

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

Chemistry  
PAPER 2  
Higher Tier

Diagram Booklet

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.

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

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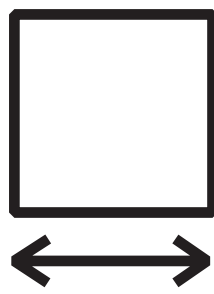
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## Question 1(b)

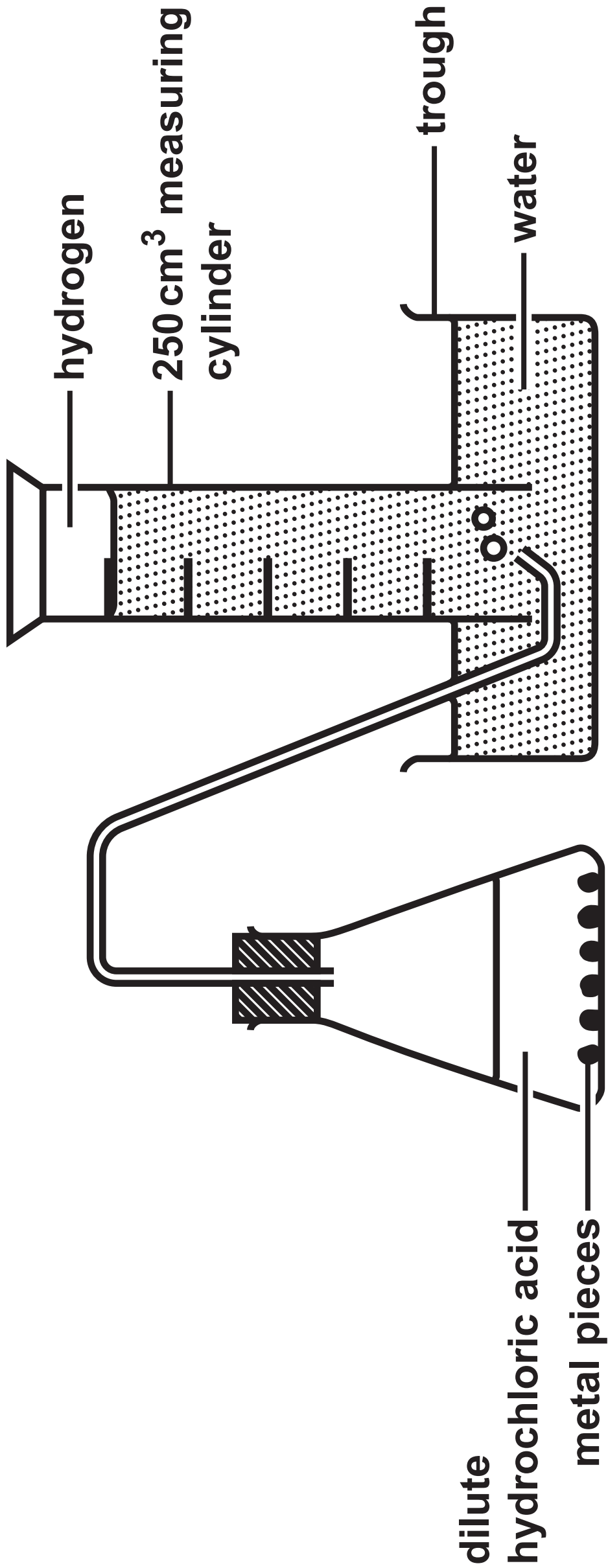
FIGURE 1

<b>diameter of nanoparticle in nm</b>	<b>surface area : volume ratio</b>
<b>10</b>	<b>3 : 5</b>
<b>20</b>	<b>3 : 10</b>
<b>30</b>	<b>3 : 15</b>
<b>40</b>	<b>3 : 20</b>
<b>50</b>	<b>3 : 25</b>

