

Biology
UNIT: 4BI1
Science (Double Award) 4SD0
PAPER: 1B

Friday 10 May 2024 – Morning

Time: 2 hours

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.

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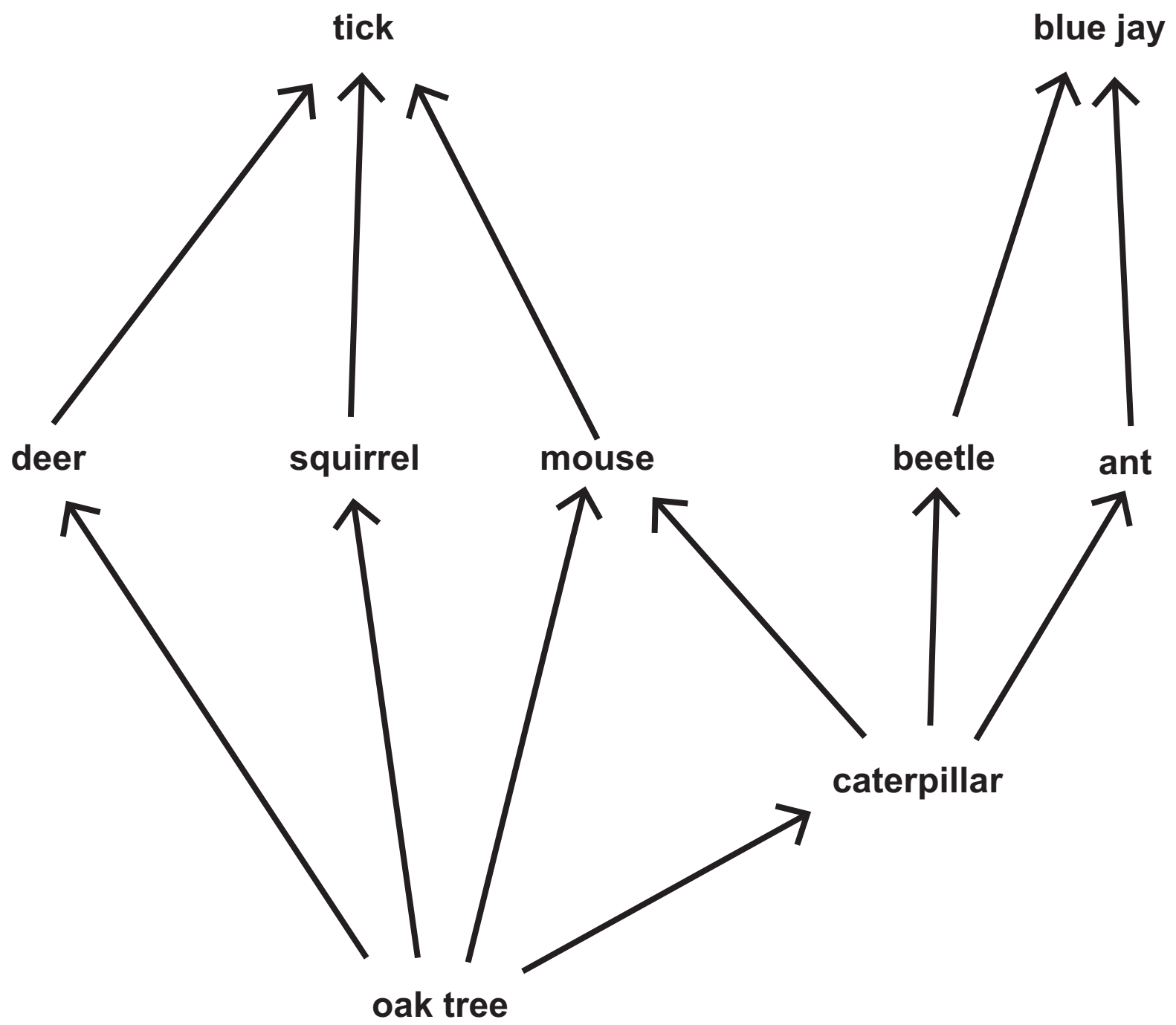
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Spare Copies

