

Paper Reference(s) 1CH0/2F
Pearson Edexcel Level 1/Level 2 GCSE (9–1)

Chemistry
PAPER 2
Foundation Tier

Tuesday 11 June 2024 – Morning
Time: 1 hour 45 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					
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INSTRUCTIONS

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

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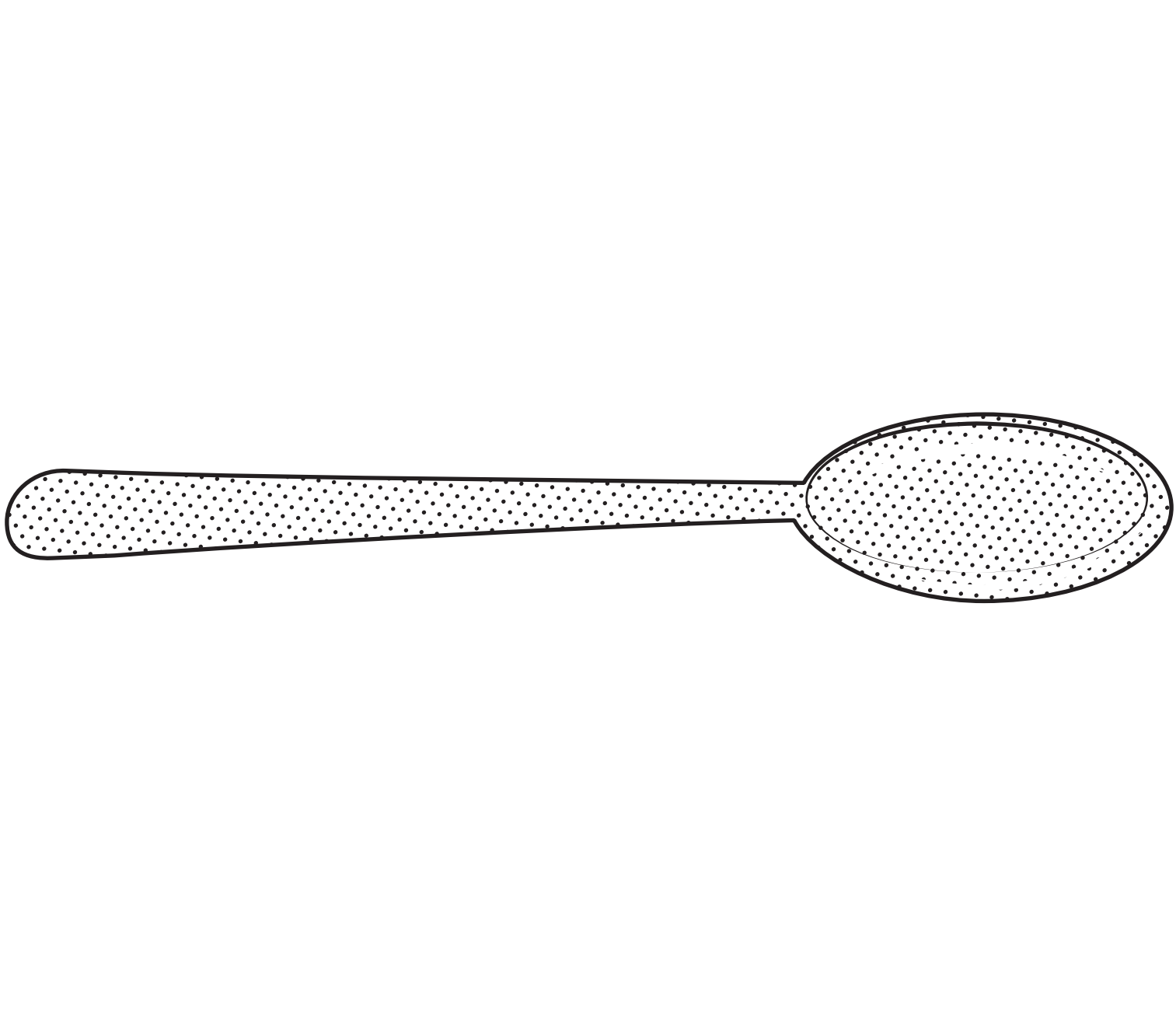
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Question 1(a)

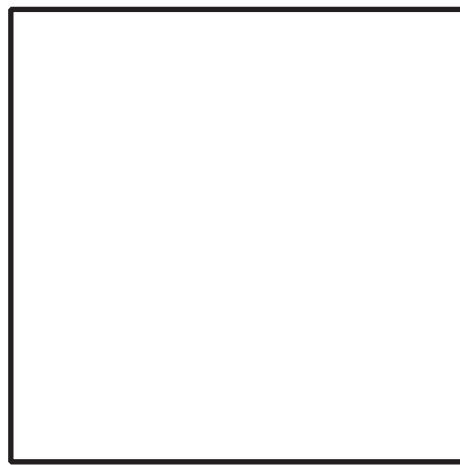
FIGURE 1



Question 1(c)

FIGURE 2

one face of the cube



80 nm

Question 2(a)

FIGURE 3

symbol	atomic number	melting point in °C
Na	11	98
Mg	12	650
Al	13	660
Si	14	1410
P	15	44
Cl	17	−101
Ar	18	−189

Question 2(b)

