

Paper Reference(s) 4PH1/2P
Pearson Edexcel International GCSE (9–1)

Physics
UNIT: 4PH1
PAPER: 2P

Friday 14 June 2024 – Afternoon

Time: 1 hour 15 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

4	Question 1
5	Question 1(a)
6	Question 2(a)
7	Question 2(c)
8	Question 3(a)
9	Question 3(b)
10	Question 4(b)
11	Question 5(b)
12	Question 5(c)(ii)
13	Question 6(b)

(continued on the next page)

CONTENTS continued.

14 Question 7(b)

15 Question 8

16 Question 8(b)(ii)

Spare Copies

17 Question 1(a)

18 Question 3(b)

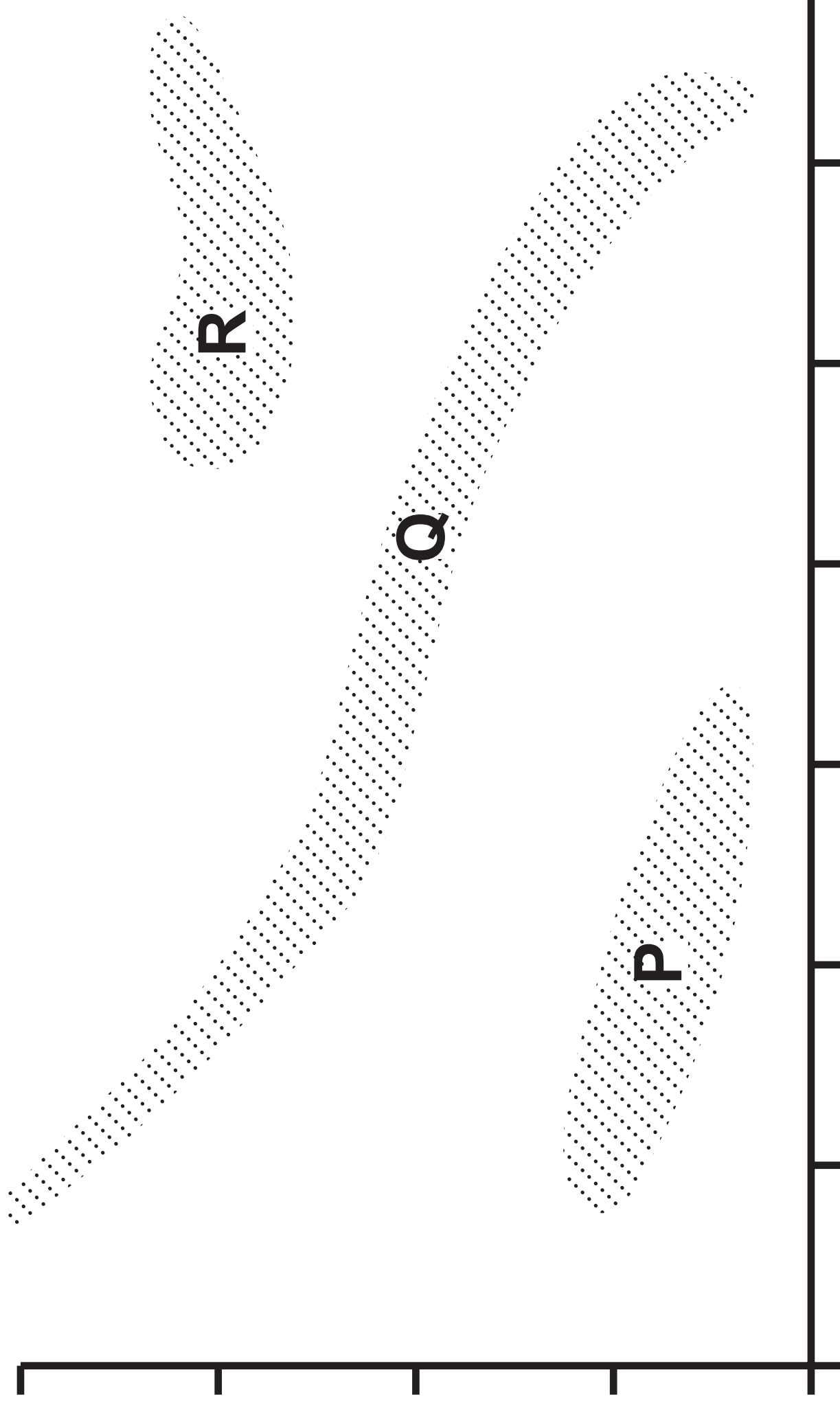
19 Question 4(b)

