

Combined Science
PAPER 6
Higher Tier

Friday 14 June 2024 – Afternoon

Time: 1 hour 10 minutes

Diagram Booklet

THIS DIAGRAM BOOKLET MUST BE RETURNED WITH THE QUESTION PAPER AT THE END OF THE EXAMINATION.

In the boxes below, write your name, centre number and candidate number.

| | | | | | |
|------------------|--|--|--|--|--|
| Surname | | | | | |
| Other names | | | | | |
| Centre Number | | | | | |
| Candidate Number | | | | | |

INSTRUCTIONS

There may be spare copies of some diagrams in case you need them.

CONTENTS

Page

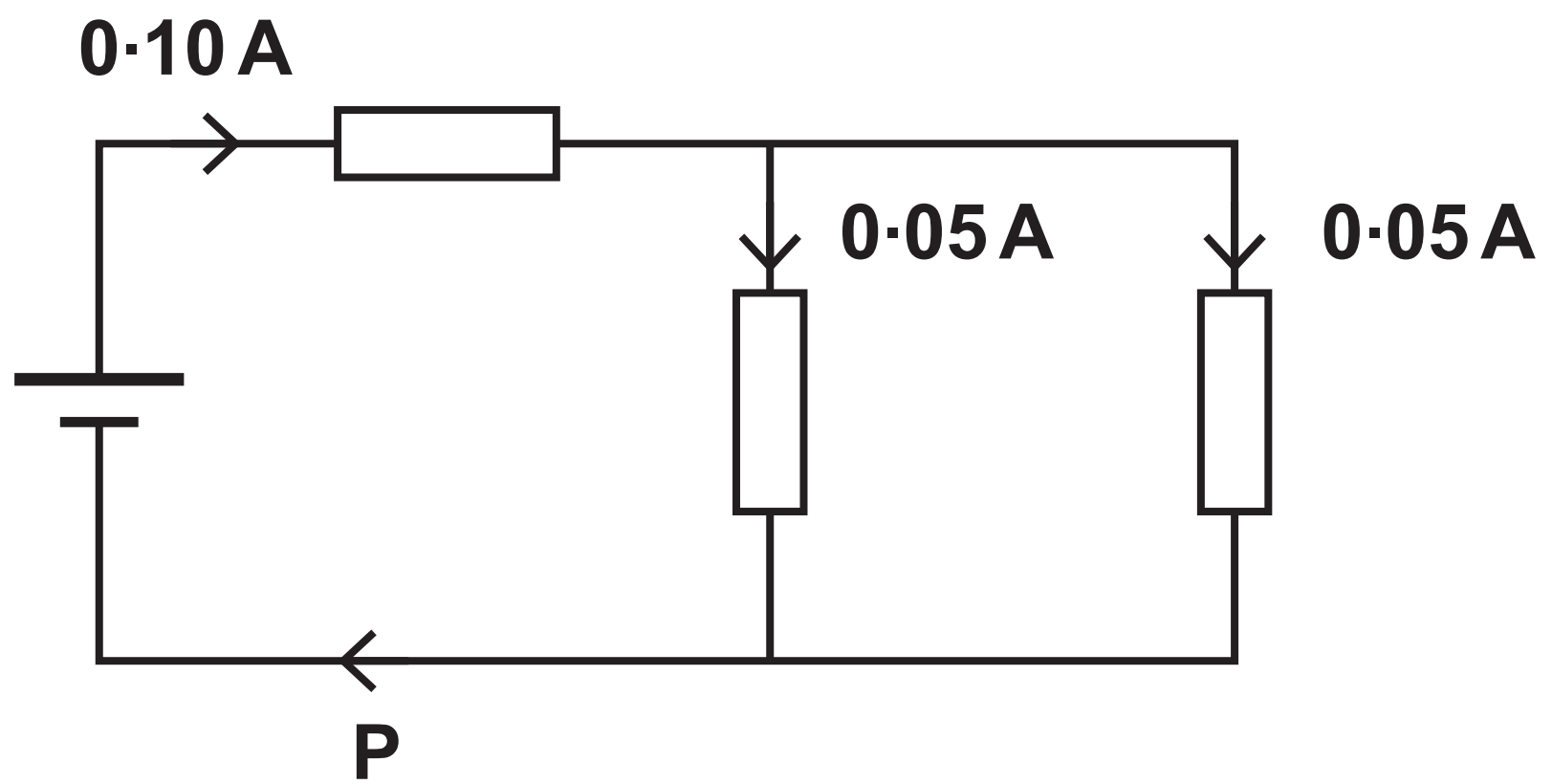
| | |
|-----------|-----------------------------------|
| 3 | Question 1(a) |
| 4 | Question 1(b) Figure 2 |
| 5 | Question 1(b) Figure 3 |
| 6 | Question 2(b) |
| 7 | Question 2(d) |
| 8 | Question 3(a) |
| 9 | Question 3(b) |
| 10 | Question 4(a) |
| 11 | Question 4(b) |
| 12 | Question 5(a) |
| 13 | Question 5(b) |
| 14 | Question 6(b) |
| 15 | Question 6(c) |
| 16 | Question 6(d) – Blank page |

Spare Copies

| | |
|-----------|-----------------------------------|
| 17 | Question 1(b) Figure 2 |
| 18 | Question 3(a) |
| 19 | Question 3(b) |
| 20 | Question 4(b) |
| 21 | Question 5(a) |
| 22 | Question 6(d) – Blank page |