FIGURE 4

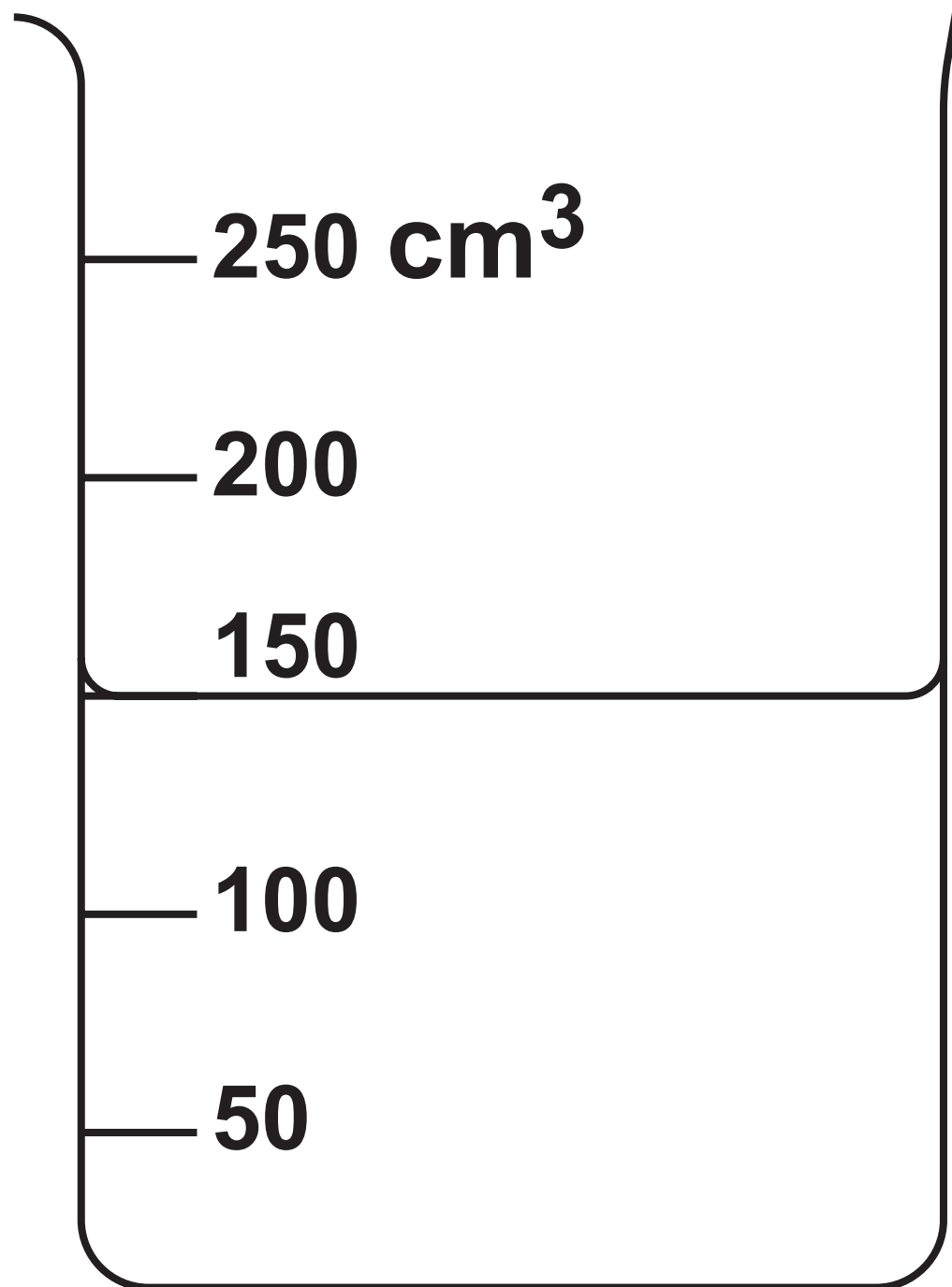
