NEATH PORT TALBOT COLLEGE
COLEG CASTELL NEDD PORT TALBOT

School of Maths & Science
Science Practical

Variation of current with potential difference for a diode.

◆ Aim

To determine the relationship between p.d and current for a diode

◆ Introduction

You will vary the p.d. across a diode and measure the corresponding current through it. You will plot a graph of I against V and determine how the resistance of the diode varies.

◆ Safety

Control Measures

- You are reminded of the need of good laboratory practice in order to maintain a safe working environment.

Hazards

Electrical hazard. Take care with circuits. Switch off power before connecting and disconnecting the circuit.

◆ Procedure

1. Connect a diode to a variable power supply.
2. Place an ammeter in series with the diode to measure the current through the diode.
3. Place a voltmeter in parallel with the diode to measure the p.d. across the diode.
4. Increase the p.d. across the diode in steps of 0.1V and note the corresponding current in milliamps. Repeat until a p.d. of 0.8V is achieved.
5. Reverse the diode and repeat, now treating the current and p.d. as negative. You can now increase the p.d. in larger steps.

Current positive	**V /Volts**									
	I /mA									
Current negative	**V/ Volts**									
	I / mA									

6. Plot a graph of current, I against p.d, V.
7. Describe and explain your observations using relevant knowledge of physics.