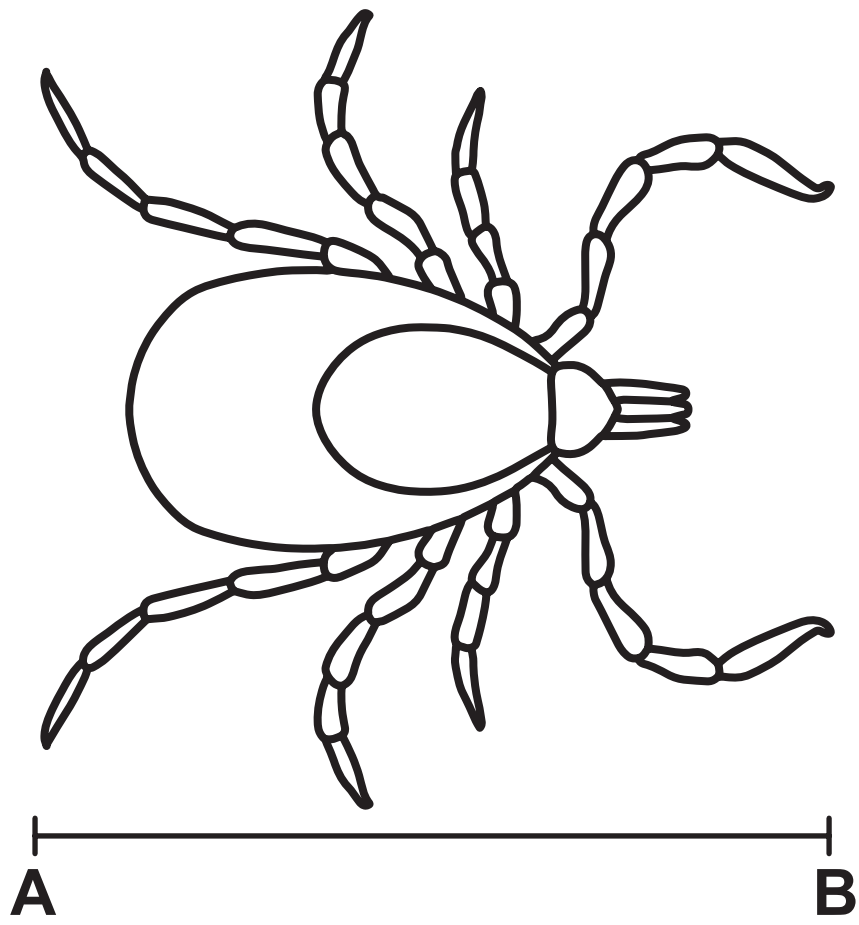
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Question 1(a)(i)