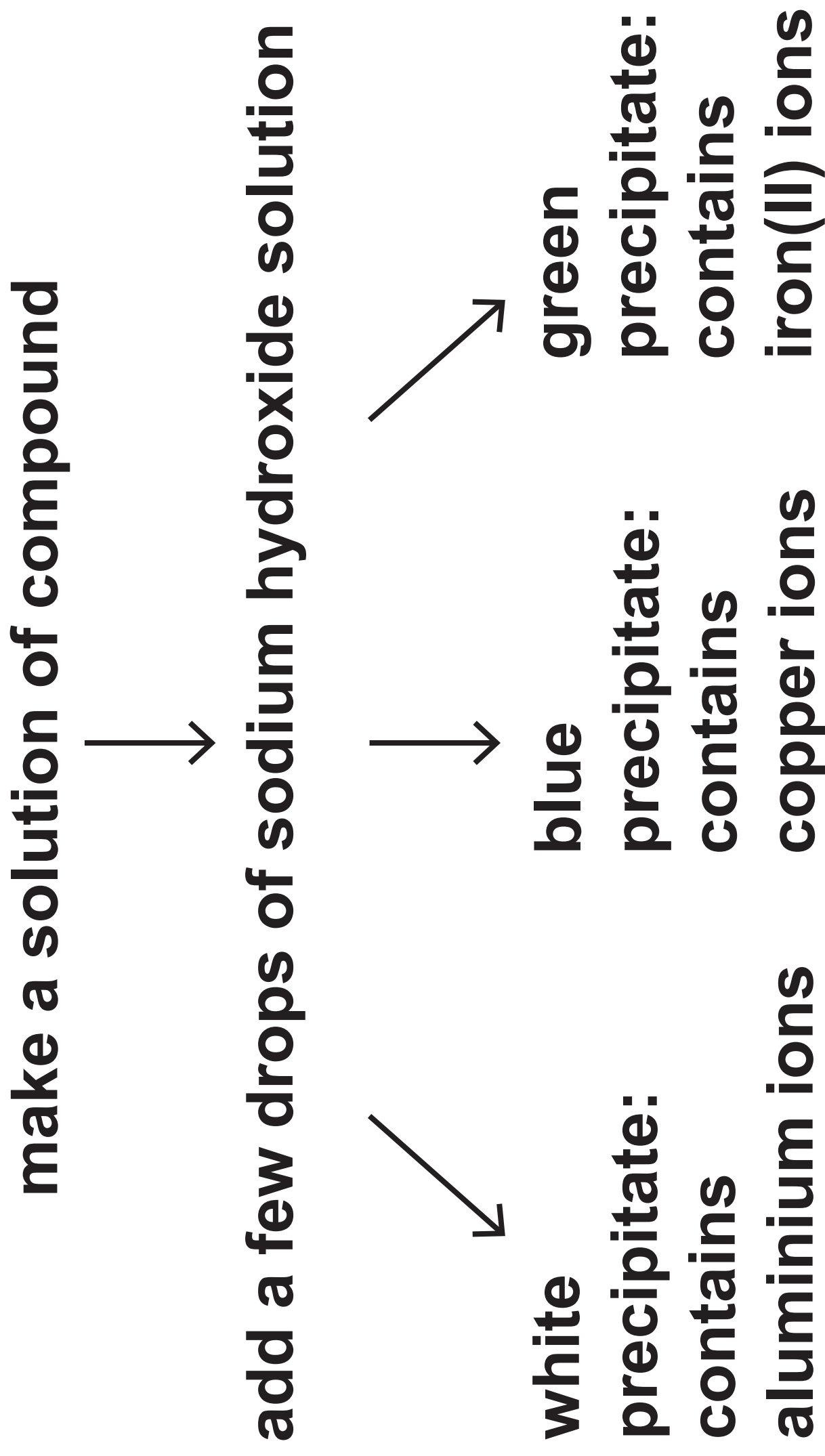
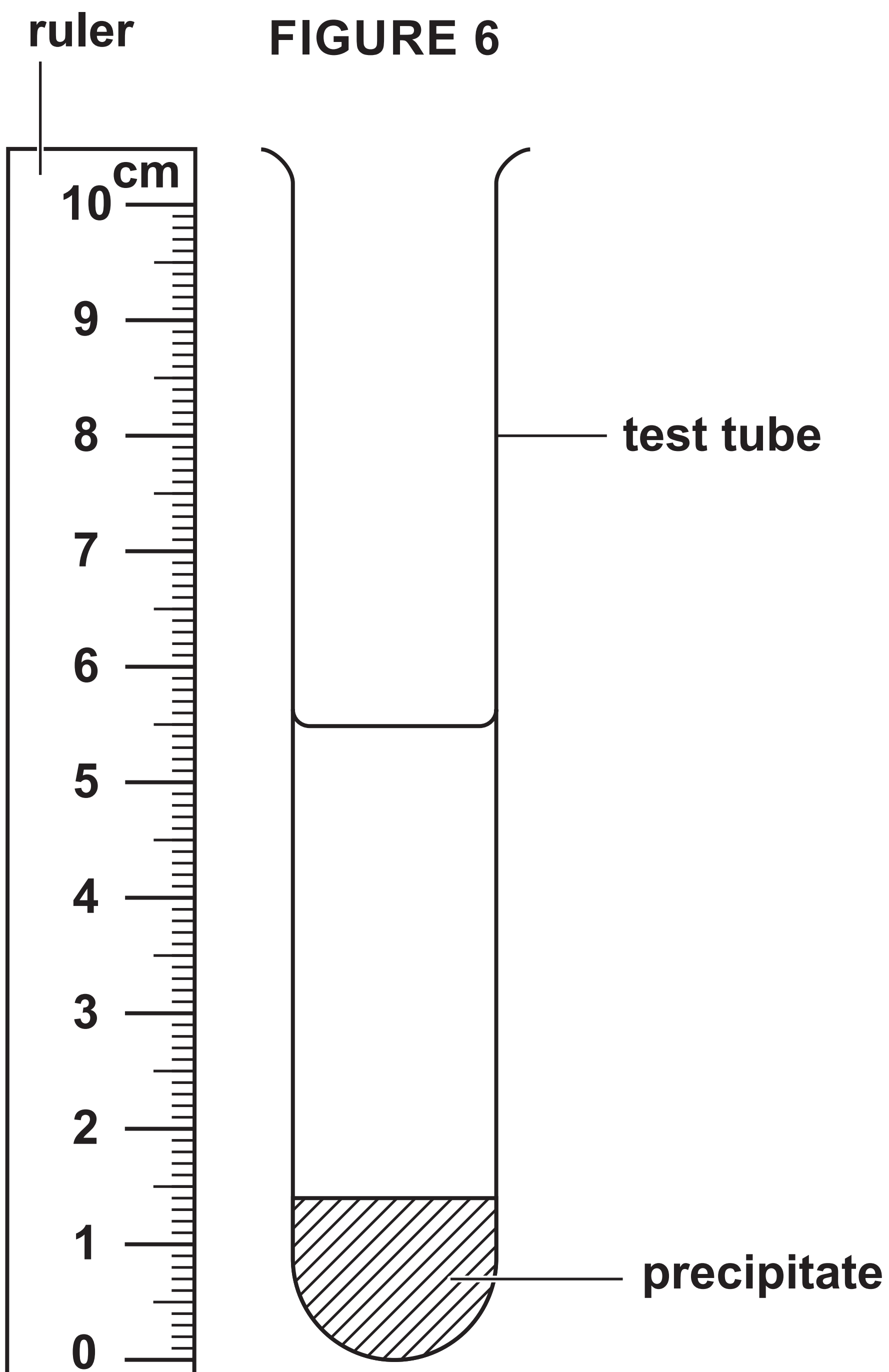


