Question number	Answer	Notes	Marks
6 (a)	resistor, battery, voltmeter, ammeter all present in a complete circuit	all four symbols drawn correctly condone use of cell or dc power supply symbol for battery	4
	variable resistor connected in series with resistor;	symbol drawn correctly	
	ammeter in series with resistor;	condone incorrect yet identifiable ammeter symbol	
	voltmeter in parallel with 60 ohm resistor;	condone incorrect yet identifiable voltmeter symbol accept higher level answers involving potential divider circuits	
(b)	any four from: MP1. measure voltage and current; MP2. idea of varying voltage (across resistor); MP3. take repeat readings and average (at each voltage); MP4. switch off circuit in between readings; MP5. other reasonable safety measure relating to equipment heating up	 e.g. by altering the resistance of the variable resistor e.g. not using full range of voltages so current doesn't get too high ignore references to graph	4
(c) (i)	line passes through origin; line is straight throughout; line passes/would pass through the point (12,0.20);	 by eye	3
(ii)	any three from: MP1. line will be same shape / straight line through origin / both components are resistors; MP2. line (for 120Ω resistor) will have a lower gradient; MP3. line (for 120Ω resistor) will have half the gradient; MP4. (because) larger resistance will result in a lower current in the circuit;	 allow (still) directly proportional also award MP2 allow relevant justification by V=IR all three marks can be awarded from a correct new line on the graph.	3

Total for Question 6 = 14 marks