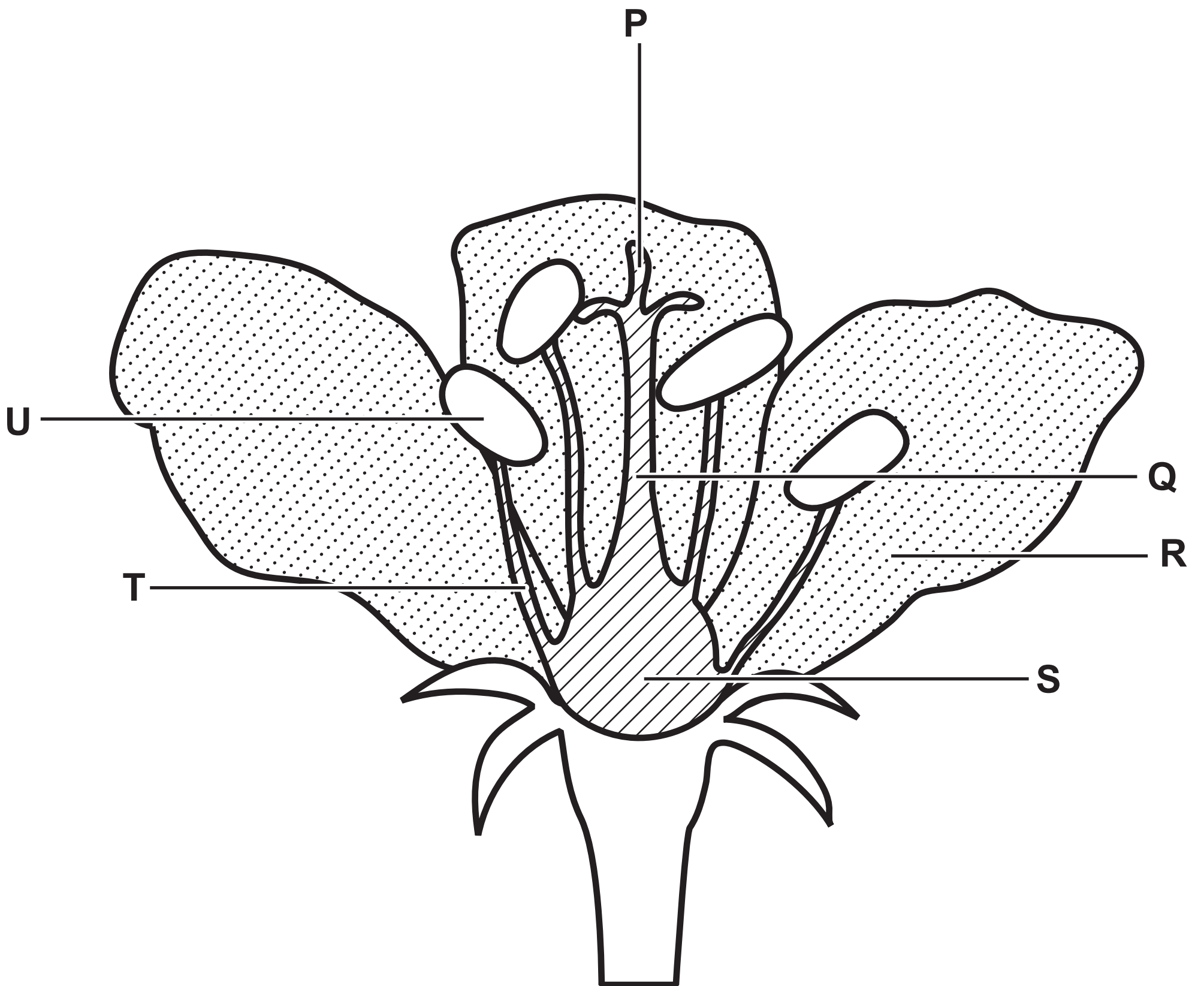


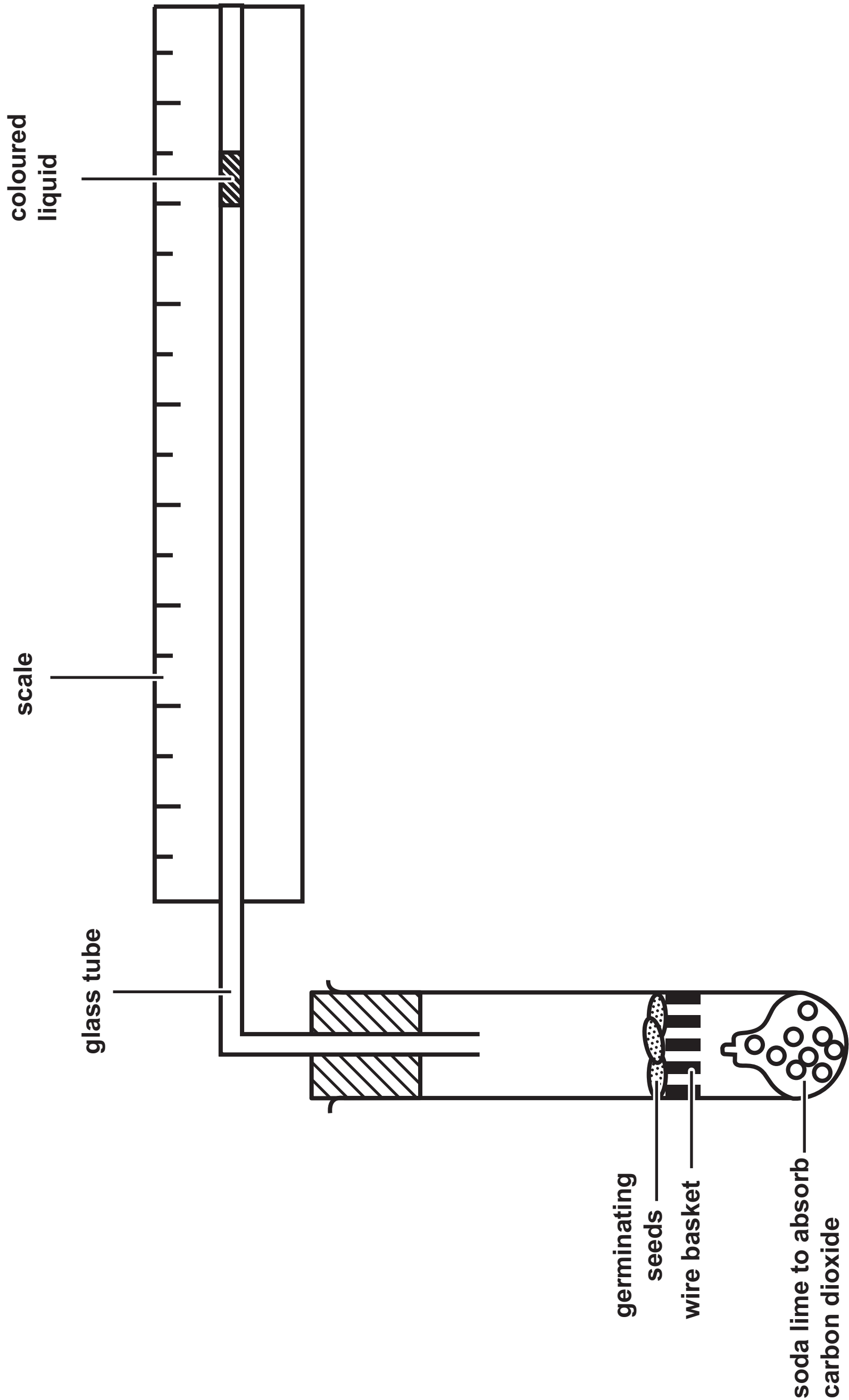
Question 1(a)(ii) – Blank

Question 1(b)



Question 2





Question 4(c)

Temperature in °C	Distance moved by bubble in one minute in mm			
	reading 1	reading 2	reading 3	mean
20	14	12	14	13
30	22	25	24	

Question 5(b)