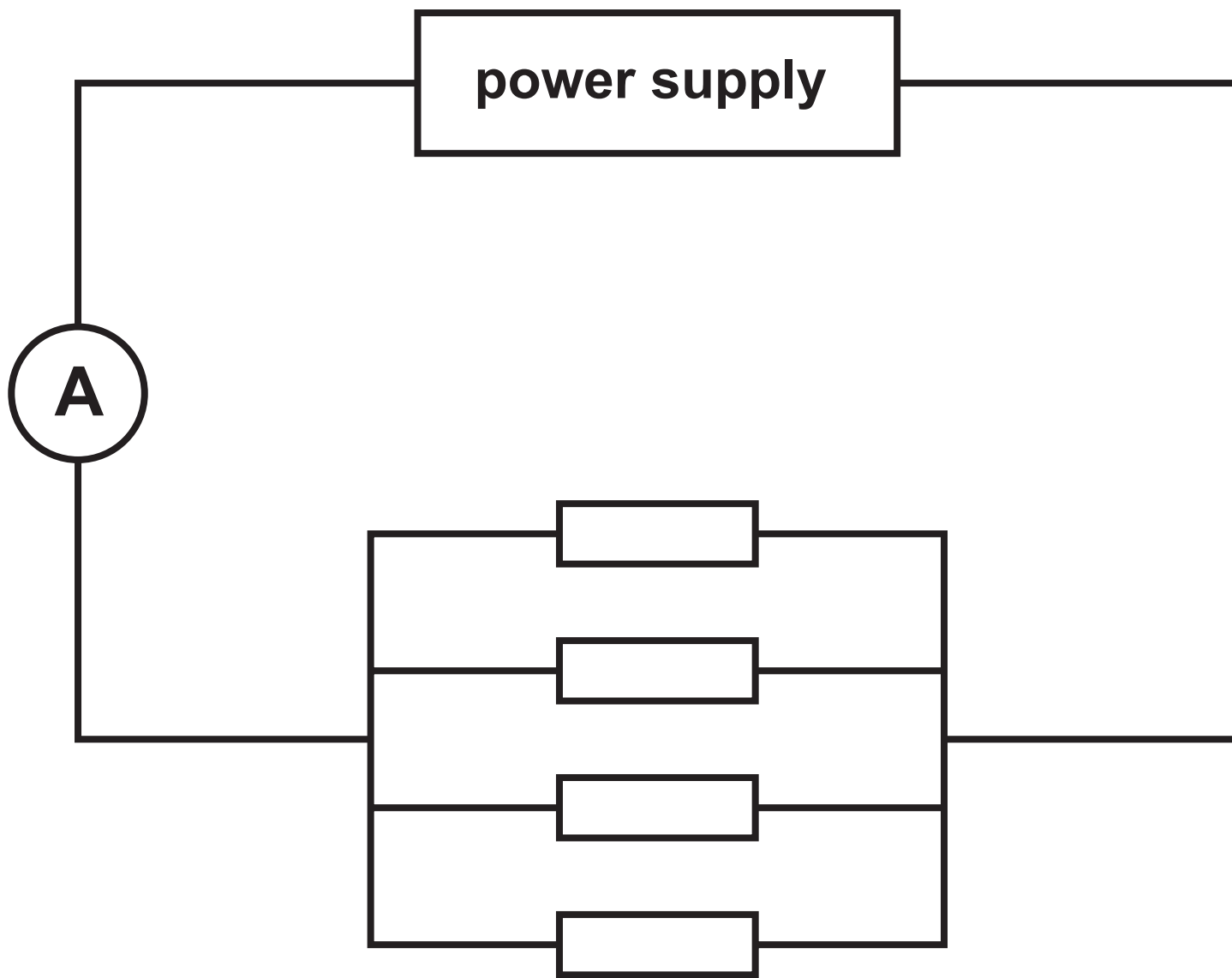
Question 1(a)

FIGURE 1



Question 1(b)

FIGURE 2



Question 1(b)

FIGURE 3

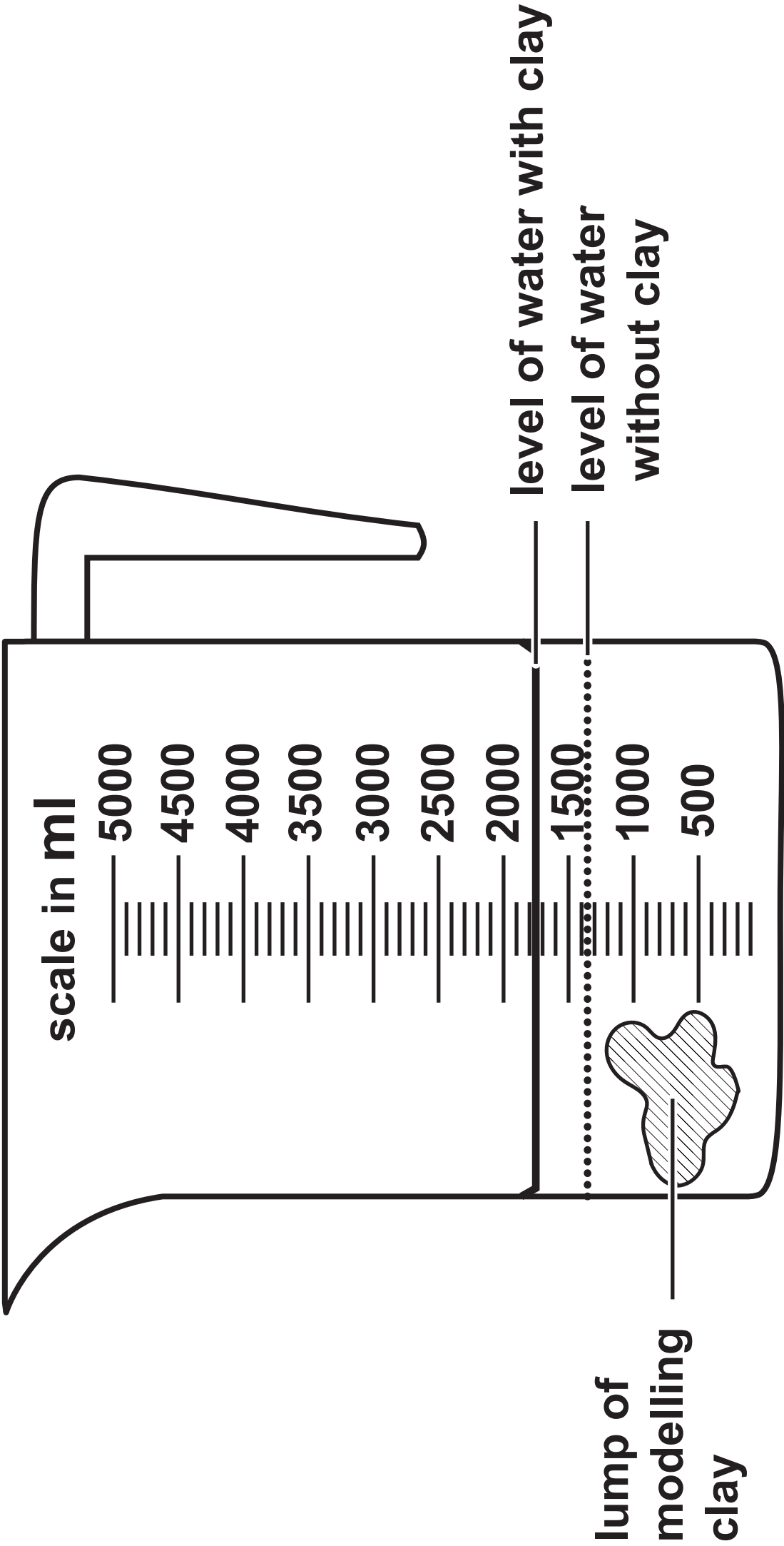
| number of resistors | current in mA | voltage in V |
|---------------------|---------------|--------------|
| 4 | | 6.00 |
| 3 | 27.3 | 6.00 |
| 2 | 18.2 | 6.00 |
| 1 | 9.1 | 6.00 |

Question 2(b)

FIGURE 4

| | |
|---------------------|---------------------------------|
| | density in g/cm ³ |
| solid aluminium | 2·70 |
| liquid aluminium | 2·38 |

