Question number	Answer	Notes	Marks
6 (a)	idea that there must be a current in the wire; this current must be to the right;	allow charge/electrons moving in the wire reject references to positive electrons allow electrons moving to the left	2
(b) (i)	any one of: MP1. idea of avoiding fall objects from hitting hands/feet etc; MP2. taking care of heating effect of current; MP3. idea of protecting floor from damage;	ignore electric shocks, safety glasses, gloves allow idea of not standing underneath	1
(ii)	correct calculation of mean; answer given to 3 significant figures; e.g. **(mean current =) 1.833…(A)** (mean current =) 1.83 (A)	independent mark	2
(iii)	y-axis scale with a sensible, continuous scale such that plotted data covers 50% of the grid; y-axis labelled with current/**I** AND amps/A; all data plotted correctly;	reject if scale uses multiples of 0.3, 0.7 or 0.9 or if discontinuous allow ecf from (ii) reject if scale is discontinuous data should be plotted to within half a small square	3

Mass of load in g	Mean current in A
100	0.30
200	0.58
300	0.89
400	1.23
500	1.50
600	1.83

Question number	Answer	Notes	Marks
(iv)	straight line drawn with approximately equal distribution of points either side;	allow ecf from incorrect plotting/scale line does not need to pass through origin	1

	(v)	any three from: MP1. indication that 1.0 kg is 1000 g; MP2. use of data from table to show that ratio supports 3.0 A current value; MP3. (because) current is (directly) proportional to mass; MP4. idea that 1.0 kg is (far) beyond range of collected data/graph; MP5. idea that pattern may not continue outside range of data collected/graph;	can be inferred from working e.g. 2×500g = 1kg e.g. 500g gives 1.50A and 1000g is double 500g, 100g gives 0.30A and 1000g is 10 times 100g	3

Total for Question 6 = 12 marks