KEY

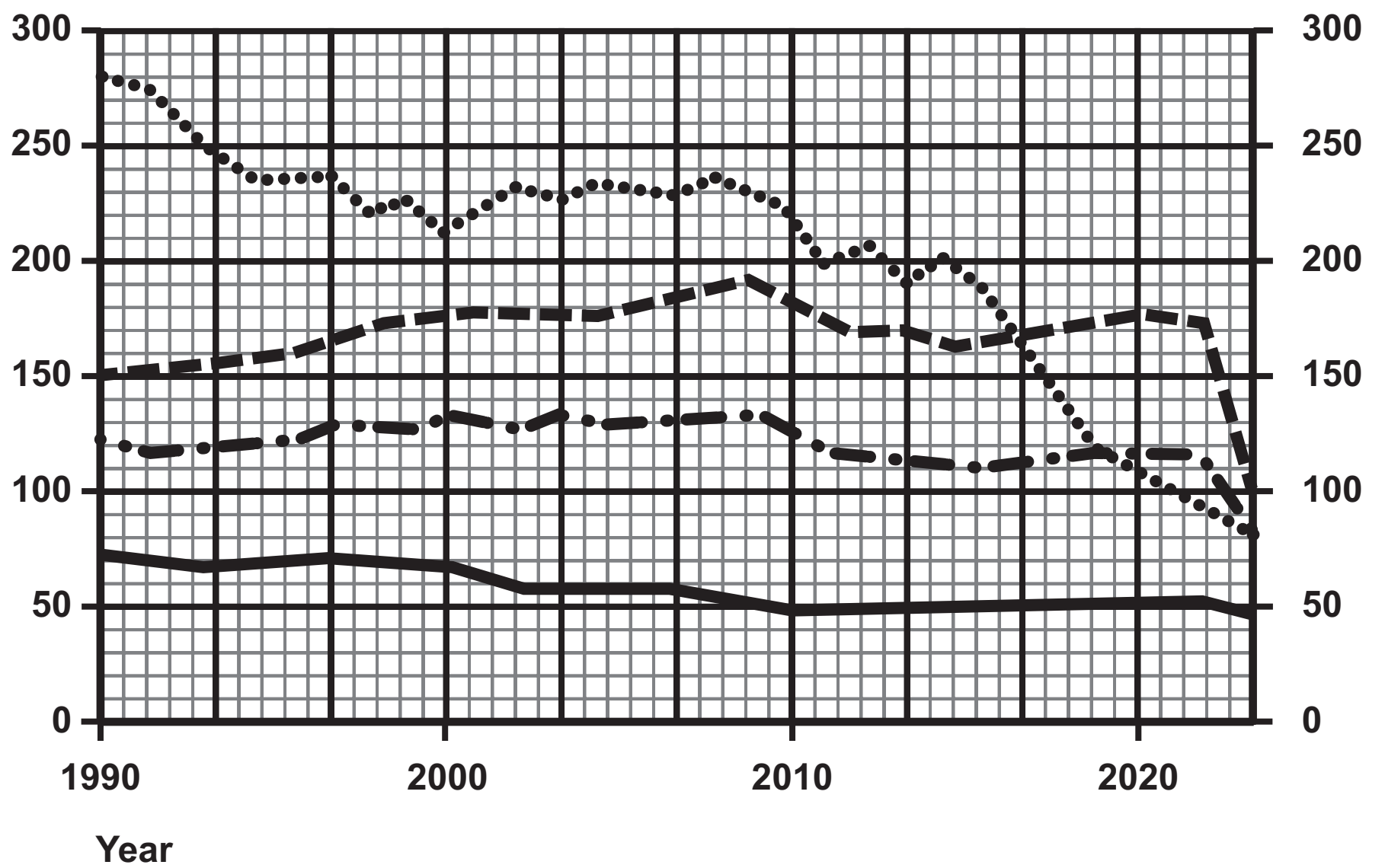
— — — — — transport (including international)