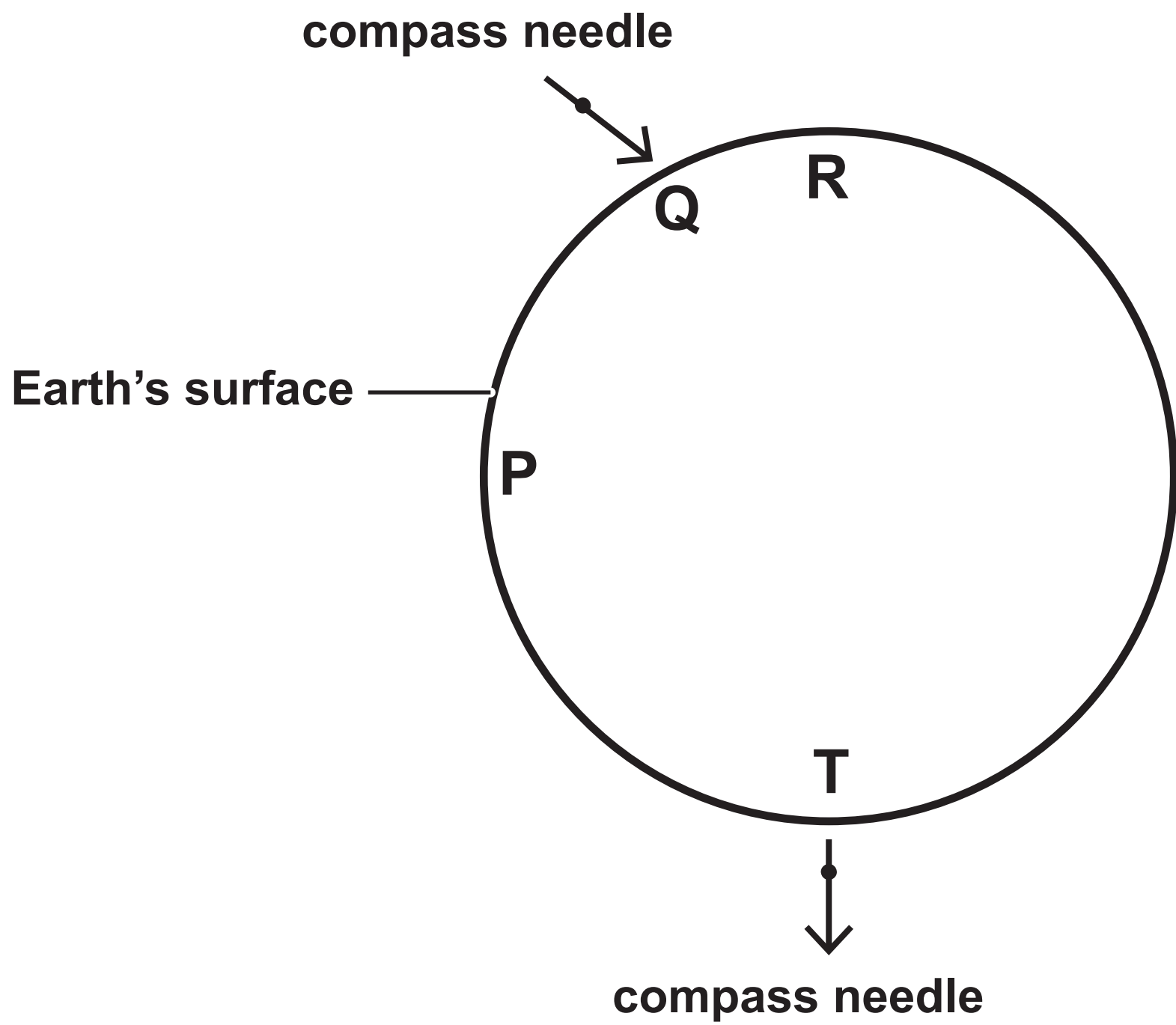
FIGURE 5



Question 3(a)

