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Experiment 1-Ohm's Law

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Title: Ohm's Law

Submitted to

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of
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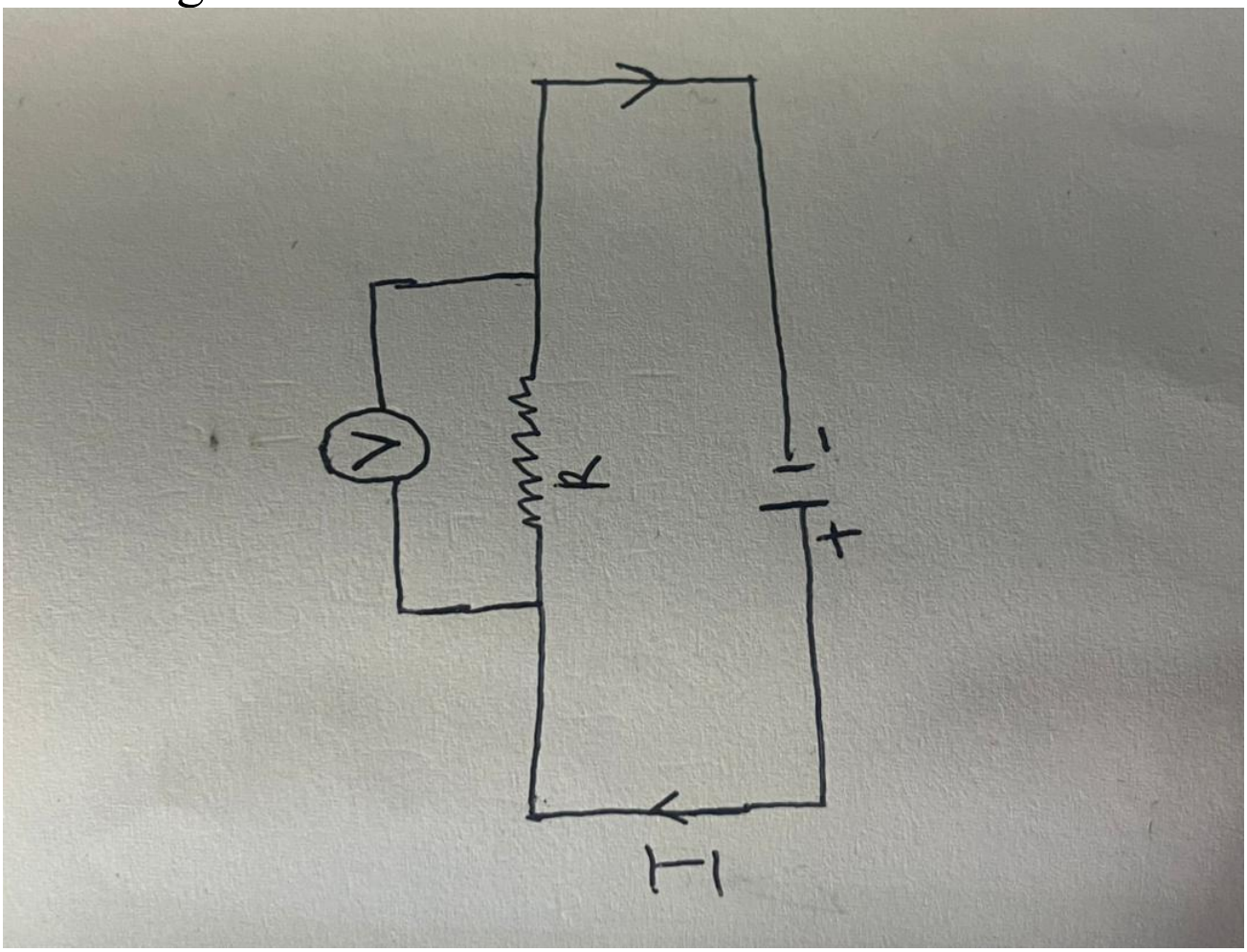
In partial fulfillment of the requirements for the course

PHY 102

Content of report

- Aim of experiment: Confirmation of Ohm's law

- Apparatus
  1. Connecting cables
  2. Resistor
  3. Power supply
  4. Digital multimeter
- Diagram



➢Procedure

1.Get your measured resistance(9.88)
2.Determine the resistance of each resistors
3.Adjust the voltage of the power supply to a suitable valve and keep it constant
4. Measure the current and voltage
5. Repeat the third step for other resistors