FIGURE 5

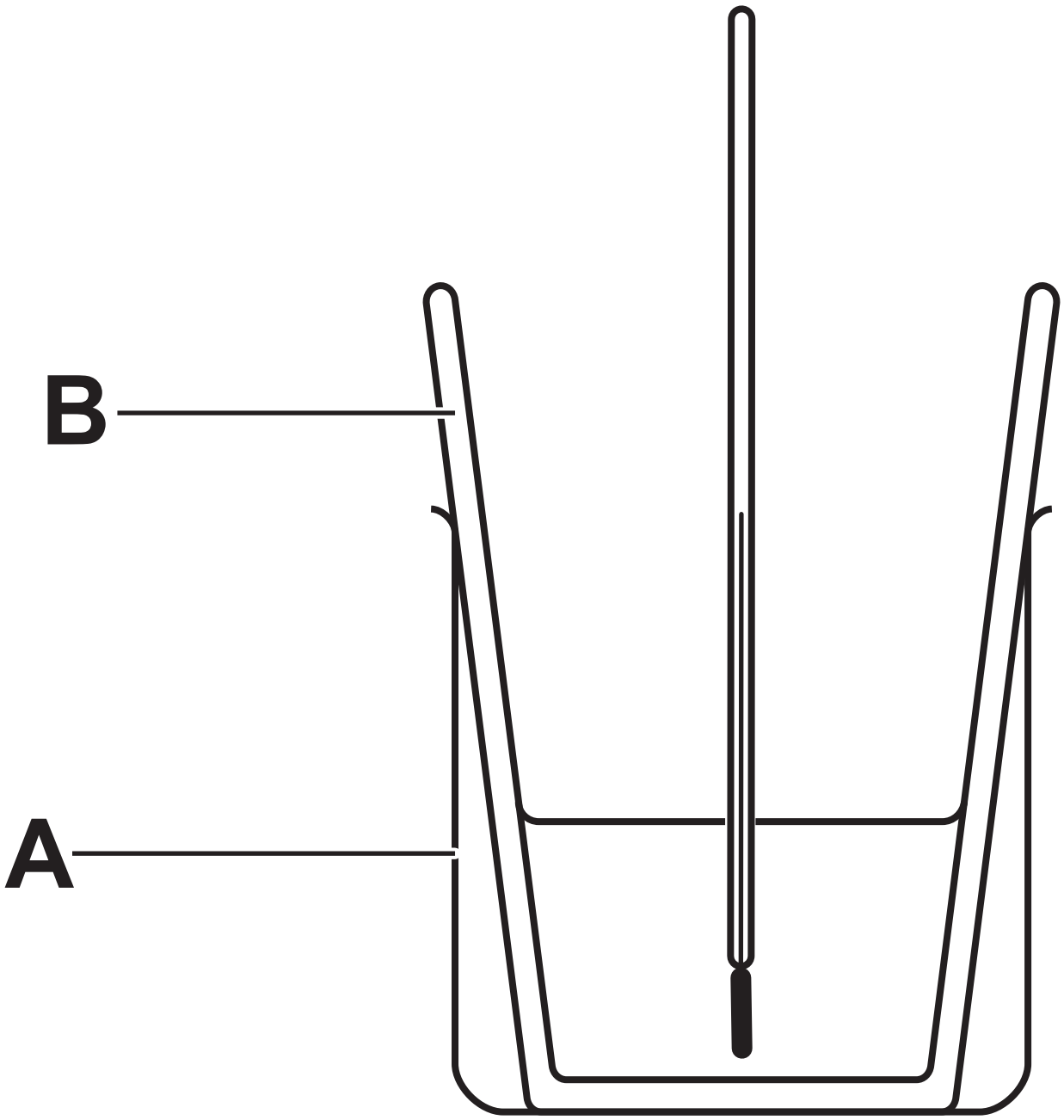


Question 3(d)(ii)



Question 4(b)

FIGURE 7

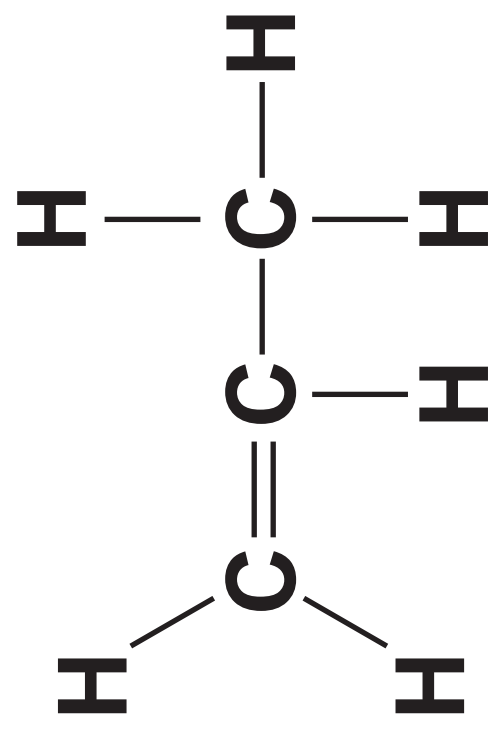
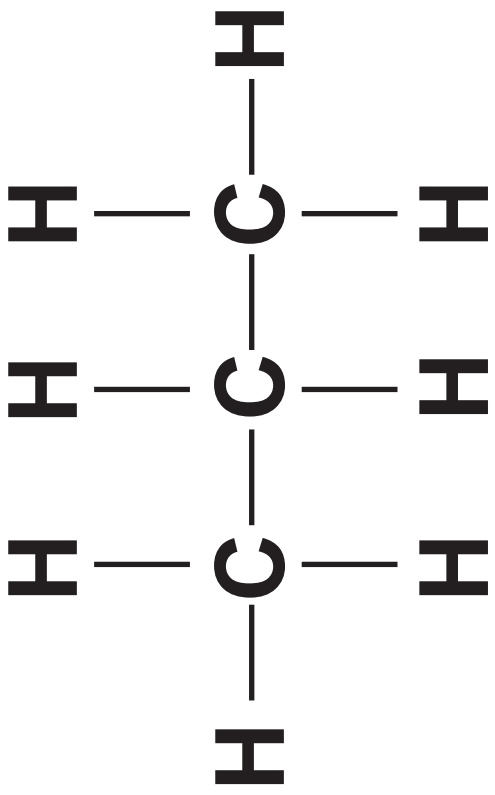
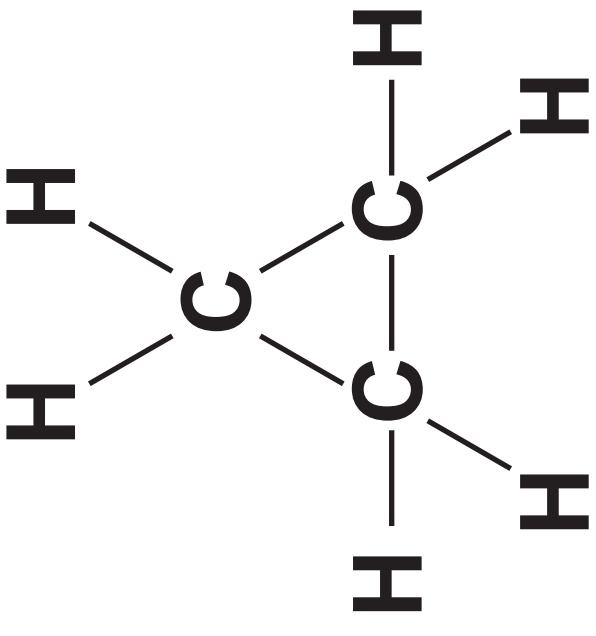