20 Question 5(c)(ii)

21 Question 6(b)

Question 1

Absolute
magnitude



Question 1(a)

Region

P

Q

R

Astronomical object

black hole

main sequence star

nebula

neutron star

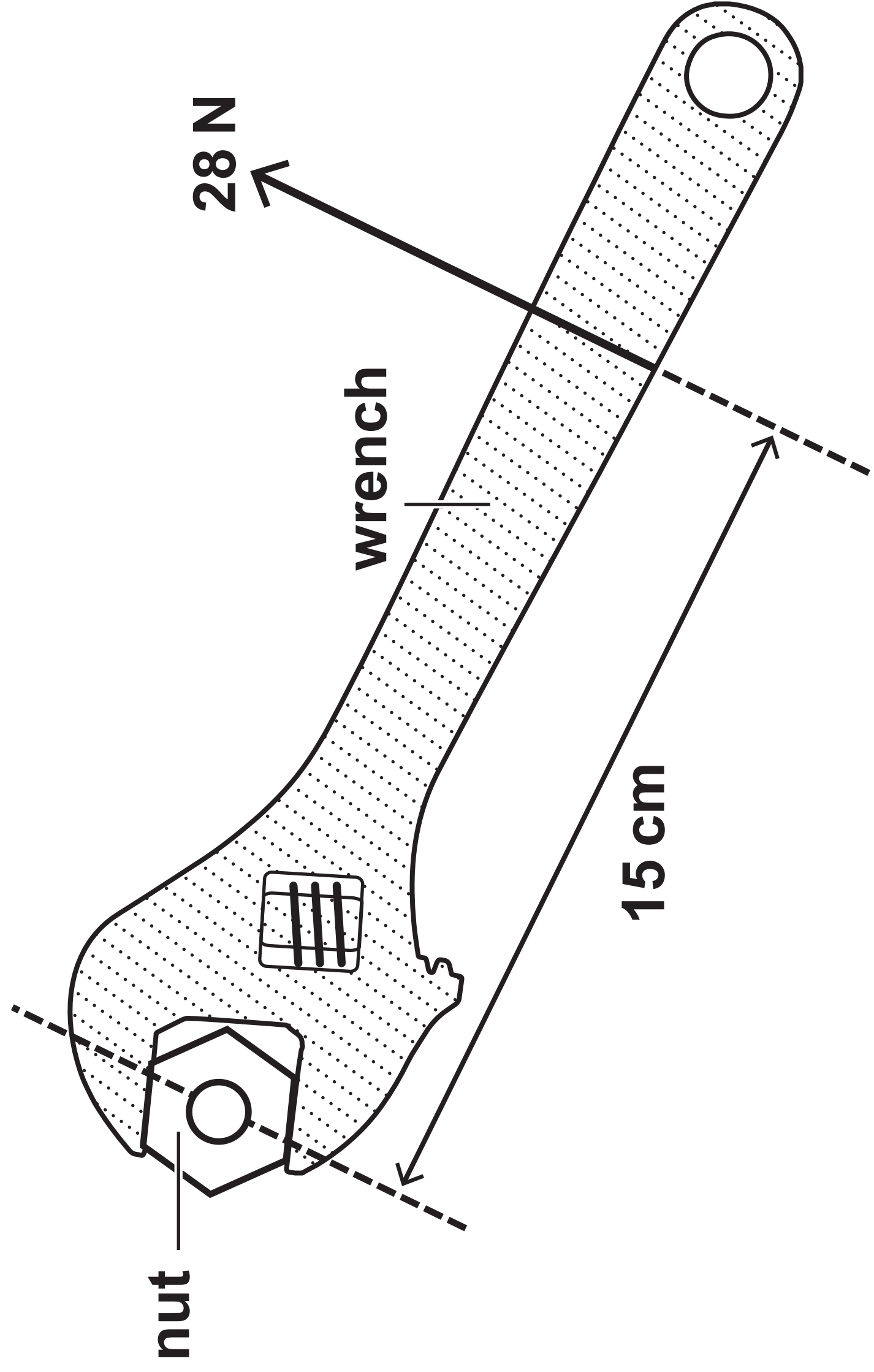
red giant star

supernova

white dwarf star

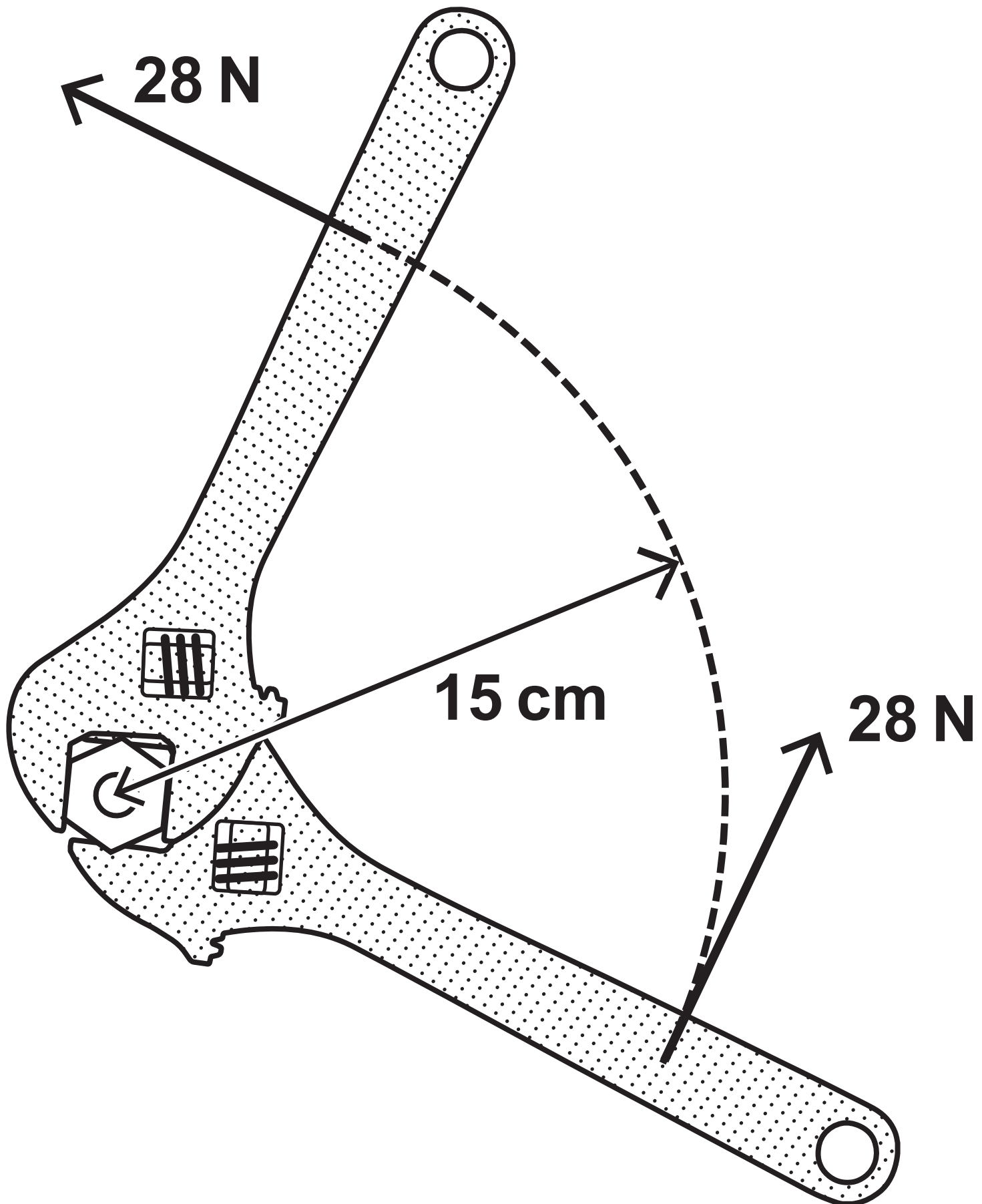
Question 2(a)