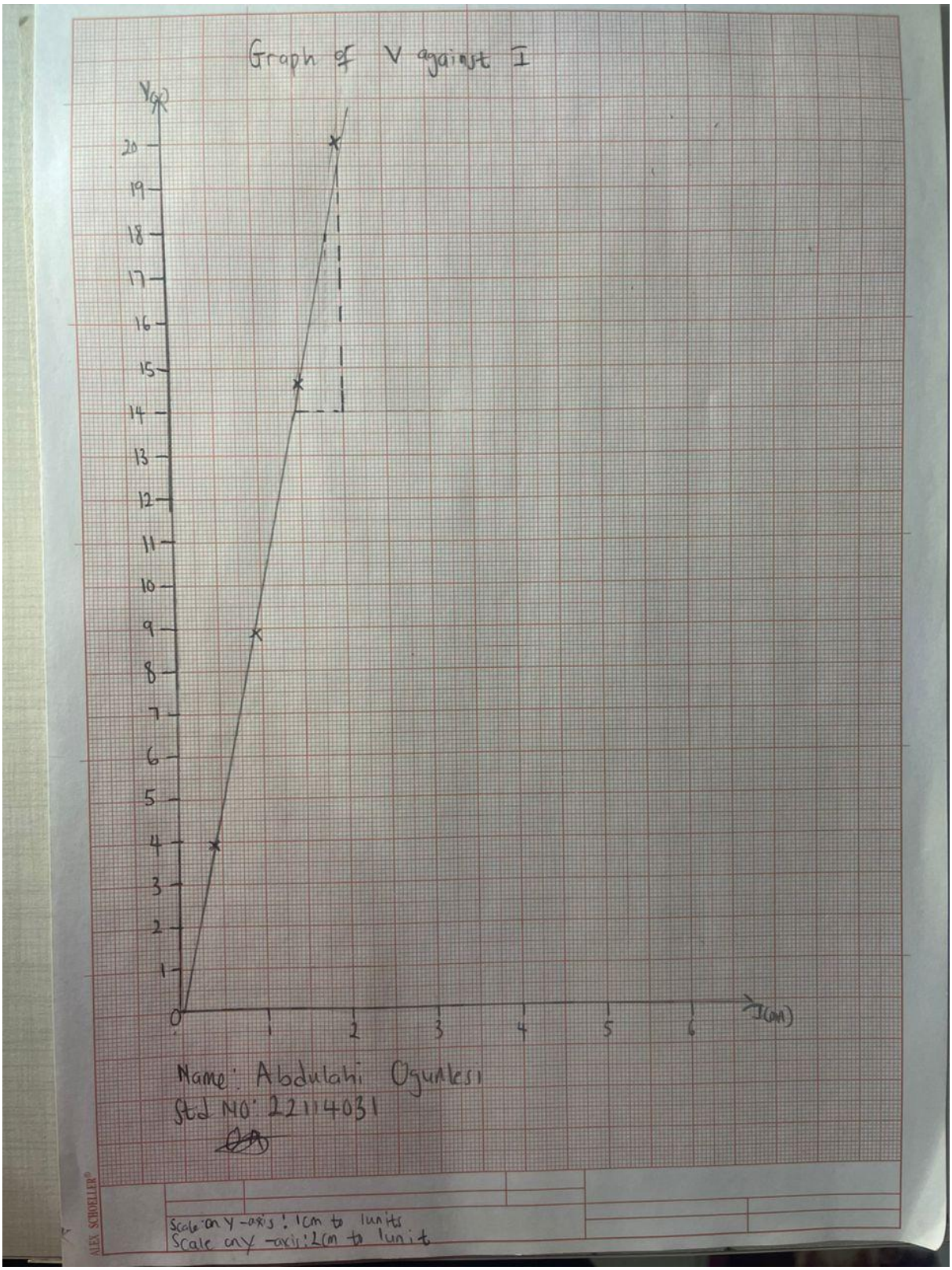
➢Equation: R=V/I

➢Table

Measured resistance = 9.88

Ref(v_1v)	$V_{(v)}$	$I_{(mA)}$	$R_{(\Omega)}$
5	3.90	0.39	10
10	8.93	0.90	9.92
15	14.56	1.47	9.90
20	19.95	2.03	9.83

➢Graph


Graph of V against I
V(V)
I(cm)
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Scale on y-axis: 1cm to 1unit
Scale on x-axis: 2cm to 1unit

- Calculations

  Slope(R)= y_2-y_1/x_2-x_1

  19.5-14/2-1.4

  =5.5/0.6

  =9.19$_{k\Omega}$

- Results & Discussion

  Resistance is the slope of the voltage against current graph.

- Conclusion

  The experiment is about ohm's law. The values of R are closed which means ohm's law is confirmed.