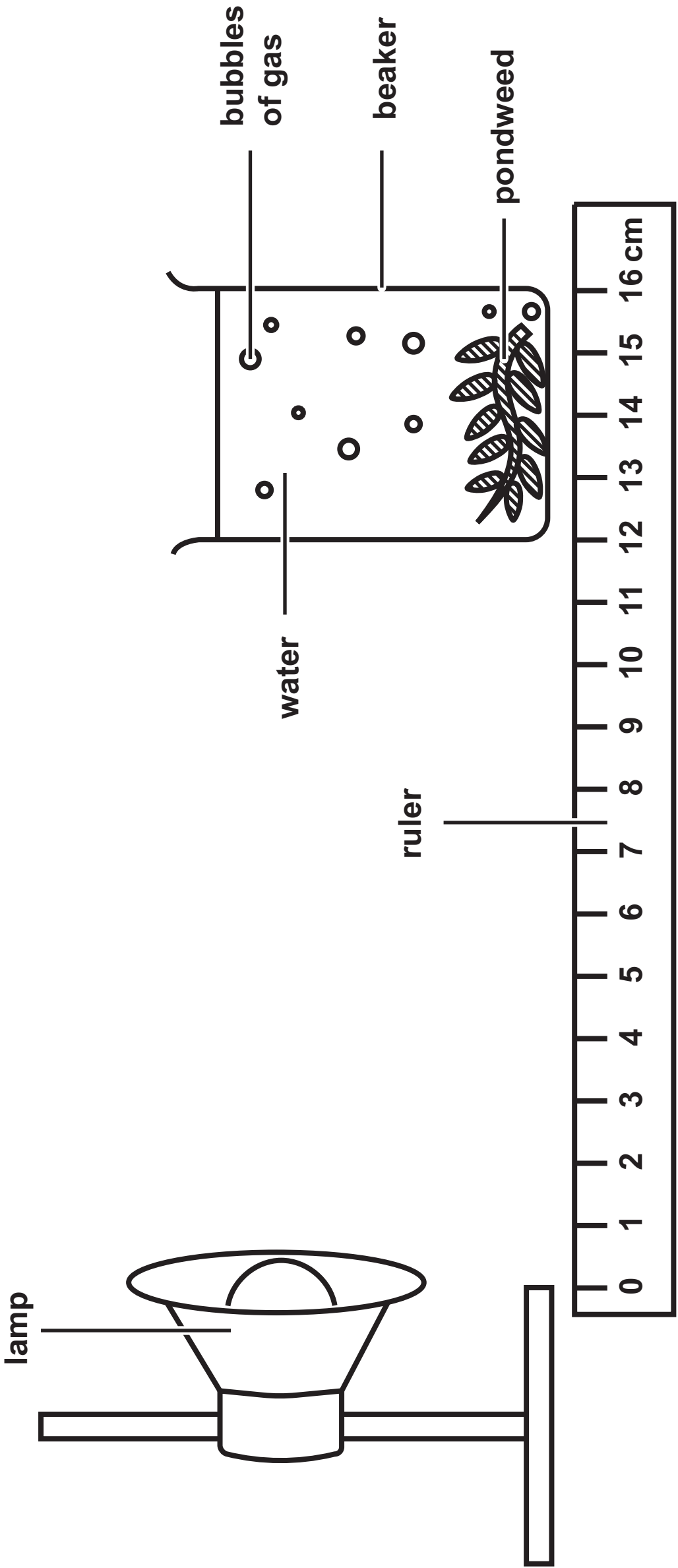
• • — — • • business

• • • • • energy production

————— agriculture

Mass of greenhouse
gas in million tonnes

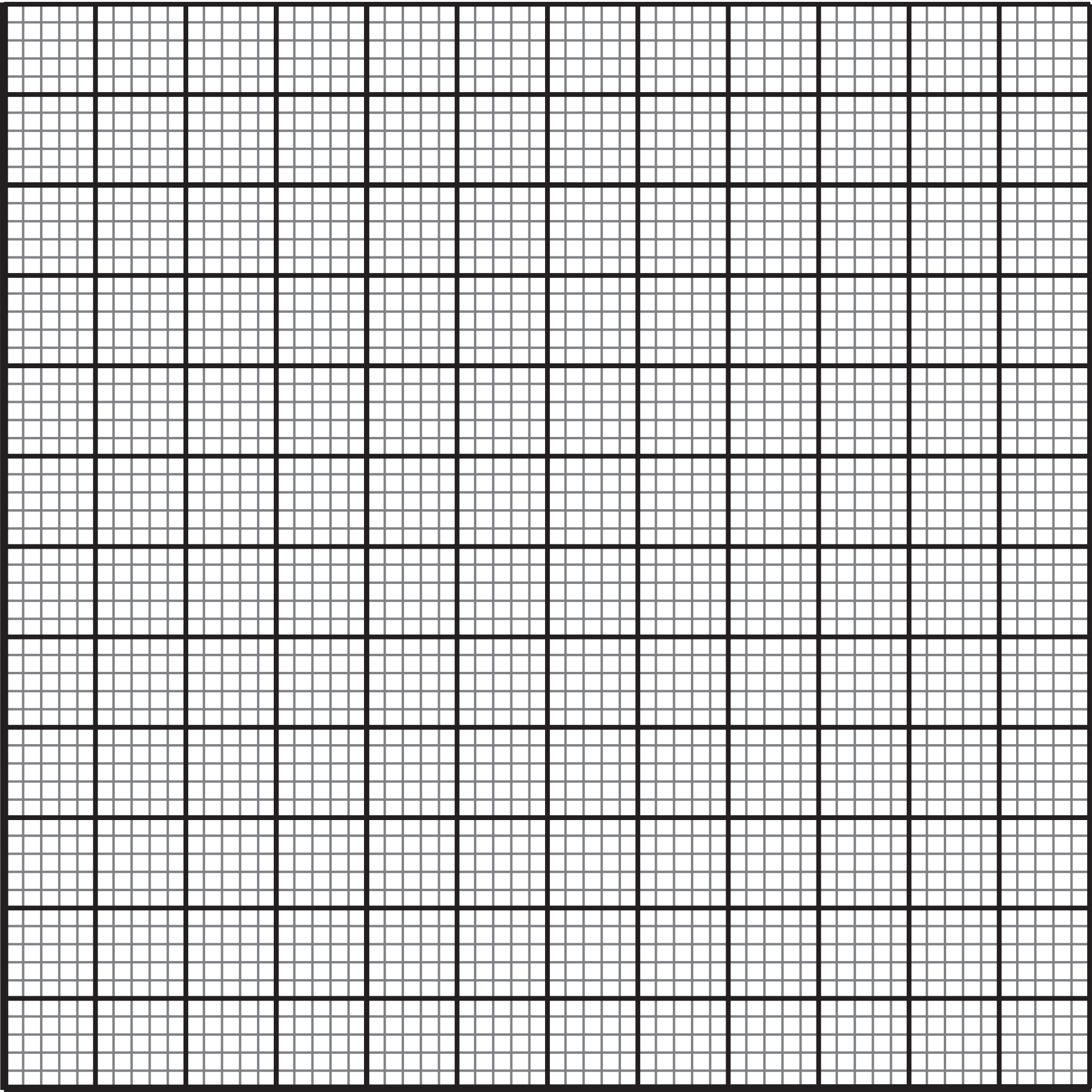




Question 6(b)

Distance of lamp from beaker in cm	Number of bubbles released per minute			
	count 1	count 2	count 3	mean (average)
2	20	18	20	19
4	16	15	15	15
6	12	14	13	13
8	10	9	8	9
10	8	7	8	8
12	5	6	4	5

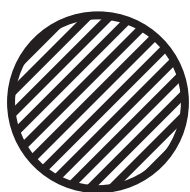
Question 6(b)(i)



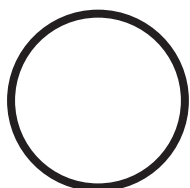