DIAGRAM 1

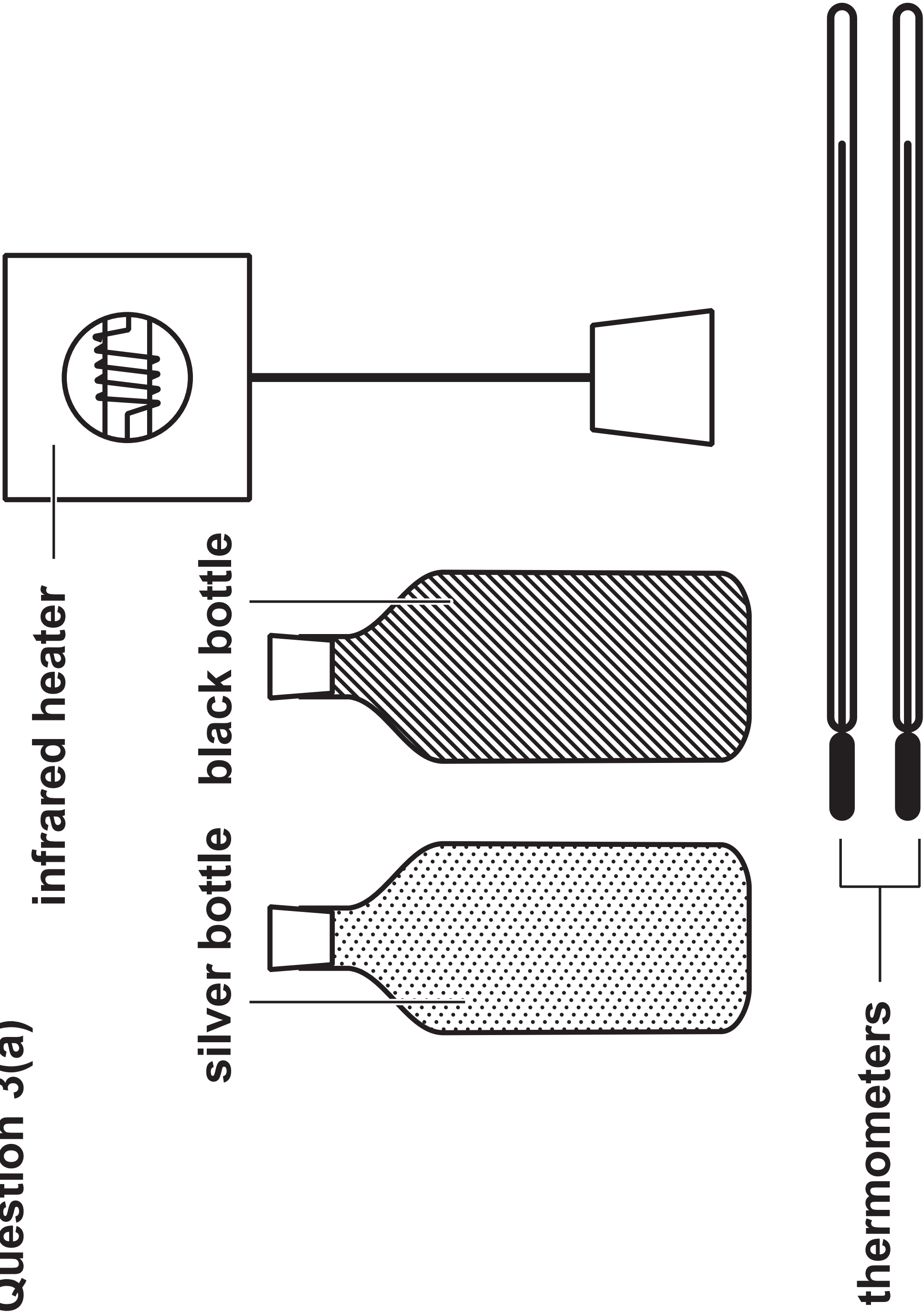


Question 2(c)

DIAGRAM 2



Question 3(a)



Question 3(b)