**Question 1(c)****FIGURE 2****60 nm**

Question 2

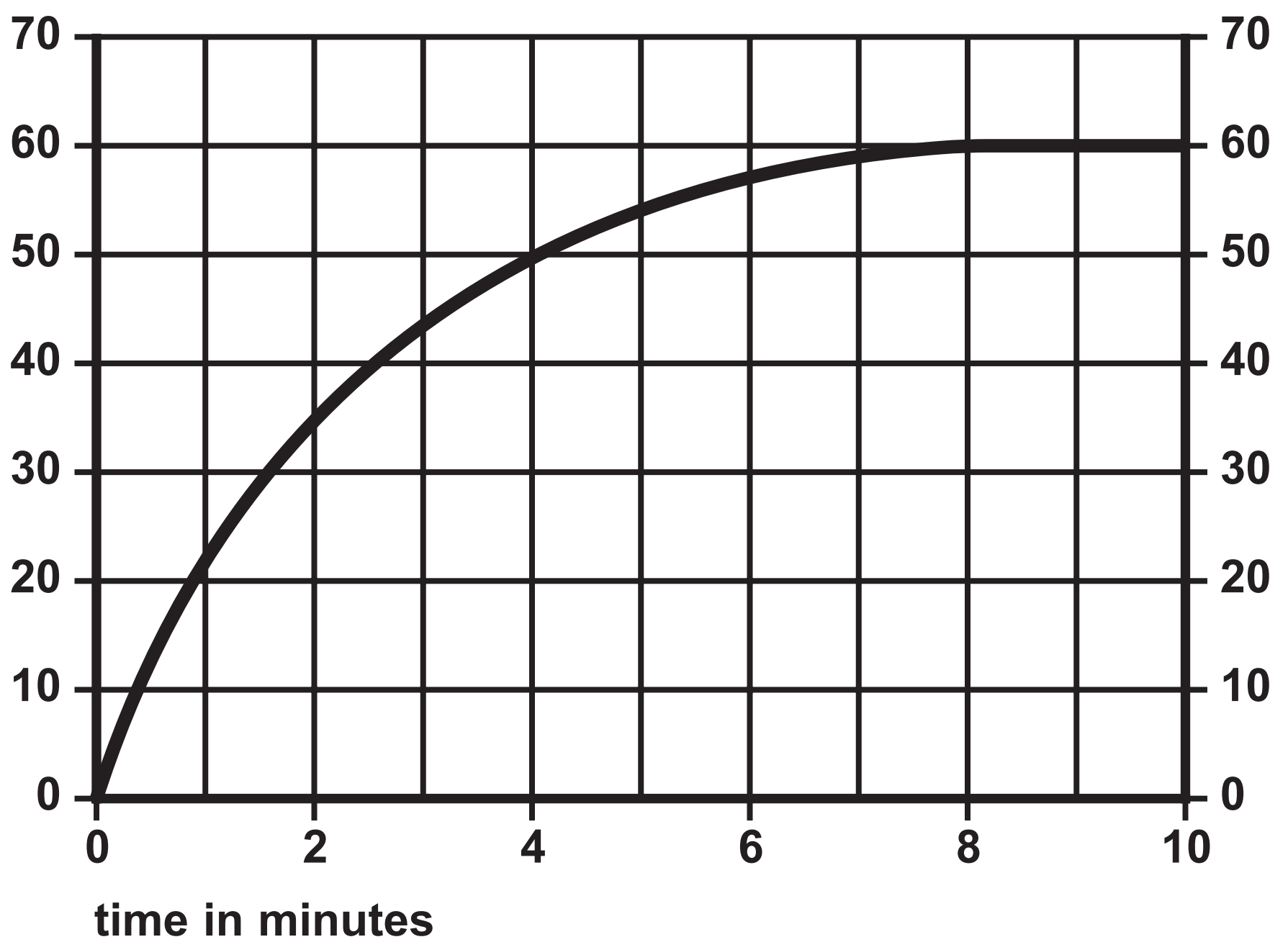
FIGURE 3



## Question 2(a)

FIGURE 4

volume of hydrogen  
in  $\text{cm}^3$



## Question 3(d)

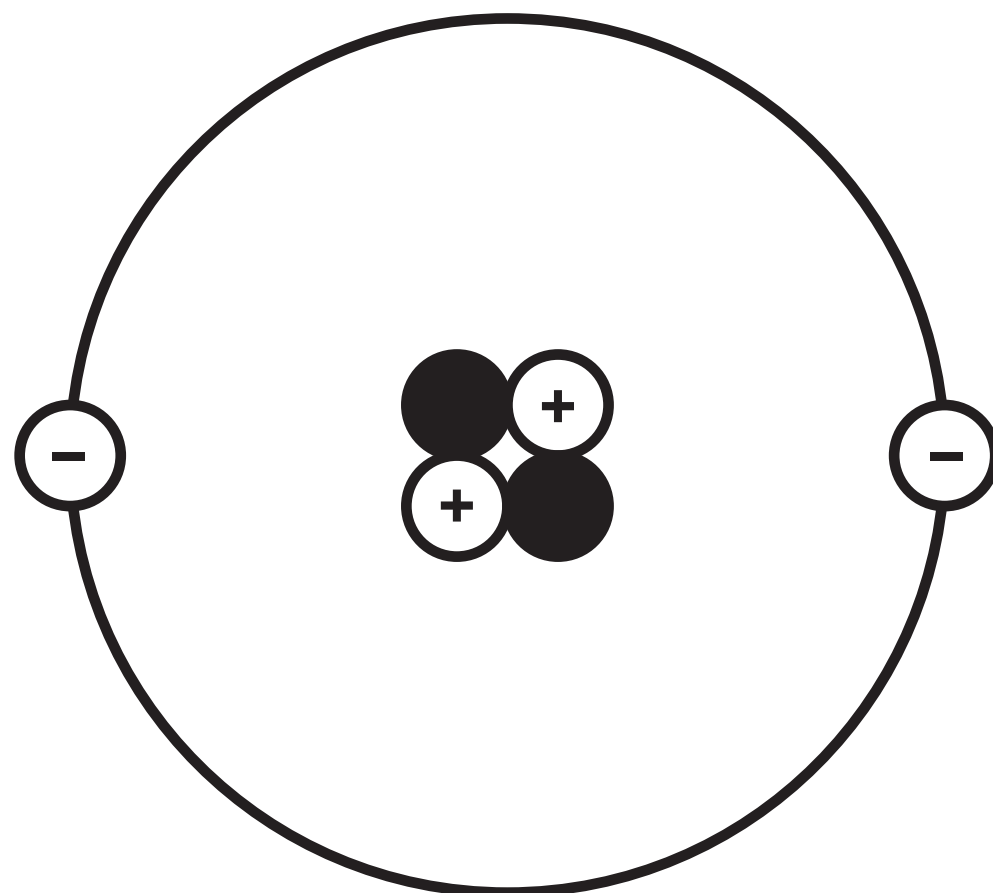