Question 4(b)(iv)

FIGURE 8

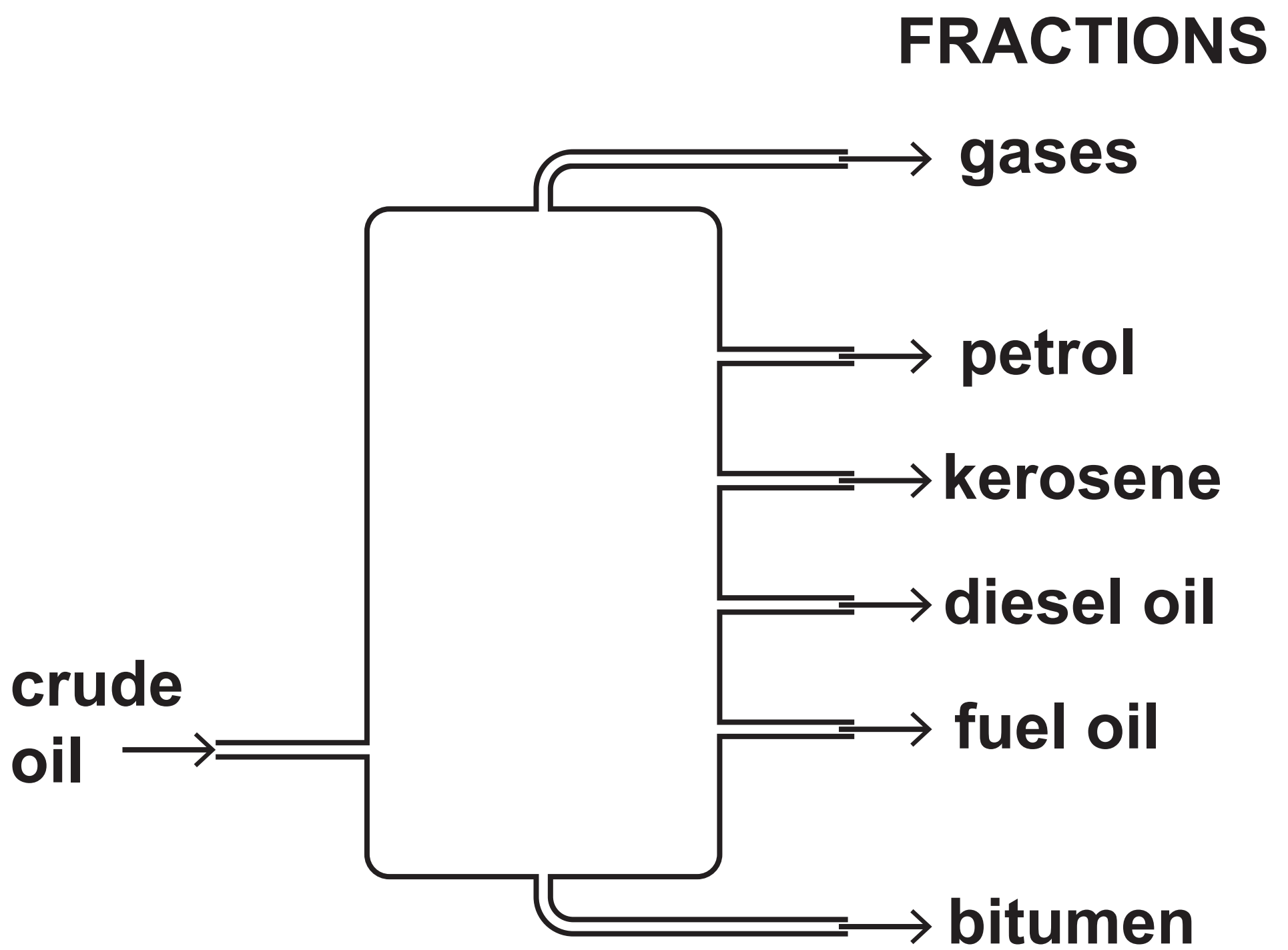
	salt P	salt Q	salt R	salt S
starting temperature in °C	20·0	20·0	20·0	20·0
final temperature in °C	22·4	19·5	23·0	18·5
temperature change in °C	+2·4	−0·5		
salt that absorbed most heat energy when it dissolved				

FIGURE 9

X	Y	Z
		

Question 5(b)

FIGURE 10



Question 6(b)(i)

14

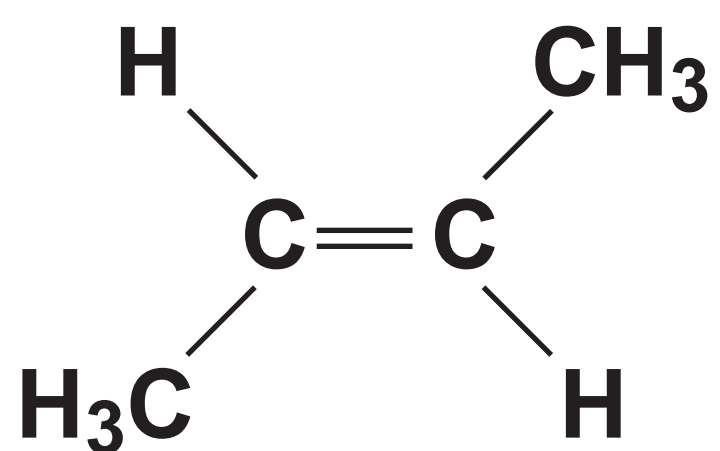
$$\frac{\quad}{\quad} + \frac{\quad}{\quad} \rightarrow \frac{\quad}{\quad}$$