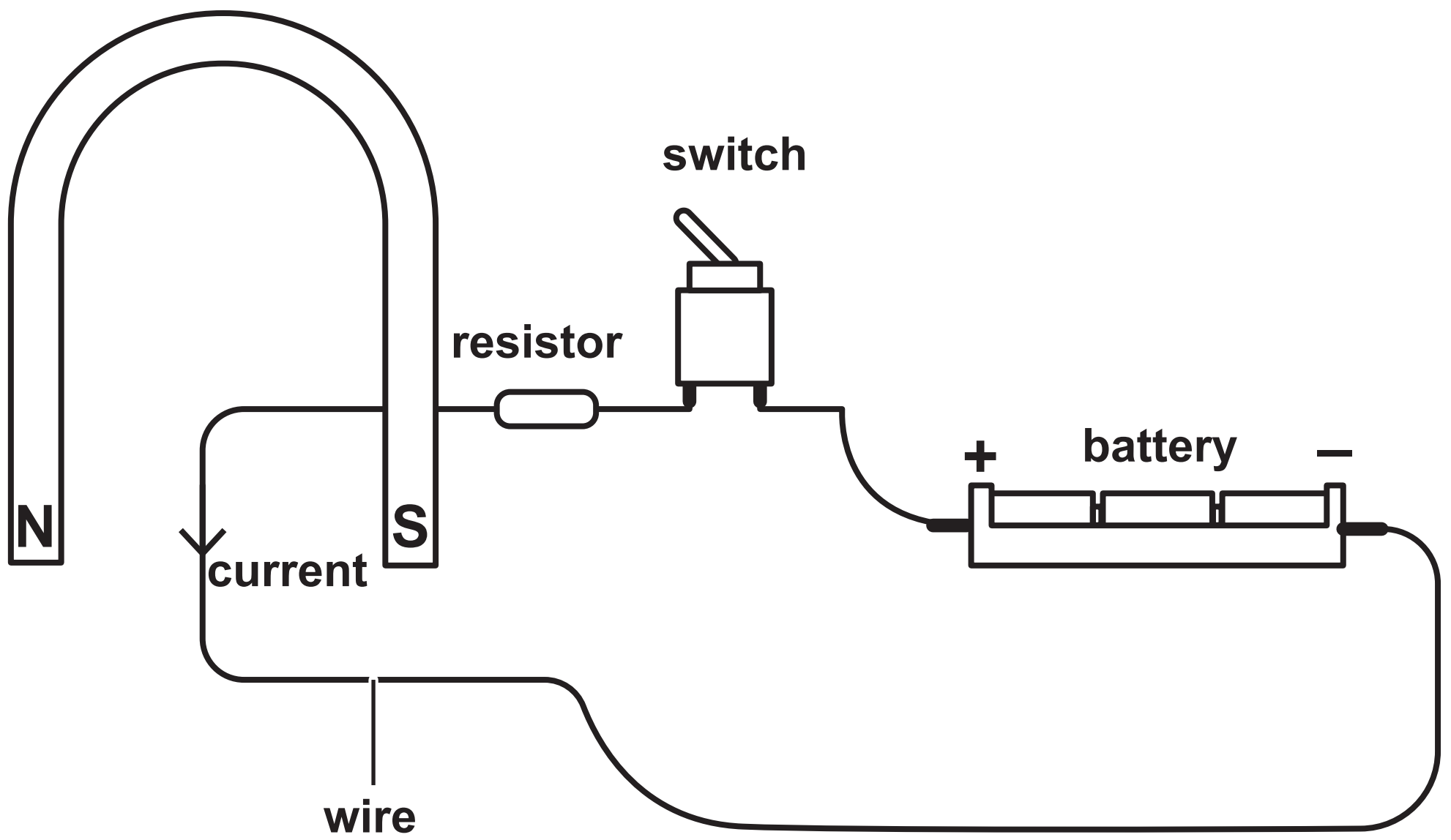
FIGURE 6

not to scale



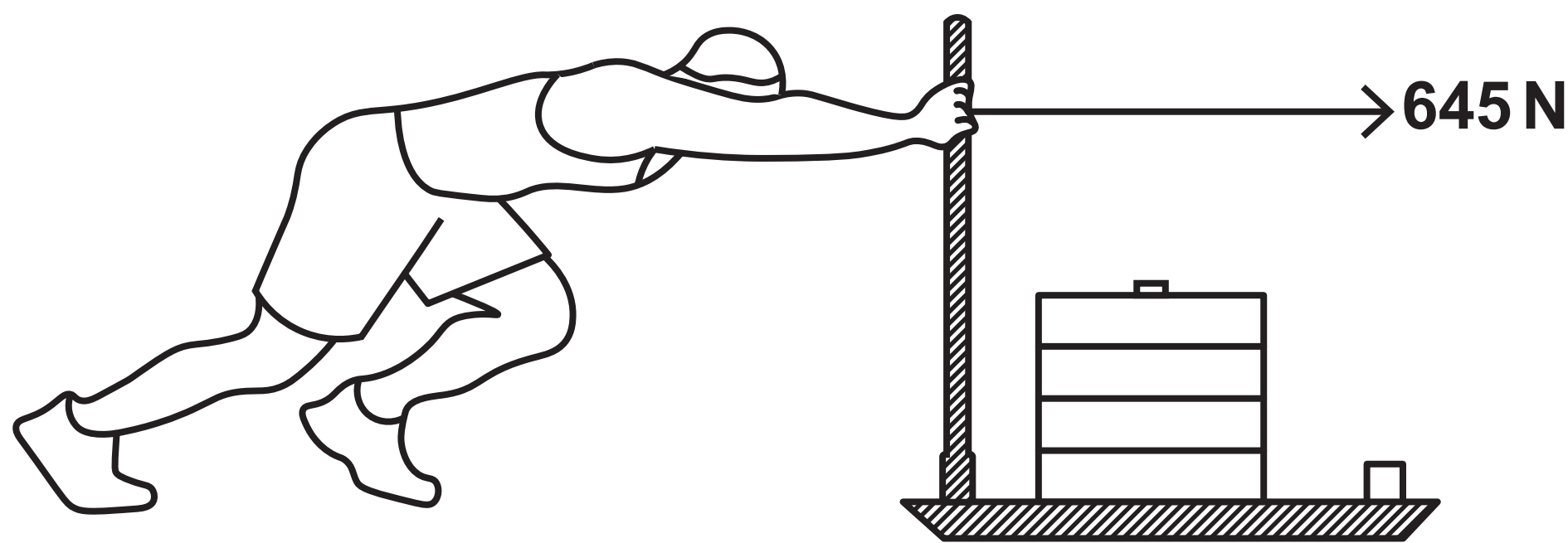
Question 3(b)

FIGURE 7



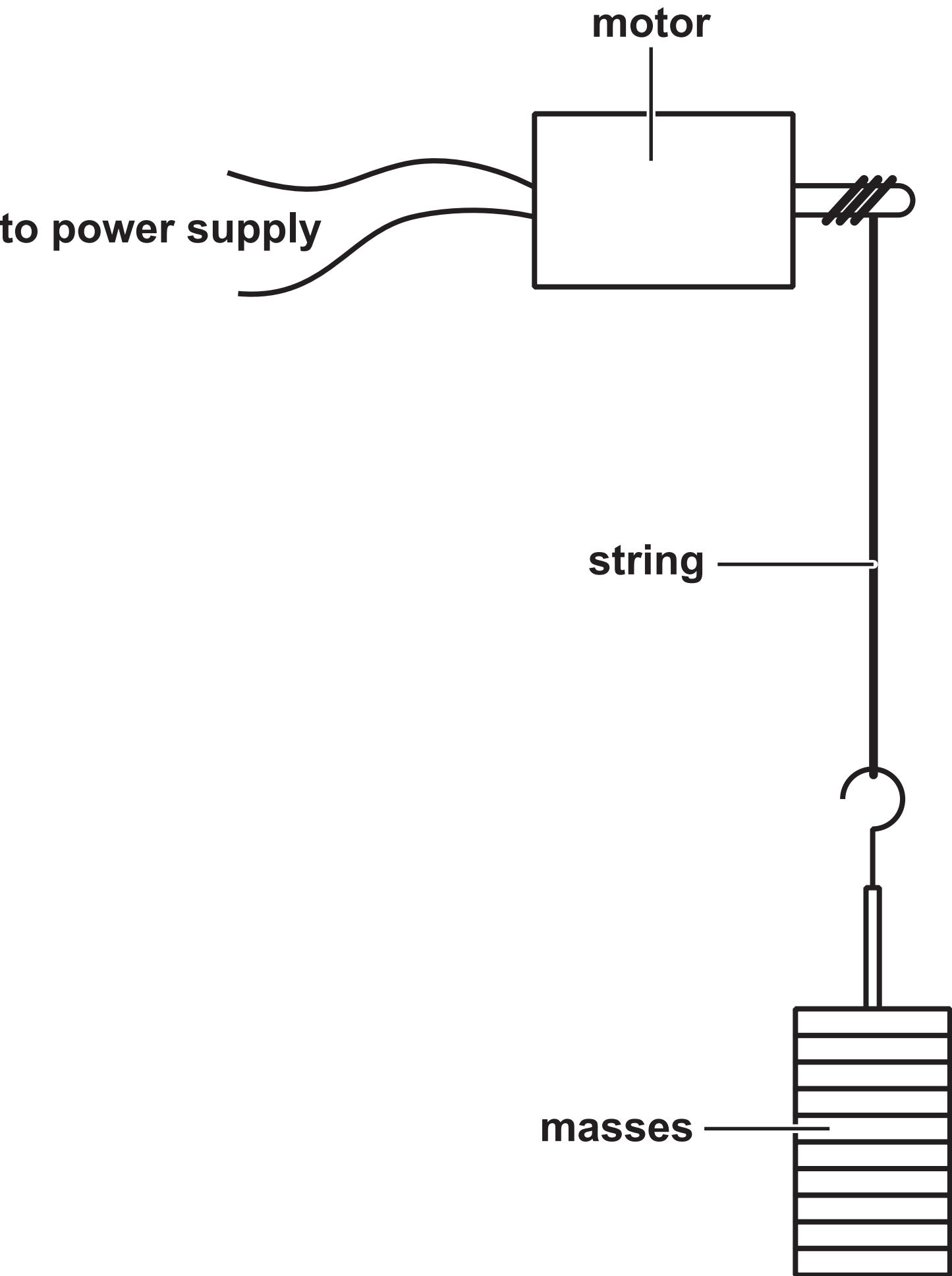
Question 4(a)

