

Name of the Student: _____

Max. Marks : 18 Marks

Time : 18 Minutes

Mark Schemes

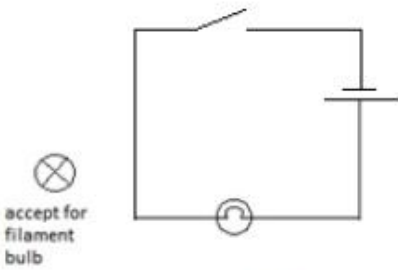
Q1.

Question number	Answer	Additional guidance	Mark
	d.c. - (current) in one direction only (1)	one way	(2)
	a.c. - (current) changes direction (1)	both ways	A01

Q2.

	Answer	Acceptable answers	Mark
(i)	C		(1)
(ii)	B		(1)

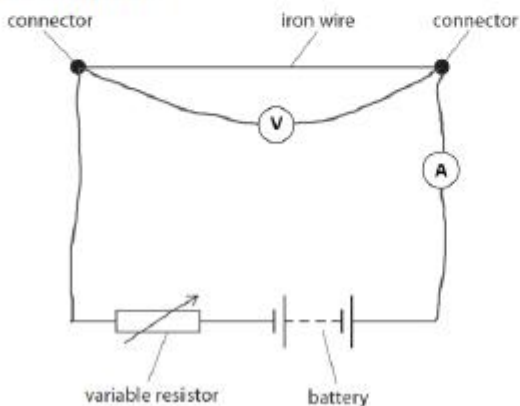
Q3.

Question number	Answer	Additional guidance	Mark
	 <p>accept for filament bulb</p> <p>battery/cell symbol (1) lamp symbol (1) switch symbol (1)</p> <p>then complete series circuit shown (1)</p>	ignore polarity of battery	(4) A03

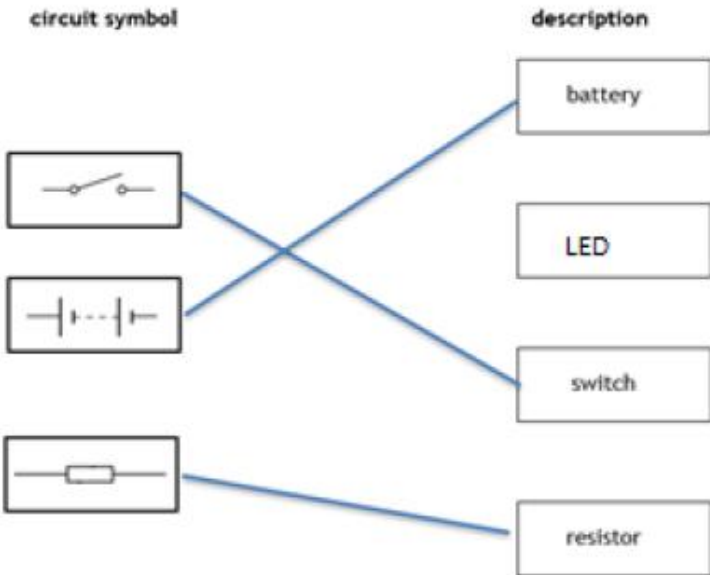
Q4.

Question number	Answer	Additional guidance	Mark
	<p>a diagram of a circuit including all of the following: power supply / cell(s) / battery, identifiable resistance wire an ammeter a voltmeter (1)</p> <p>plus any two from ammeter in series (1) voltmeter in parallel (1)</p> <p>indication of tapping off / using 50cm of resistance wire (1)</p>	<p>accept symbols</p> <p>accept ohmmeter with resistance wire only</p> <p>ignore lamp(s) / additional resistors</p> <p>allow ohmmeter (across wire) instead of ammeter and voltmeter for 1 mark</p> <p>e.g. (crocodile) clips</p>	<p>(3)</p> <p>AO2</p>

Q5.

Question number	Answer	Additional guidance	Mark
	<p>voltmeter connected in parallel with the iron wire / any part of the iron wire (1)</p> <p>ammeter connected in series with the iron wire (1)</p> <p>example:</p> 	<p>accept any recognisable symbols.</p> <p>accept symbol drawn over connecting wire</p> <p>do not credit the same type of meter shown in contradictory positions</p>	<p>(2) AO1</p>

Q6.

Question number	Answer	Additional guidance	Mark
	<p>circuit symbol</p>  <p>description</p> <p>battery</p> <p>LED</p> <p>switch</p> <p>resistor</p>	<p>1 mark for each correct line.</p> <p>more than one line to or from any box loses the mark for that symbol.</p>	<p>(3) AO1</p>

Q7.

Question number	Answer	Additional guidance	Mark
	<div><p>The diagram shows a series circuit. On the right, a battery is represented by two cells, each with a long horizontal line (positive) and a shorter, thicker horizontal line (negative). A dashed line connects the two cells, with the word "battery" written to its right. A wire goes from the top of the battery to an open switch. From the switch, the wire goes down to a lamp symbol (a circle with an 'X' inside). From the lamp, the wire goes down to a resistor symbol (a rectangle). From the resistor, the wire goes up to the bottom of the battery, completing the circuit. Below the resistor, there are two alternative symbols for a resistor: a rectangle with a diagonal arrow pointing through it, and a rectangle with a horizontal line through it, separated by the word "or".</p><p>accept for lamp</p><p>accept for resistor</p></div> <p>lamp symbol (1)</p> <p>switch symbol (1) open or closed</p> <p>resistor symbol (1)</p> <p>complete series circuit, with any circuit symbol(s) connected to the battery (1)</p>	<p>ignore any additional symbols</p> <p>ignore cells / batteries</p>	<p>(4) AO1</p>