Question 6(c)**FIGURE 11**

halogen	relative speed of reaction
fluorine	
chlorine	reacts very quickly
bromine	reacts quickly
iodine	reacts slowly

Question 7(a)

FIGURE 12



Question 7(b)

NATURAL POLYMER

DNA

proteins

starch

MONOMER

• amino acids

• nucleotides

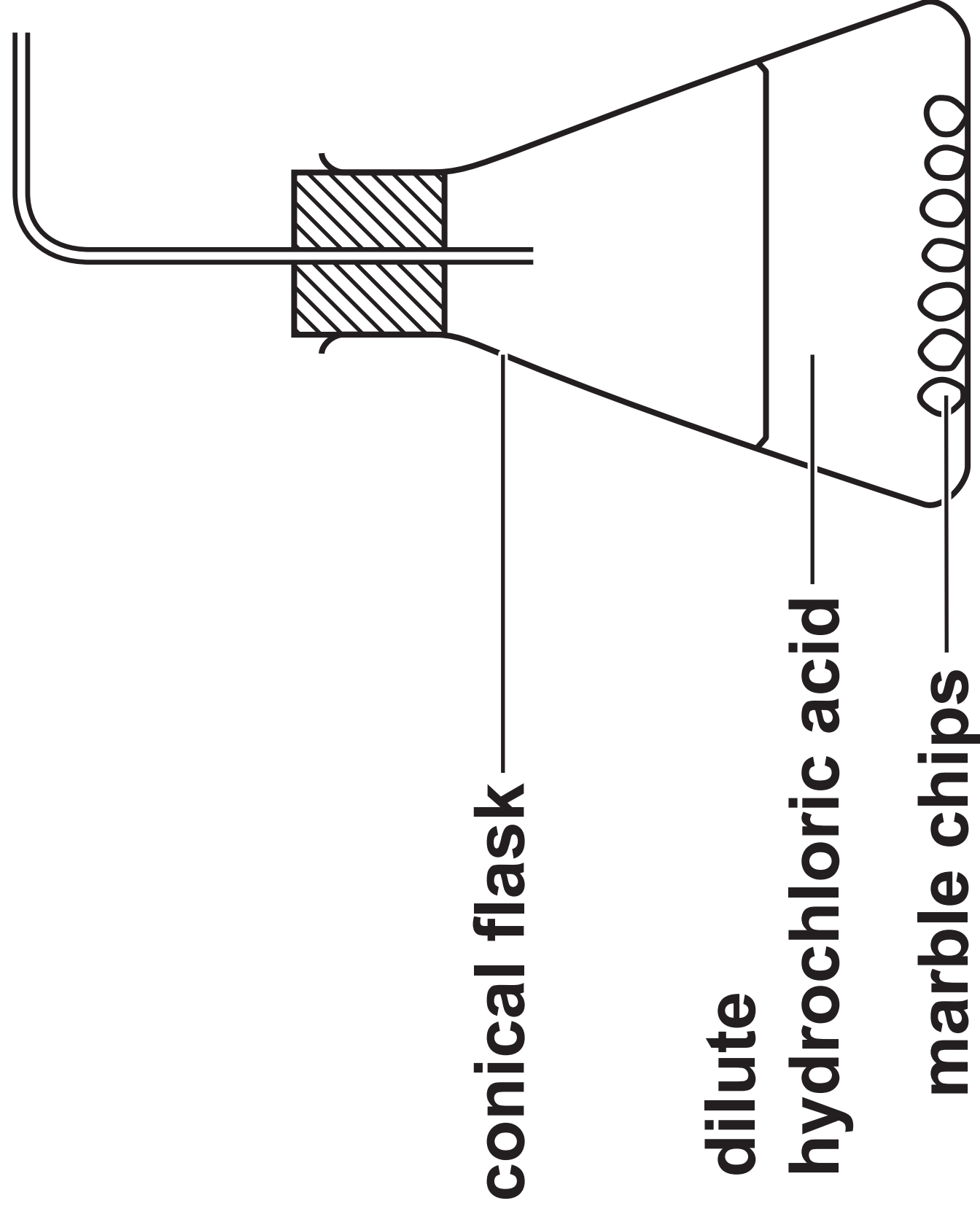
• PVC

• sugars

FIGURE 13

compound	boiling point in °C	reaction with limewater	reaction with bromine water	products when burned in oxygen
E	−78	mixture turns milky	no reaction	does not burn
F	−104	no reaction	mixture goes colourless	carbon dioxide and water
G	−89	no reaction	no reaction	carbon dioxide and water
H	−1	no reaction	no reaction	carbon dioxide and water

FIGURE 14



Question 8(b)