FIGURE 8



Question 4(b)

FIGURE 9



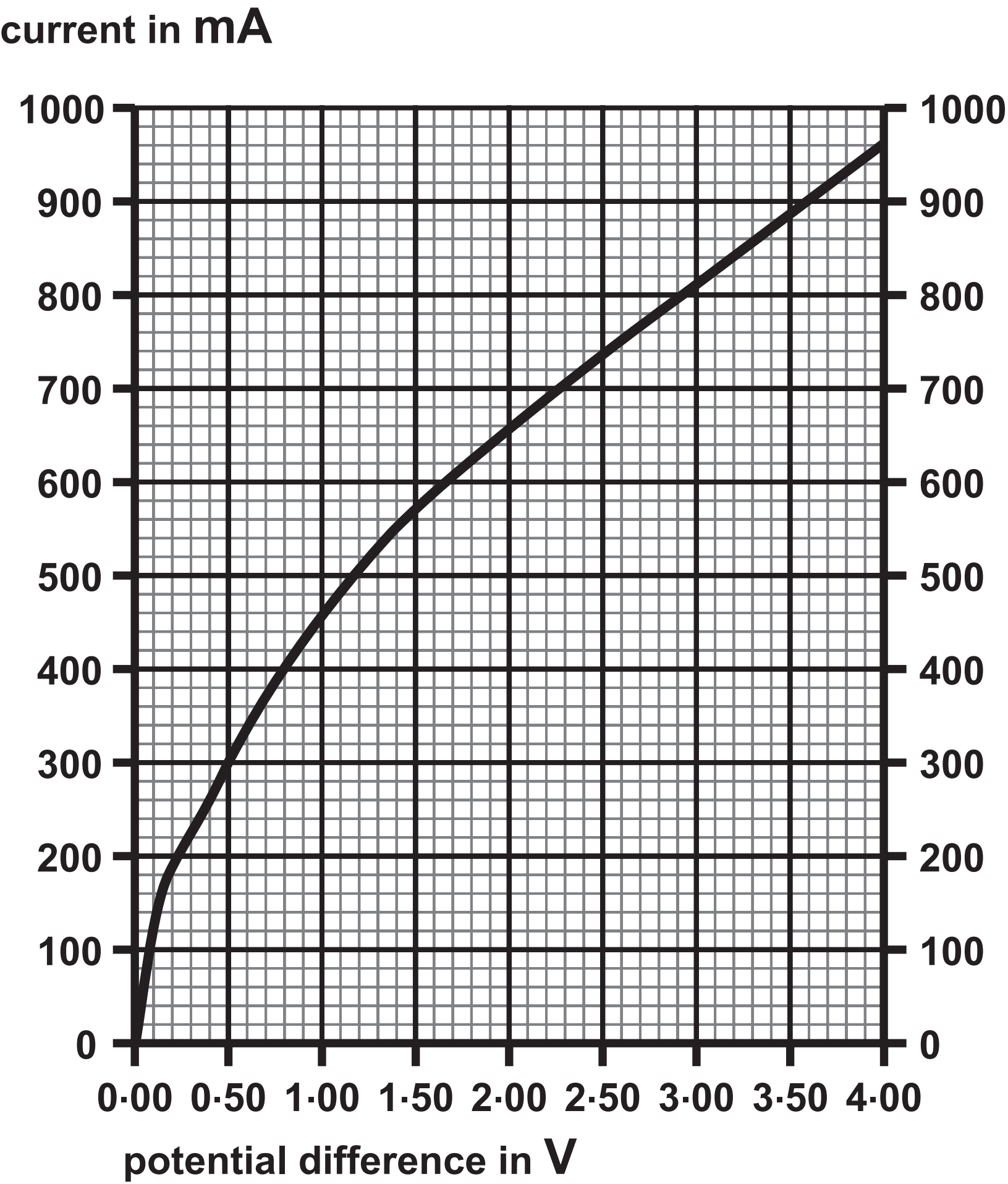
Question 5(a)

FIGURE 10



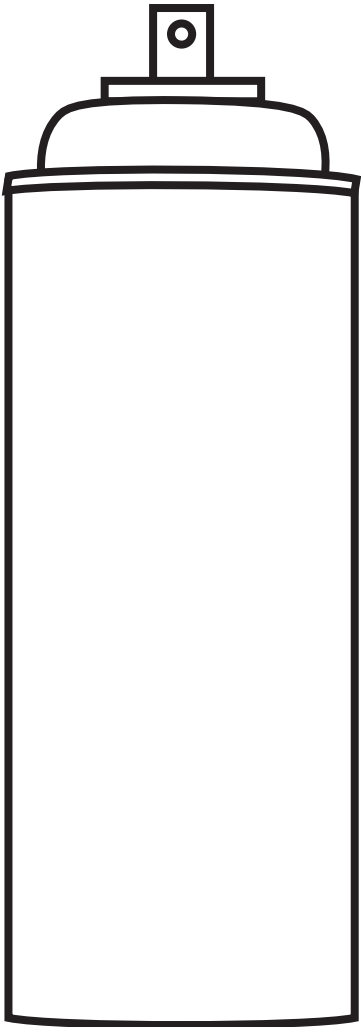
Question 5(b)

