21.2 mV across resistor

3. Covered 5V: 1.2 mV covered 3.3V: .3mV covered step up: .5mV

4. .0000012 A for dark current. There is no saturation