Temperature



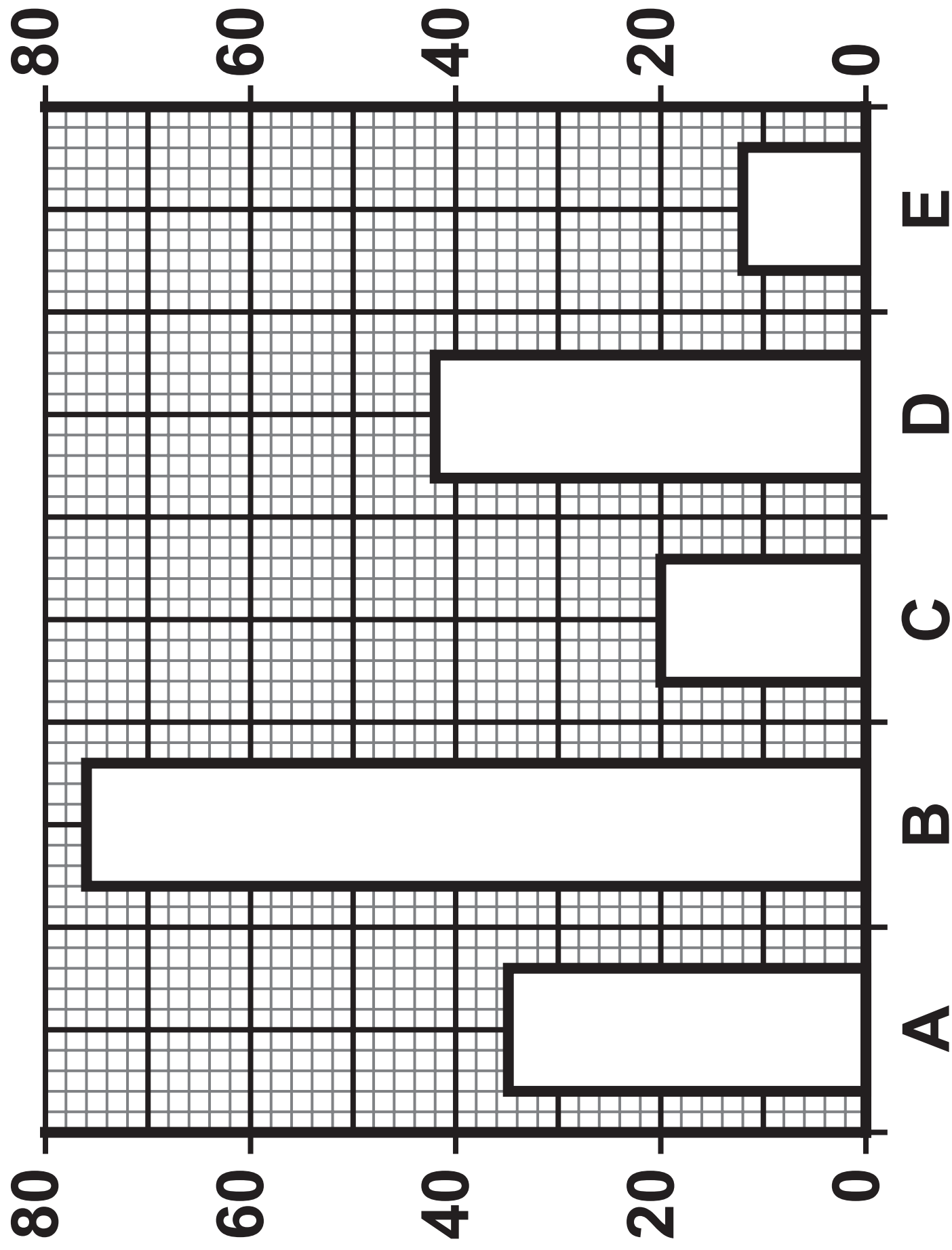
Time

Question 4(b)

Material	Charge in nanocoulombs (nC)			
	1	2	3	Mean
glass	+35	+38	+36	+36
ebonite	−168	−170	−171	−170
polythene	−61	−80	−59	
acetate	−20	−20	−18	−19

Question 5(b)