FIGURE 11



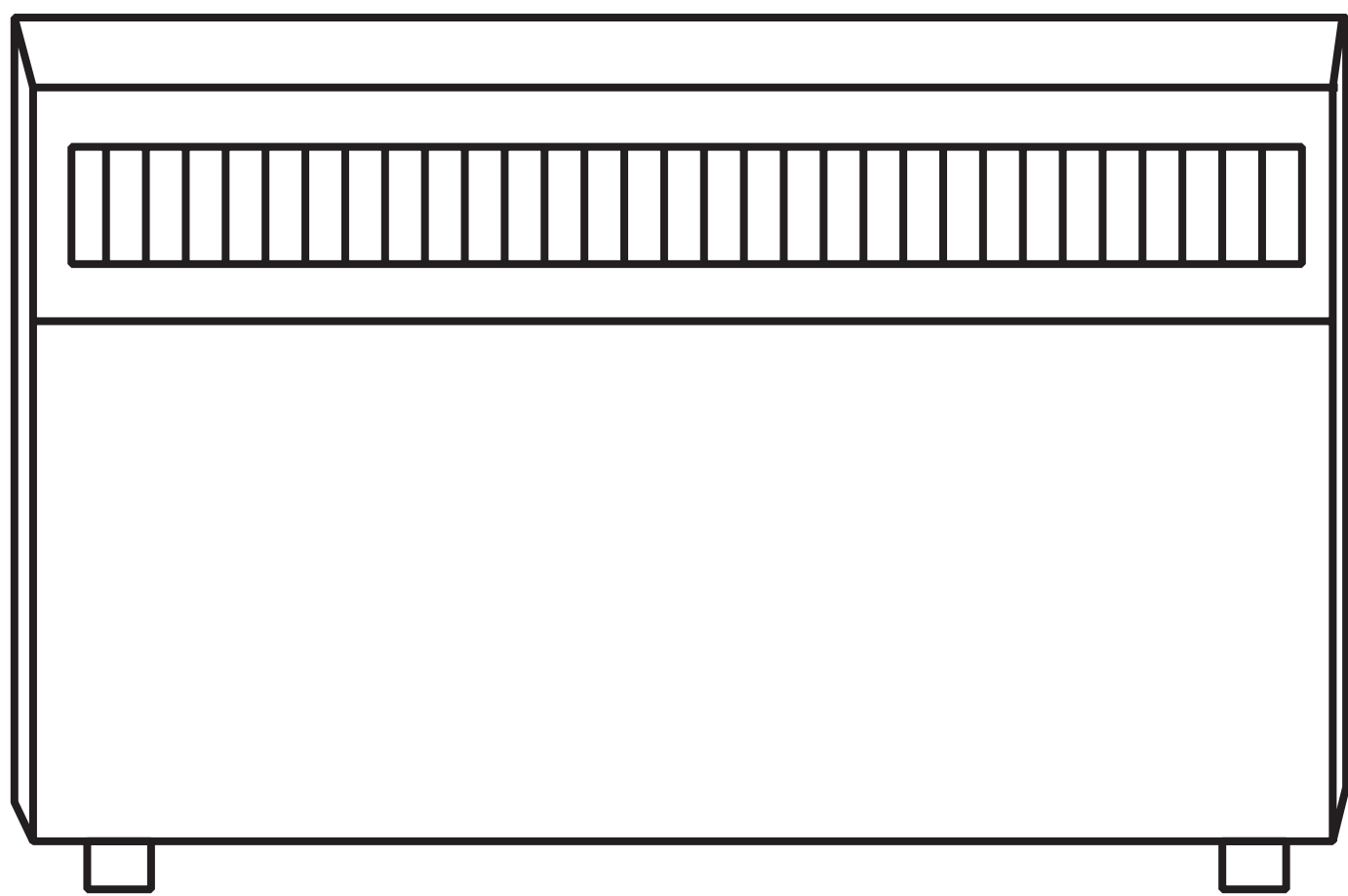
Question 6(b)

FIGURE 12



Question 6(c)

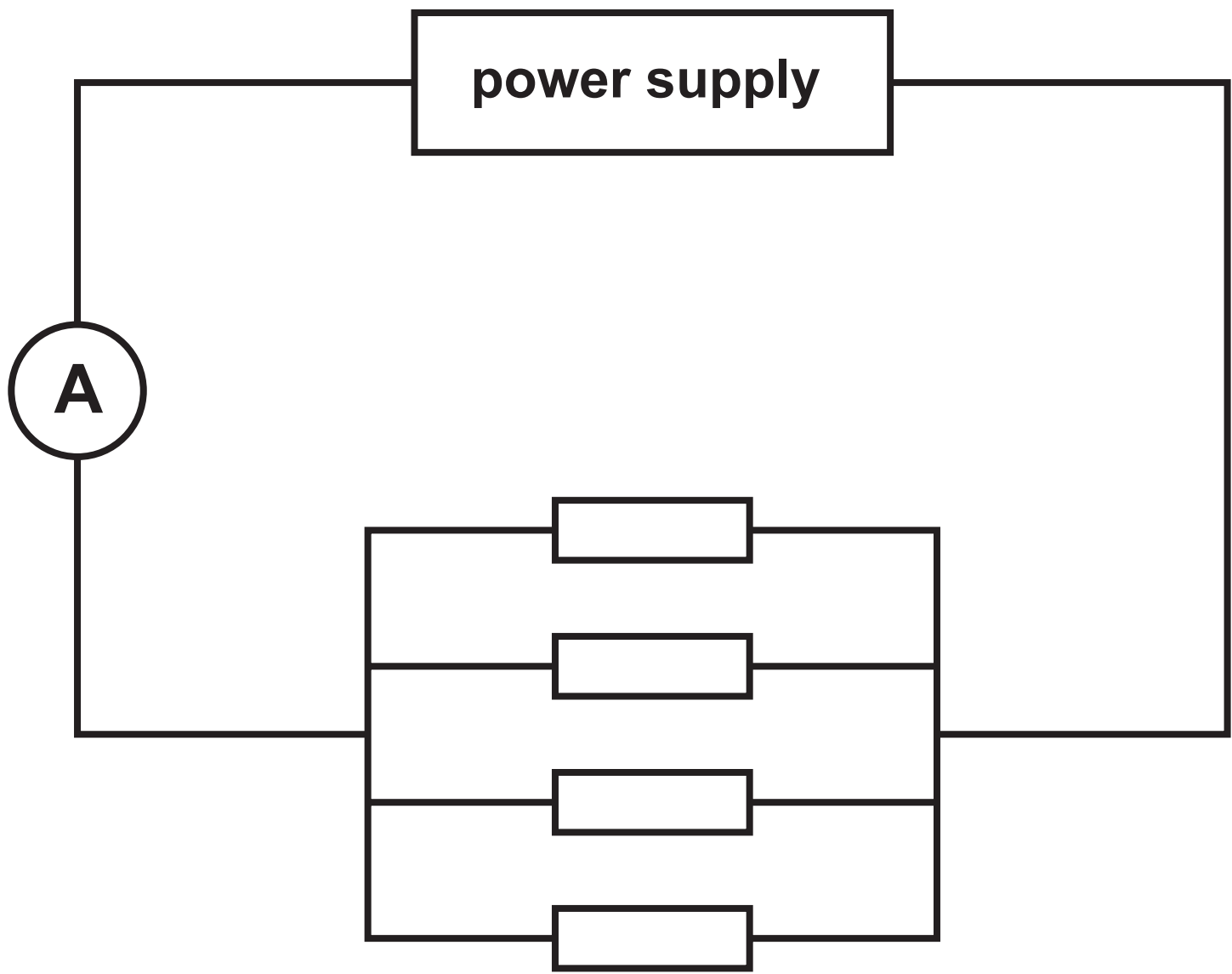
FIGURE 13



Question 6(d) – Blank page

Question 1(b)