FIGURE 15

volume of
carbon dioxide
in cm^3

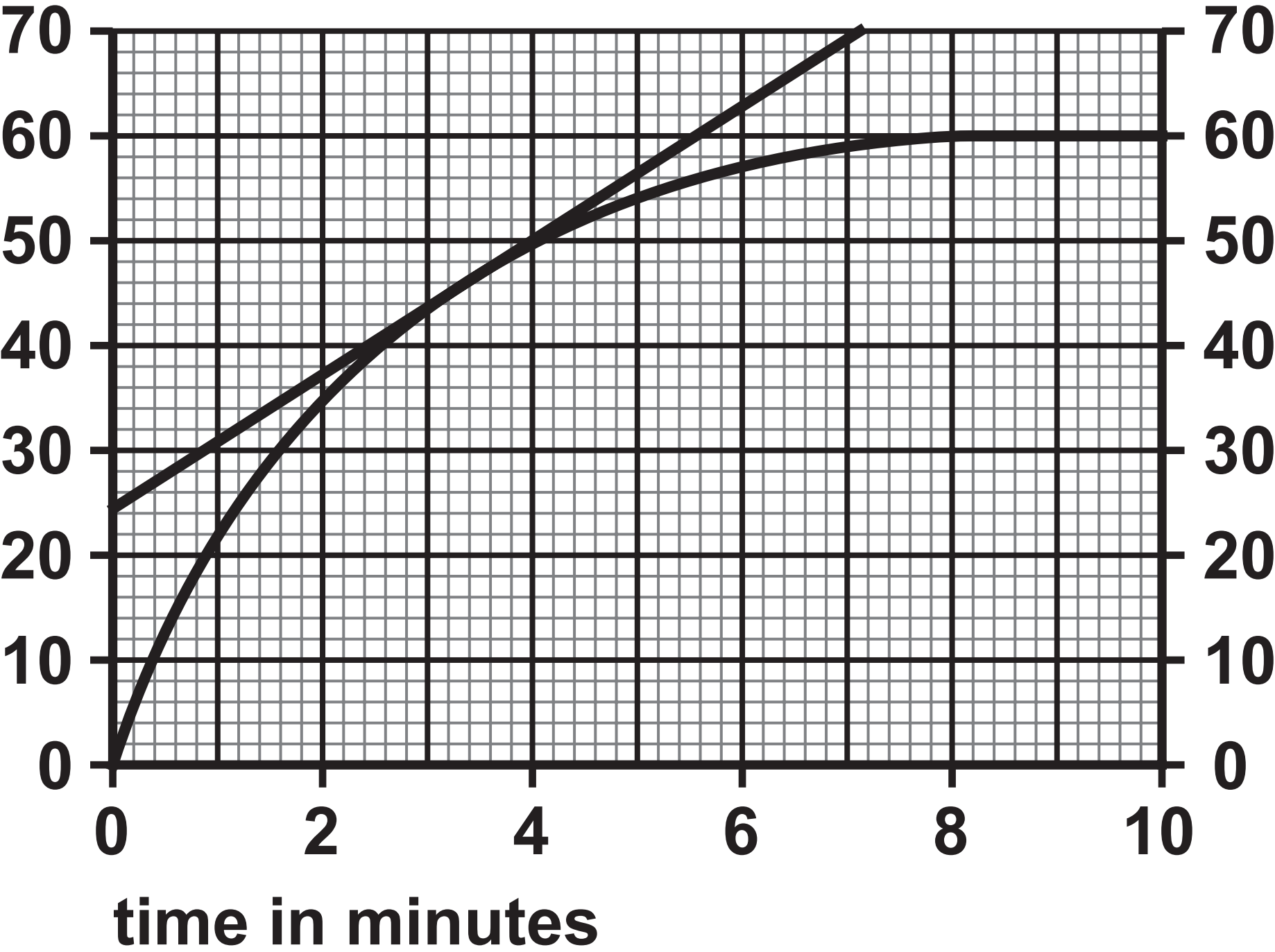
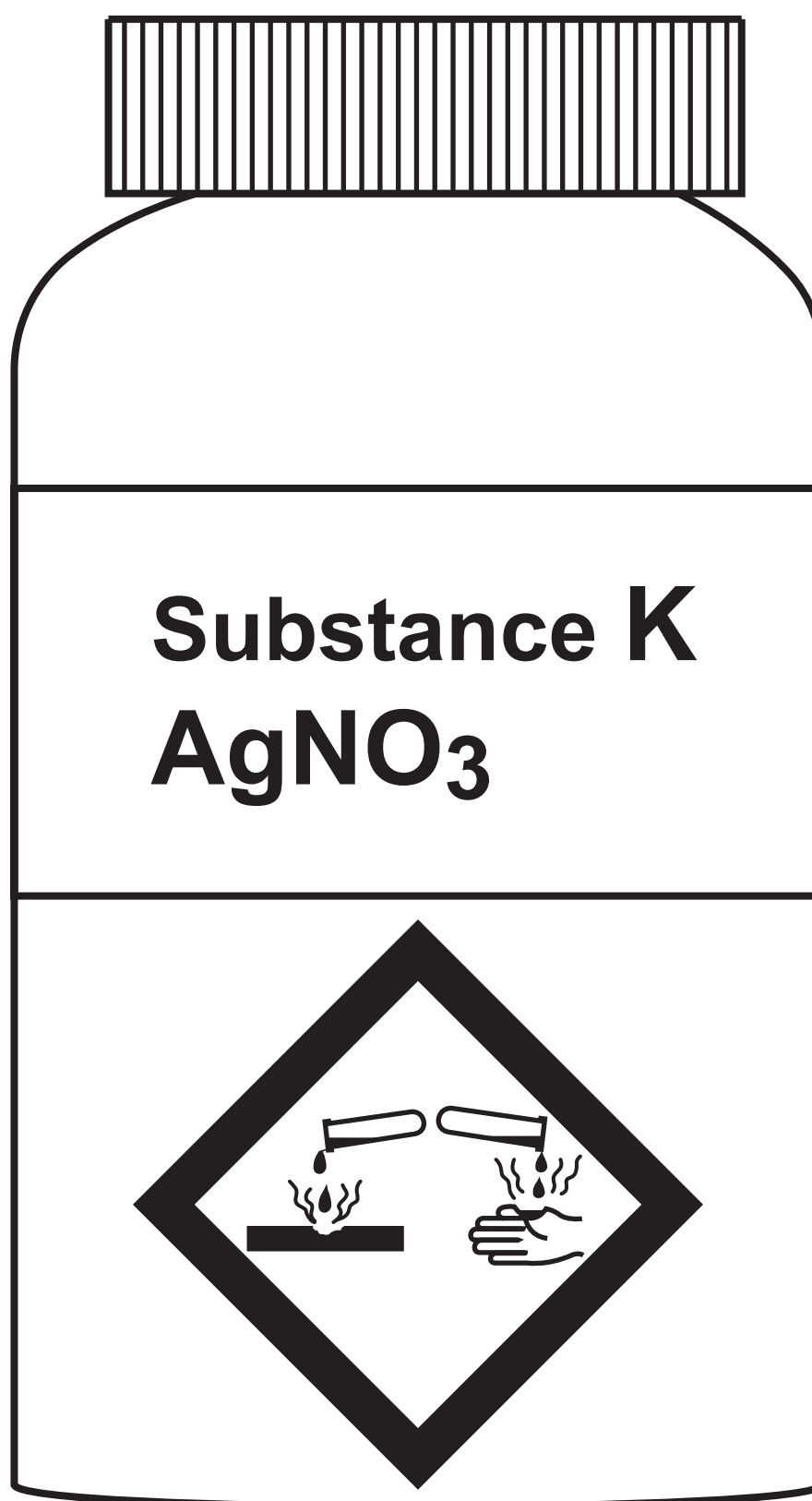