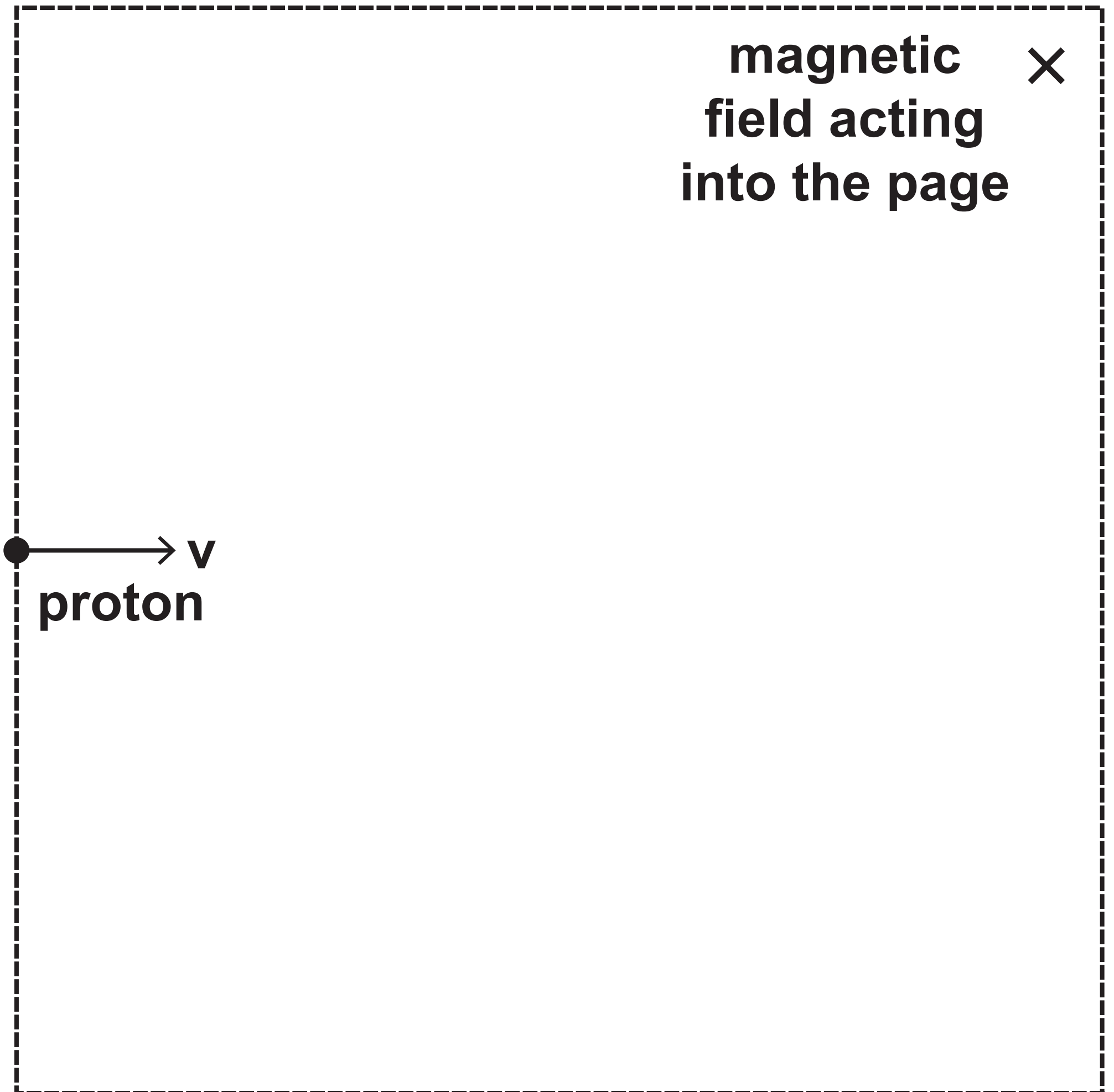
Frequency in kHz



Question 5(c)(ii)

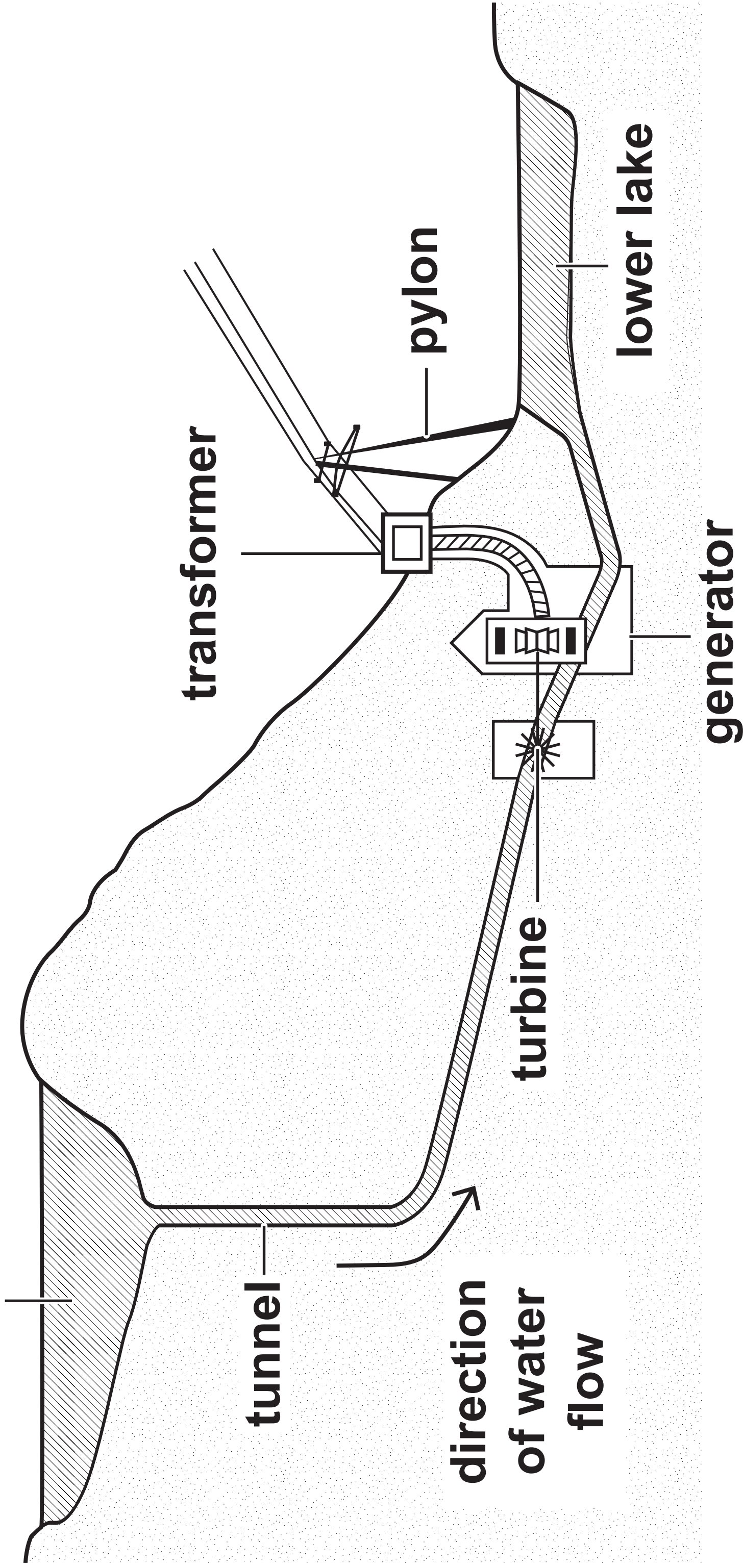
[illegible]

