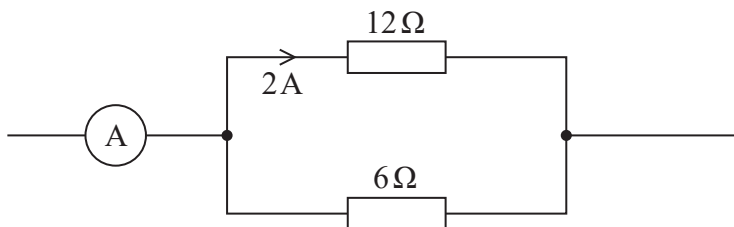


Answer ALL questions.

All multiple choice questions must be answered with a cross \boxtimes in the box for the correct answer from A to D. If you change your mind about an answer, put a line through the box \boxtimes and then mark your new answer with a cross \boxtimes .

1 Part of an electric circuit is shown.



What is the current shown by the ammeter?

- A 3 A
- B 4 A
- C 5 A
- D 6 A

half R, same p.d.

(Total for Question 1 = 1 mark)

2 A cell is connected across a resistor. After a while the internal resistance of the cell increases.

I ↓ as total R up.

Which row of the table correctly shows the change in the current in the circuit and the change in the terminal potential difference across the cell?

	Current	Terminal potential difference
<input checked="" type="checkbox"/> A	decreases	decreases
<input type="checkbox"/> B	decreases	increases
<input type="checkbox"/> C	increases	decreases
<input type="checkbox"/> D	increases	increases

T.p.d. ↓ as r now takes a bigger share

(Total for Question 2 = 1 mark)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



3 An object is falling at terminal velocity.

Which of the following is **not** a valid conclusion from this statement?

- A The acceleration of the object is zero. *true*
- B There is a resistive force acting on the object. *true*
- C There is a resultant force acting on the object. *✓*
- D The object has weight. *true*

(C)

(Total for Question 3 = 1 mark)

4 A light dependent resistor is connected across a cell of negligible internal resistance. The light intensity is increased.

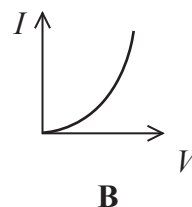
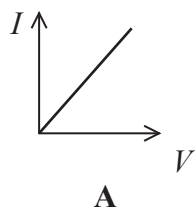
Which of the following statements about the current is correct?

- A It decreases because there is an increase in the number of conduction electrons.
- B It increases because there is an increase in the number of conduction electrons.
- C It decreases because the amplitude of lattice vibrations decreases.
- D It increases because the amplitude of lattice vibrations increases.

(Total for Question 4 = 1 mark)

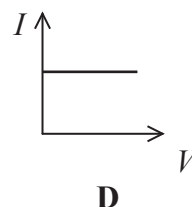
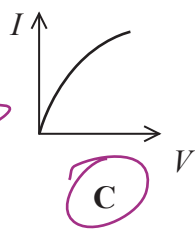
5 Which of the following graphs shows how the current varies with potential difference for a filament lamp?

$V \uparrow \Rightarrow I \uparrow \Rightarrow T \uparrow \Rightarrow R \uparrow$



it's all in the axes

*$R = \frac{V}{I}$
grad of graphs is $\frac{1}{R}$*



- A
- B
- C
- D

\therefore steeper slope = less resistance

(Total for Question 5 = 1 mark)