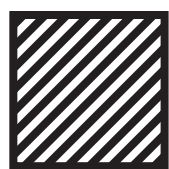
Altitude in m	Mean mass of haemoglobin in 1 litre of blood in g		Mean number of red blood cells in 1 litre $\times 10^{12}$		Number of people in sample	
	men	women	men	women	men	women
0 (sea level)	148	138	5·15	4·84	18 453	27 559
1890	152	147	5·37	5·20	2175	3510
2270	151	142	5·18	4·88	2023	2943

Question 8(b)

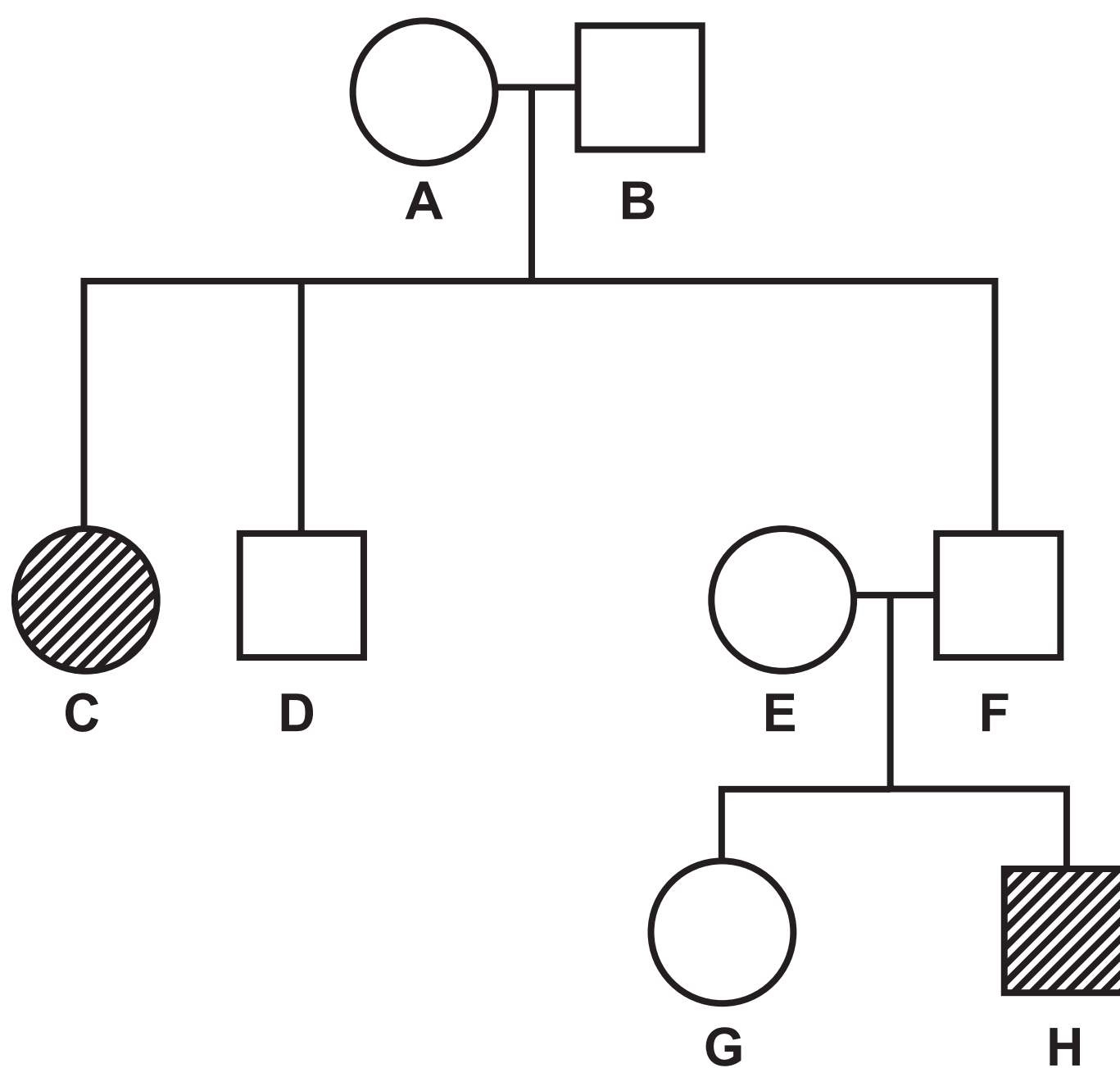
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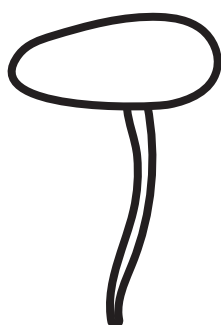


