Free report on lab number and title

TA’s Name

Partner’s name

Lab Report

Introduction: We practiced making circuits with combination of resistors in this lab. In Part A, a known resistance, potentiometer and LED were connected in series with the source. The POT was initially tuned to the maximum voltage using the multimeter. The POT was then adjusted till the LED began to glow. In part B, a circuit having a combination of resistors was connected. The voltage across each resistor, along with the current, was measured using the multimeter. The current values measured were then compared with those predicted by Ohm’s law, which gives the following relationship: V= IR. Here V is the voltage, I is the current, and R is the resistance value. The analysis shows the error in the in the predicted and measured values.

Observations:

Part A:

Part B:

Questions:

1) When connected between 2 and 3 the potentiometer can be expected to read 75k. This is because the total value of the POT equals the sum of the resistances between terminals 1, 2 and 2, 3.

2) Voltage drops across R1 and R2 have been measured and tabulated as shown above. They are seen to be very different, which is unexpected because R1 and R2 are resistors connected in parallel, which means that the drop across them must be equal. The errors in measurement, and

consequently the difference between the predicted and measured values could be due to various reasons such as error in the given resistor values, calibration error in the measuring instrument, etc.