General Certificate of Education
June 2009
Advanced Subsidiary Examination

ASSESSMENT and QUALIFICATIONS ALLIANCE

Physics
Unit 3 Investigative and Practical Skills in AS Physics
ISA (P) Emf and Internal Resistance

Task Sheet

This task is worth 10 marks

You are advised to read through these instructions before beginning your work.

You are going to carry out an experiment to investigate the relationship between the terminal potential difference across and the current through a cell or battery when connected to a range of different value resistors.

- *SWITCH OFF OR DISCONNECT THE CELL BETWEEN READINGS*
- *Set up a circuit with the cell, ammeter and a resistor in* ***series****. Connect a voltmeter to measure the pd across the cell terminals.*
- *Write down the precision of the instruments used.*
- *For each resistor, record the current and terminal pd values in a suitable table. Include the resistor values in the table. Take readings for the eight different resistors provided.*
- *Draw a circuit diagram of the circuit you used.*
- *Plot a graph of terminal pd (on the y-axis) and current (on the x-axis).*

After the Investigation

At the end of the investigation, hand in all your written work, including the graph, to the supervisor.

This documentation will be required for Stage 2 of the ISA. Please ensure that you have entered your centre details, candidate number and name on all the sheets you have completed.