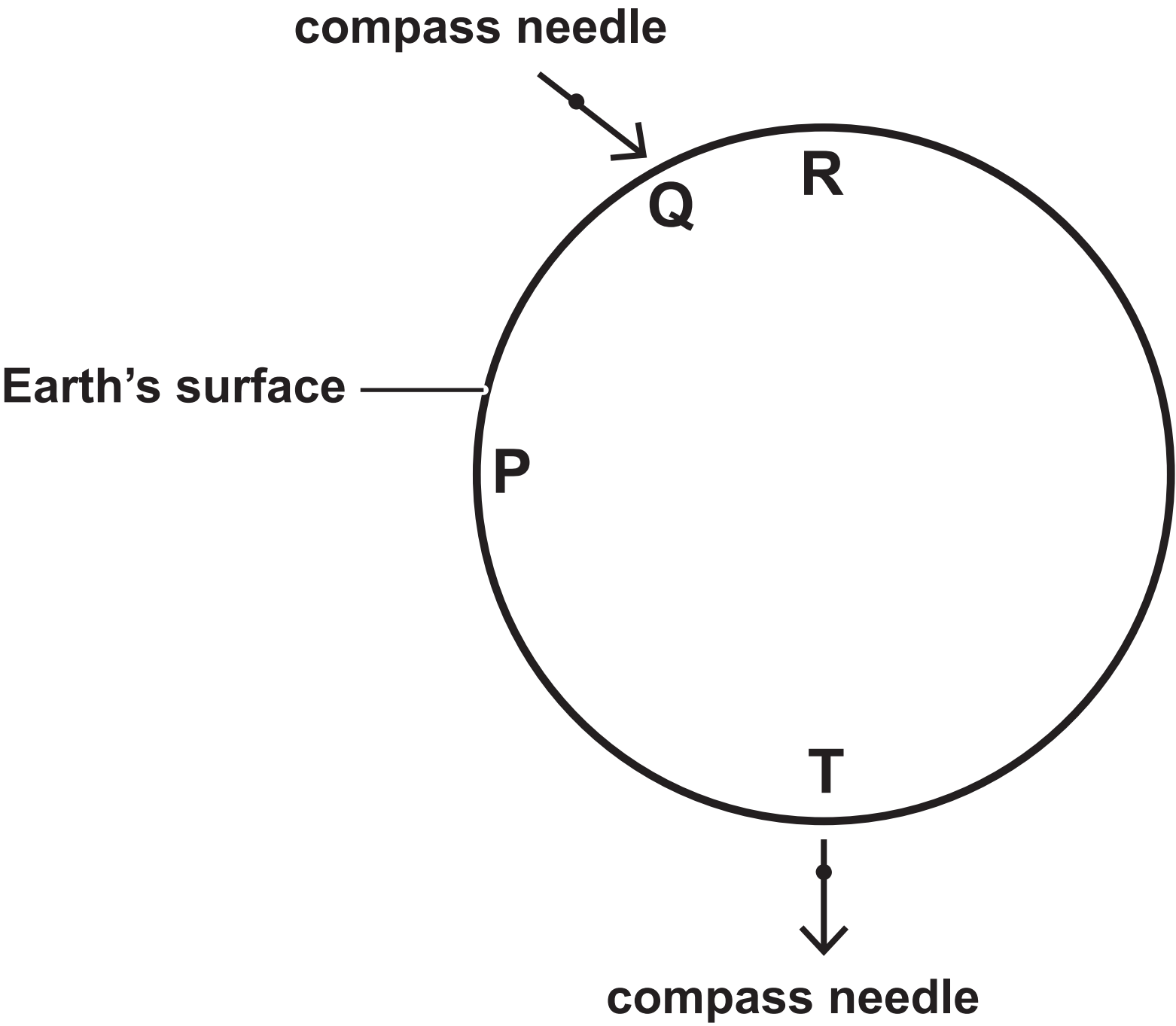
FIGURE 2



Question 3(a)