Question 6(b)

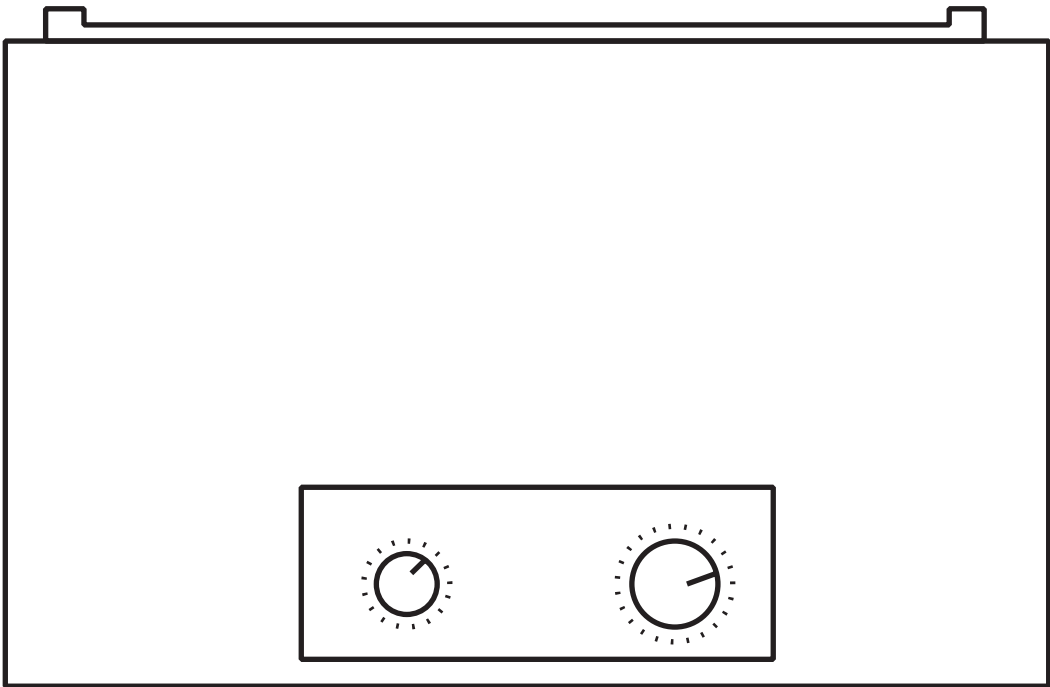


Question 7(b)

upper lake



Question 8



Question 8(b)(ii)

Initial temperature of water	15°C
Final temperature of water	60°C
Voltage of heating element	230 V
Current in heating element	1.5 A
Time taken to heat water	45 minutes

Question 1(a)

Region

P

Q

R

Astronomical object

black hole

main sequence star

nebula

neutron star

red giant star

supernova

white dwarf star

Question 3(b)

