**OHMS LAW**

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PHY 134

SECTION 07

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**Aim:**

To learn how to use and understand the principles behind ohms law and to see how current varies with resistance and voltage in a resistor, a bulb, and a diode.

**Procedure:**

**1)** First we connect the Power supple to the ammeter in series, and then to the resistor in series, and connect the voltmeter parallel to the resistor. Vary the voltage from the power supply and record the current for 5 values.

**2)** Repeat the same for the bulb

**3)** Repeat the same for the diode.

**Data Analysis:**

Using the graph we calculate the resistance with of the Resistance to be 568.6 ±6.932 Ohms and using the color codes we get 470±10%Ohm. We also notice that the bulb doesn’t follow Ohm’s law and the diode only allows current in one direction.

**Q1) Does the bulb follow Ohm’s law. Can you explain?**

No the bulb doesn’t follow Ohm’s law as resistance decreases as heat increases. So the graph shows an inverse parabolic function.

**Q2)**  **Is the current through the voltmeter significant**

No, because the voltmeter has a very high resistance. We can check using an ammeter in series with the voltmeter.

**Conclusion:**

Using various experiments we successfully calculated the value of an unknown resistance ohms law and verified the law for a bulb and a diode.