FIGURE 16

period of time	plant life	amount of carbon dioxide in atmosphere	amount of oxygen in atmosphere
the earliest Earth	no plant life	very high	none
about 3,500 million years ago	plant life evolved	high	very low
about 10,000 years ago	about 60% of land covered by trees	0-03%	about 21%
today	less than 40% of land covered by trees	0-04%	about 21%

Question 10(a)

FIGURE 17



Question 10(b)

23



Question 4(b)(iv)

FIGURE 8

	salt P	salt Q	salt R	salt S
starting temperature in °C	20·0	20·0	20·0	20·0
final temperature in °C	22·4	19·5	23·0	18·5
temperature change in °C	+2·4	−0·5		
salt that absorbed most heat energy when it dissolved				

Question 6(b)(i)

25

$$\frac{\quad}{\quad} + \frac{\quad}{\quad} \rightarrow \frac{\quad}{\quad}$$

Question 7(b)

NATURAL POLYMER

DNA

proteins

starch

MONOMER

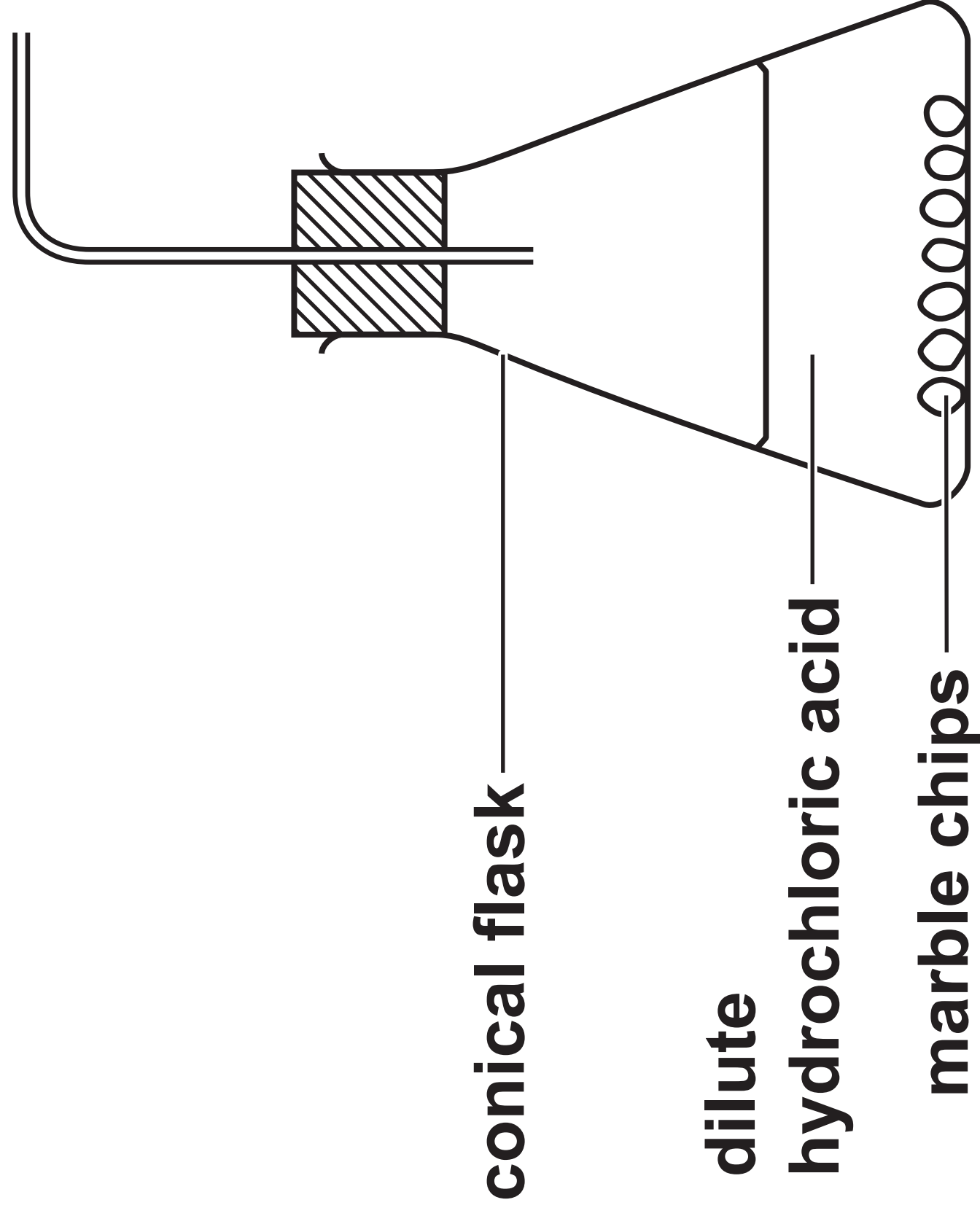
• **amino acids**

• **nucleotides**

• **PVC**

• **sugars**

FIGURE 14



Question 10(b)

28

