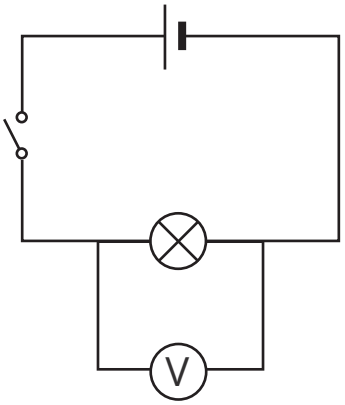
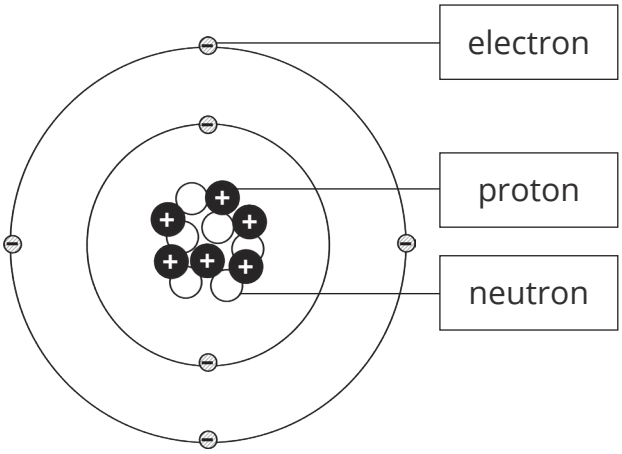
Question 1

Question	Answers	Extra information	Mark
01.1	switch	If more than one box is ticked, award no marks.	**1**
01.2	voltmeter drawn in parallel to bulb 		**1**
01.3	resistance = potential difference ÷ current	If more than one box is ticked, award no marks.	**1**
01.4	current — amps (A) potential difference — ohms (Ω) resistance — volts (V)	**2** marks for all lines correct. **1** mark for one or two lines correct.	**2**
Total			**5**

Question 2

Question	Answers	Extra information	Mark
02.1		**2** marks for all labels correct. **1** mark for one or two labels correct.	**2**
02.2	neutral	If more than one box is ticked, award no marks.	**1**
02.3	atoms have an equal number of protons and electrons	If more than one box is ticked, award no marks.	**1**
02.4	positive negative opposite	Answers in this order only.	**1** **1** **1**
Total			**7**

Question 3

Question	Answers	Extra information	Mark
03.1	Any three from: • wrap the insulated copper wire around the iron nail • attach crocodile clips to each end of the insulated copper wire • attach the crocodile clips to the power pack • switch on the power pack to allow a current to flow through the wire		**3**
03.2	the paperclips are magnetic/made of a magnetic material	Allow the paperclips are made of iron/ steel.	**1**
03.3	all points plotted correctly straight line of best fit	Allow **1** mark for 2 or 3 points plotted correctly.	**2** **1**
03.4	increases		**1**
03.5	increase the number of turns in the coil of wire		**1**
Total			**9**

Question 4

Question	Answers	Extra information	Mark
04.1	**A** series (circuit) **B** parallel (circuit)	Answers in this order only.	**1** **1**
04.2	ammeter		**1**
04.3	series circuit/circuit A: • current is the same everywhere in the circuit • potential difference is split between the components parallel circuit/circuit B: • current is shared between the components/branches • potential difference is the same across the components in each branch		**1** **1** **1** **1**
04.4	the other bulb would stop working because the circuit is broken/current can no longer flow through the circuit		**1** **1**
Total			**9**