Temperature



Time

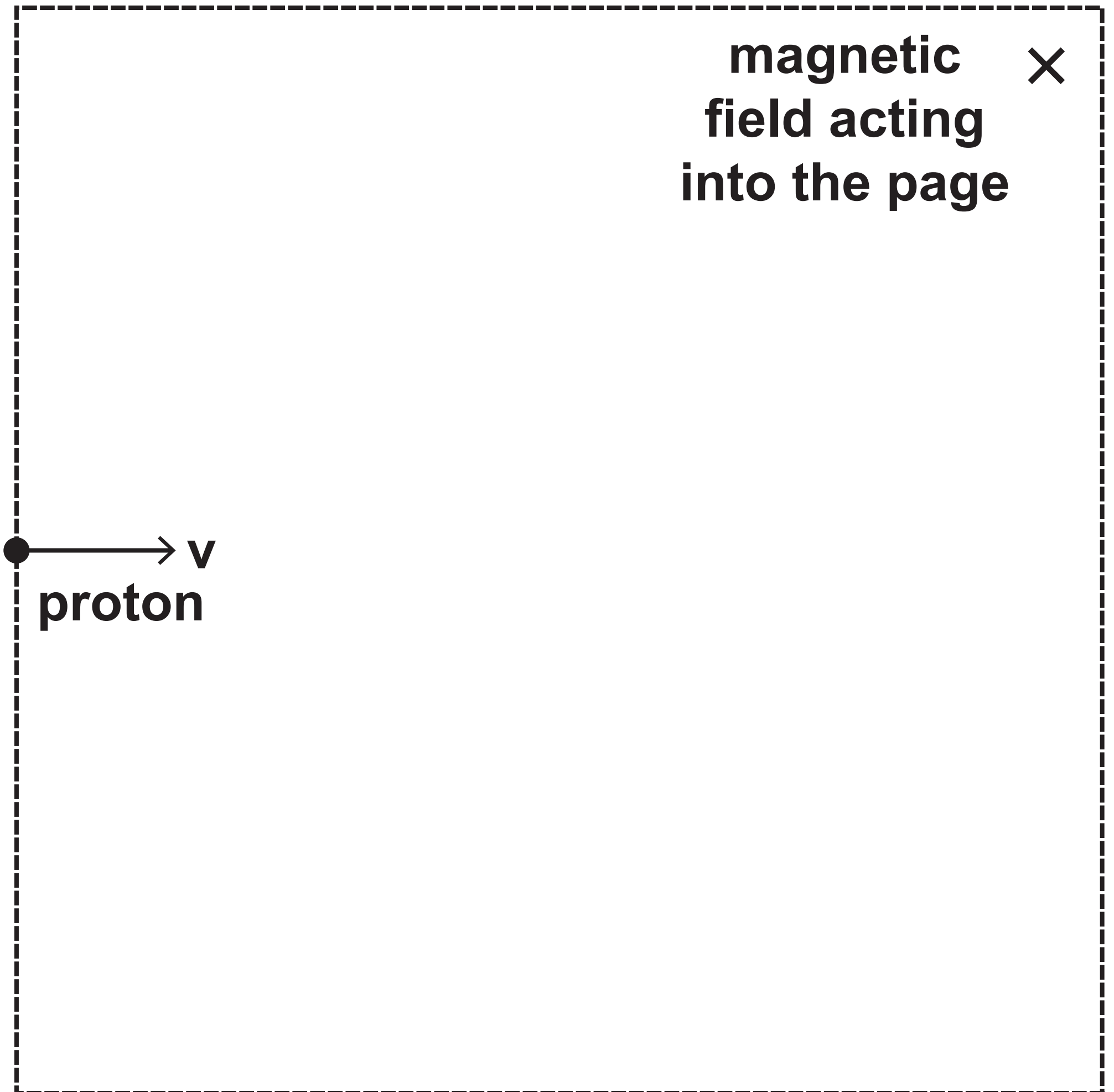
Question 4(b)

Material	Charge in nanocoulombs (nC)			
	1	2	3	Mean
glass	+35	+38	+36	+36
ebonite	−168	−170	−171	−170
polythene	−61	−80	−59	
acetate	−20	−20	−18	−19

Question 5(c)(ii)

[illegible]

Question 6(b)



Source information:

Question 2(a) and 2(c)

(Source adapted from: <https://www.shutterstock.com/image-photo/adjustable-spanner-isolated-on-white-chrome-1794553030>)