female with CF

unaffected
female

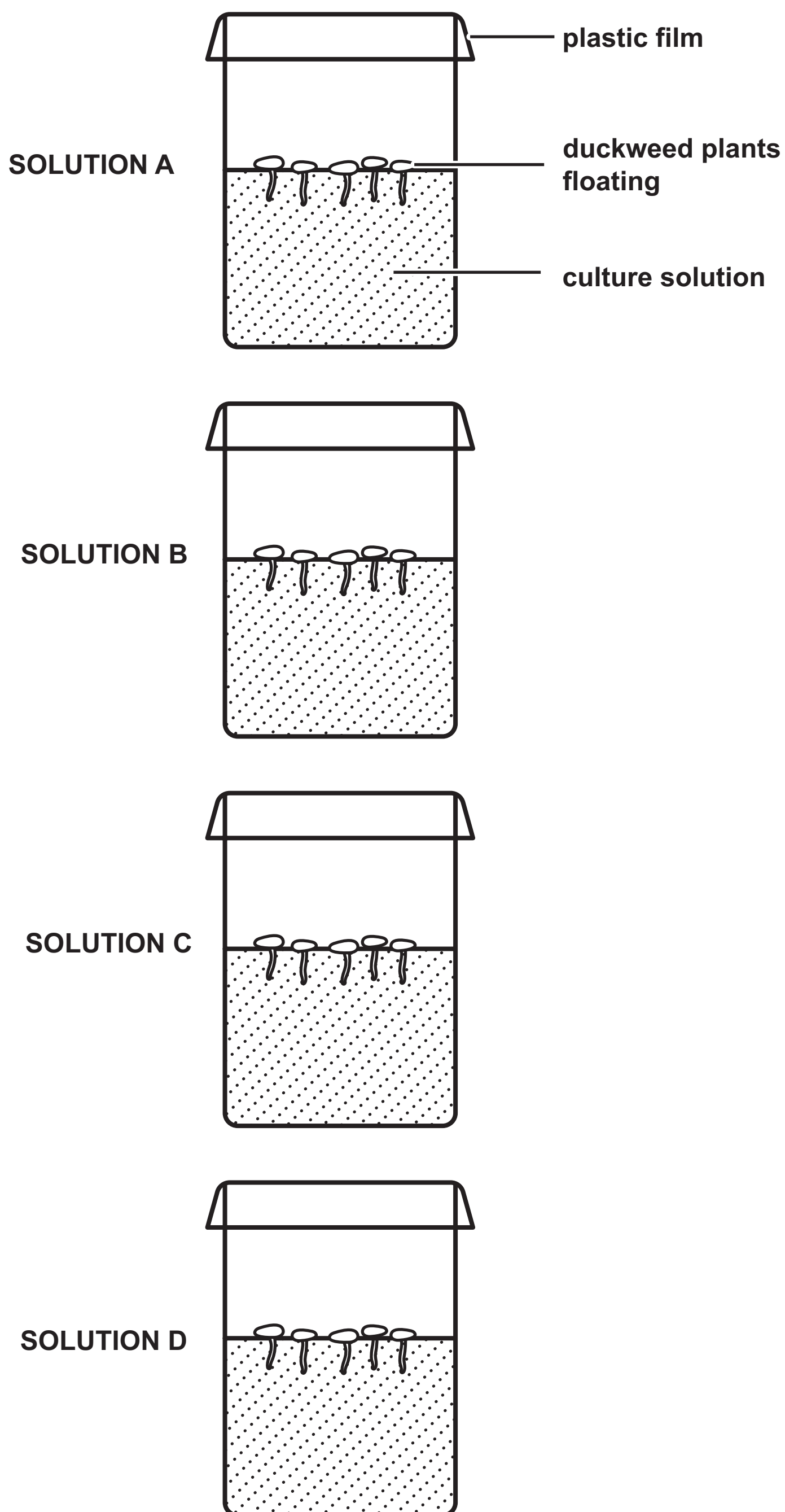
male with CF

unaffected
male

Question 9 – Diagram 1**DIAGRAM 1****Duckweed plant with one leaf**

Question 9 – Diagram 2

DIAGRAM 2

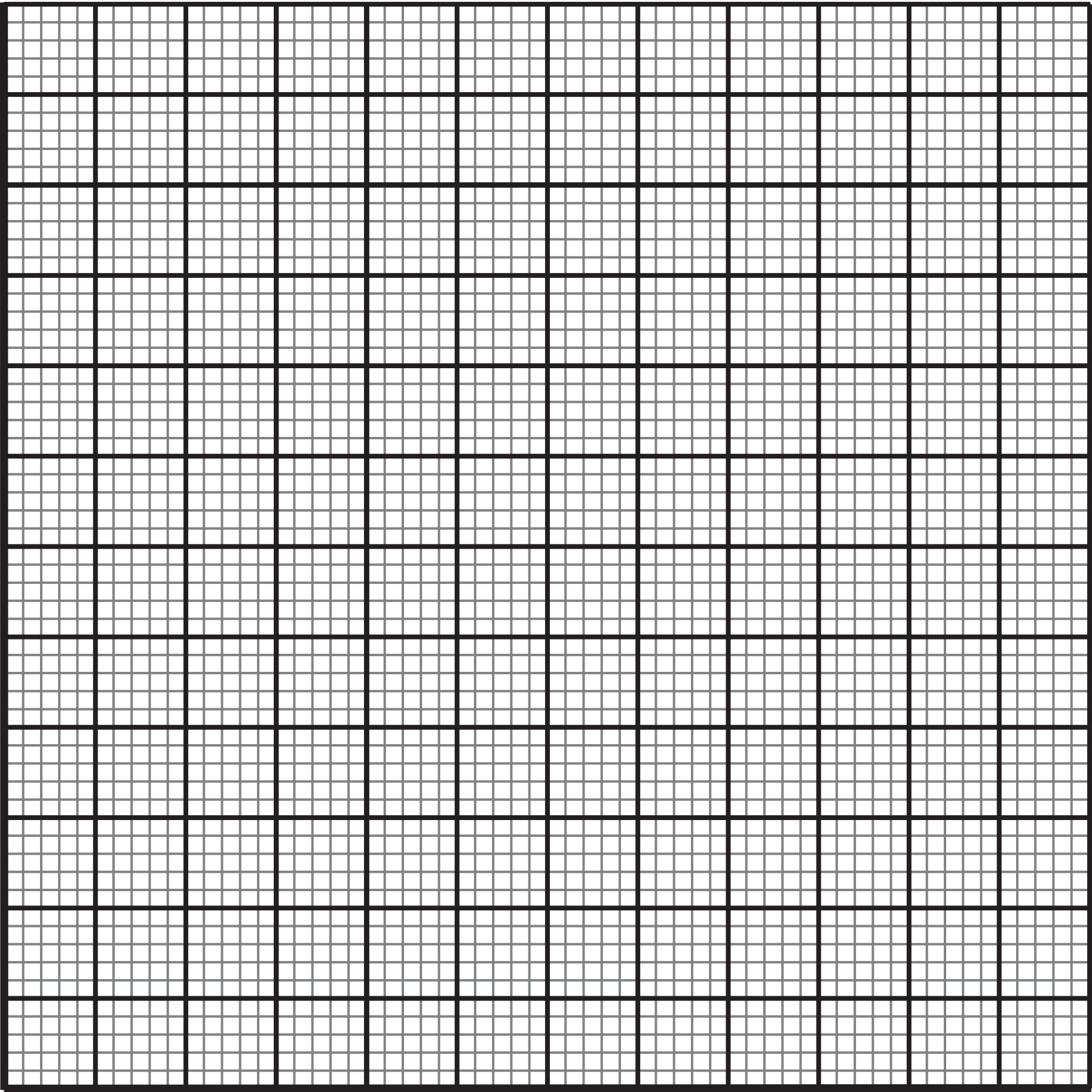


Question 9(b)

Solution	Mineral lacking	Total number of leaves	Leaf size	Leaf colour
A	none	13	large	4
B	nitrate	7	small	2
C	magnesium	8	medium	2
D	iron	9	medium	1

Question 1(a)(ii) – Blank

Question 6(b)(i)



Source information

Question 1(b)

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