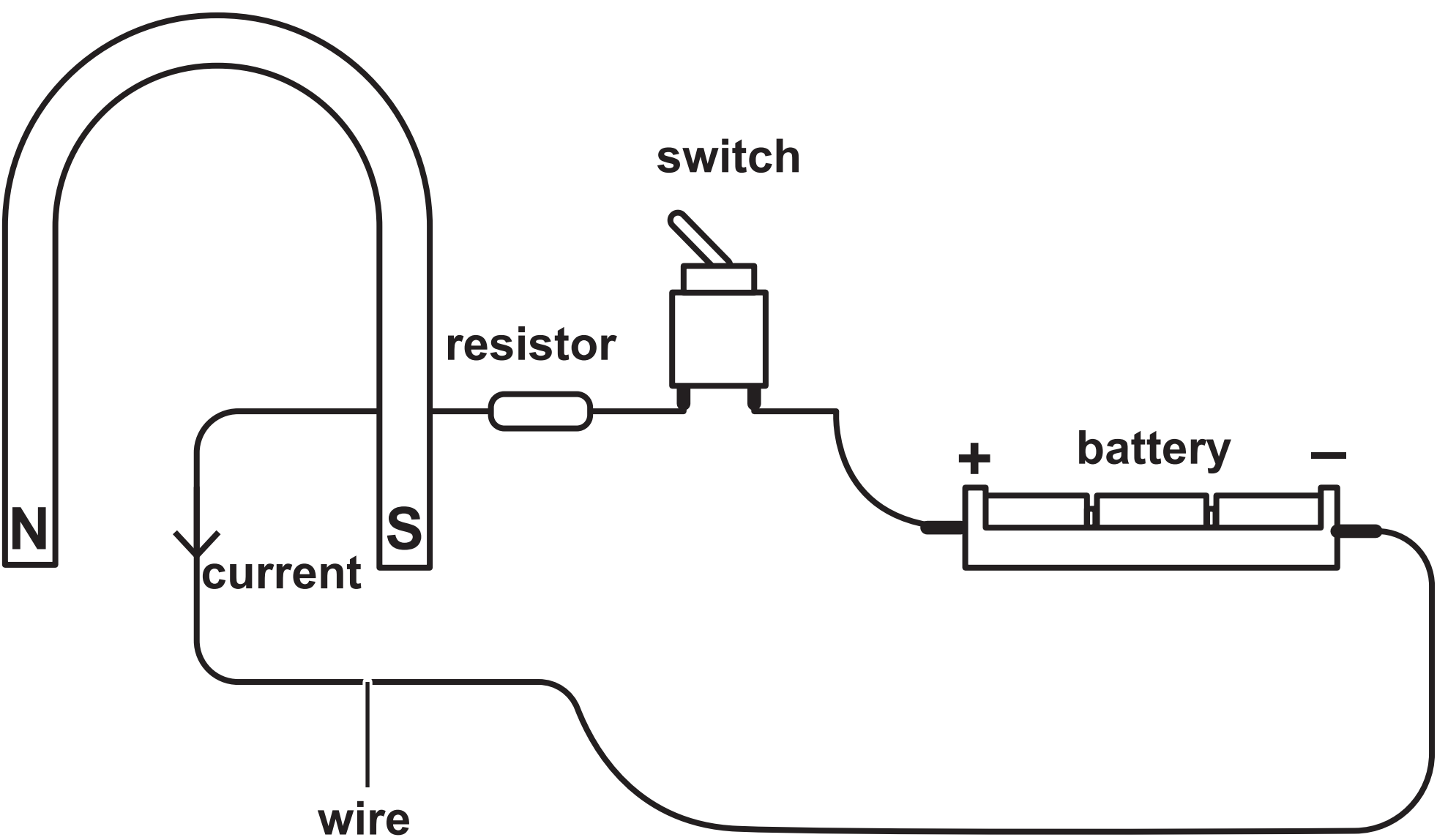
FIGURE 6

not to scale



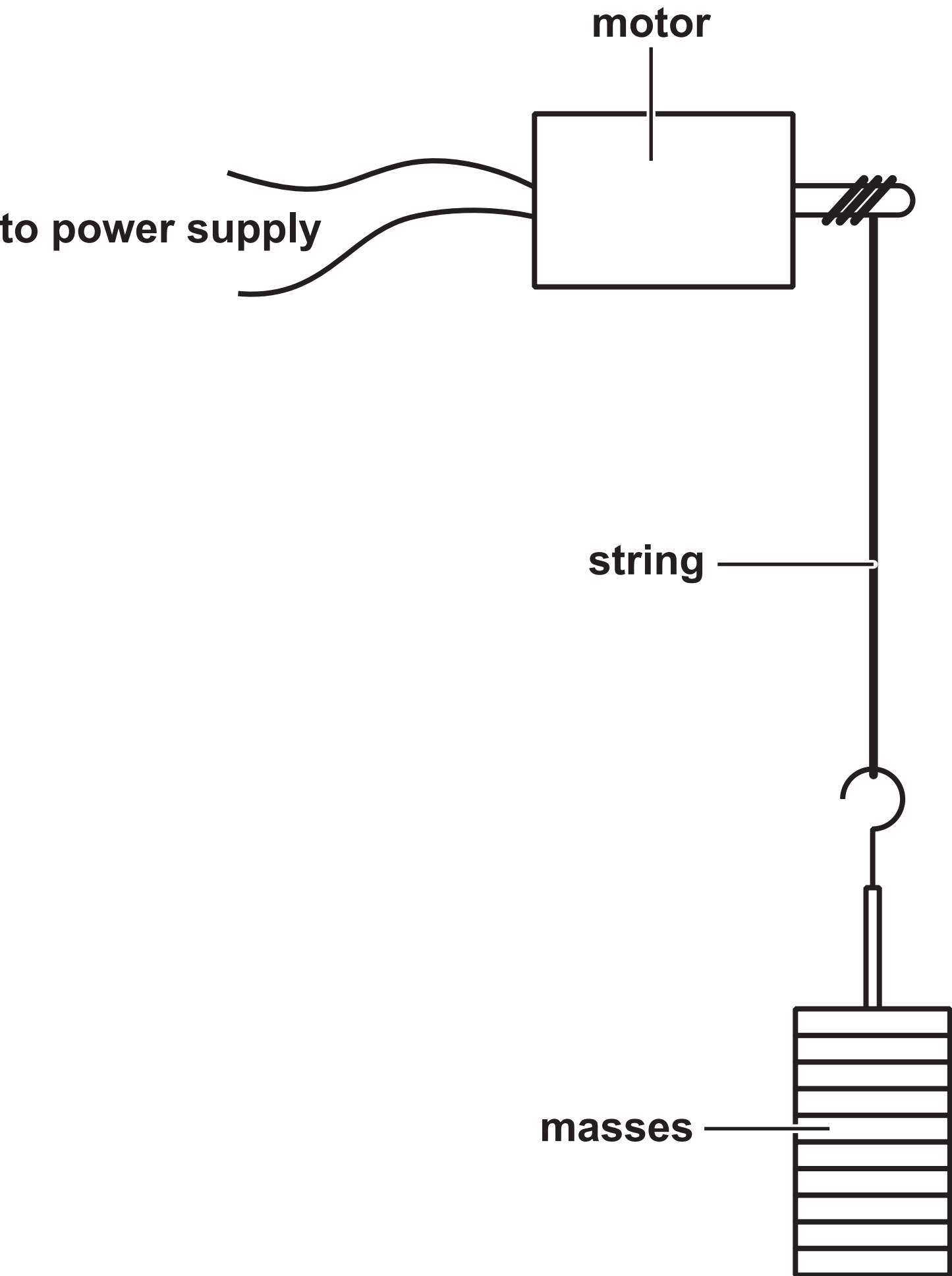
Question 3(b)

FIGURE 7



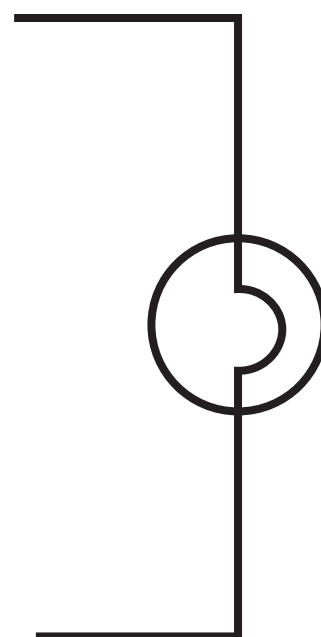
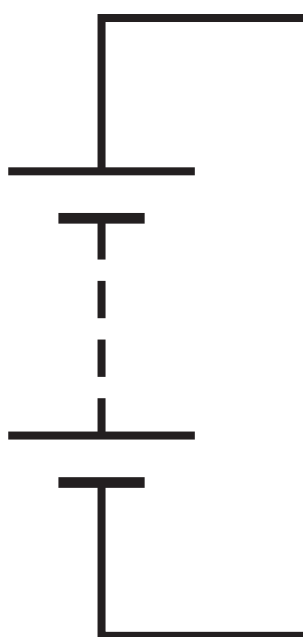
Question 4(b)

FIGURE 9



Question 5(a)

FIGURE 10



Question 6(d) – Blank page