FIGURE 5

## Key

⊖ = electron

● = neutron

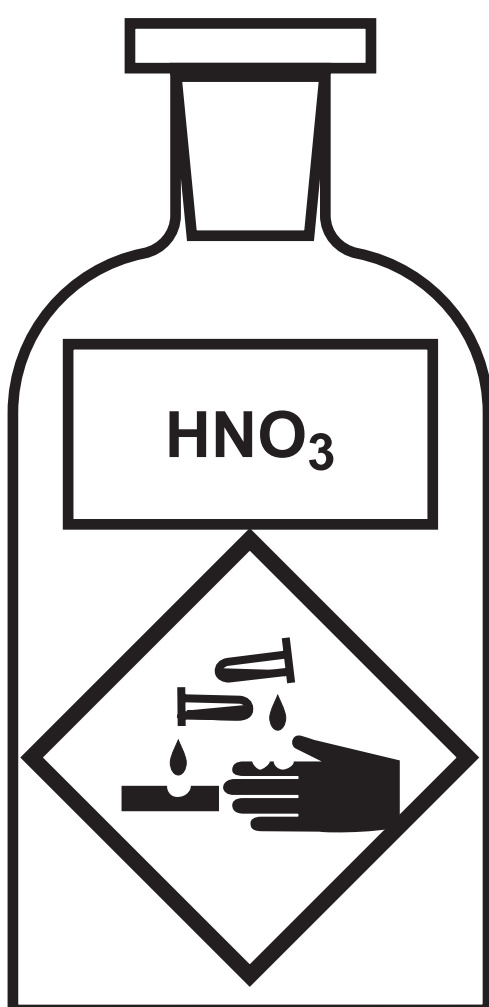
⊕ = proton





## Question 4(a)

FIGURE 6



Question 4(b)(ii)

FIGURE 7

compound	flame colour
P	red
Q	lilac
R	blue-green

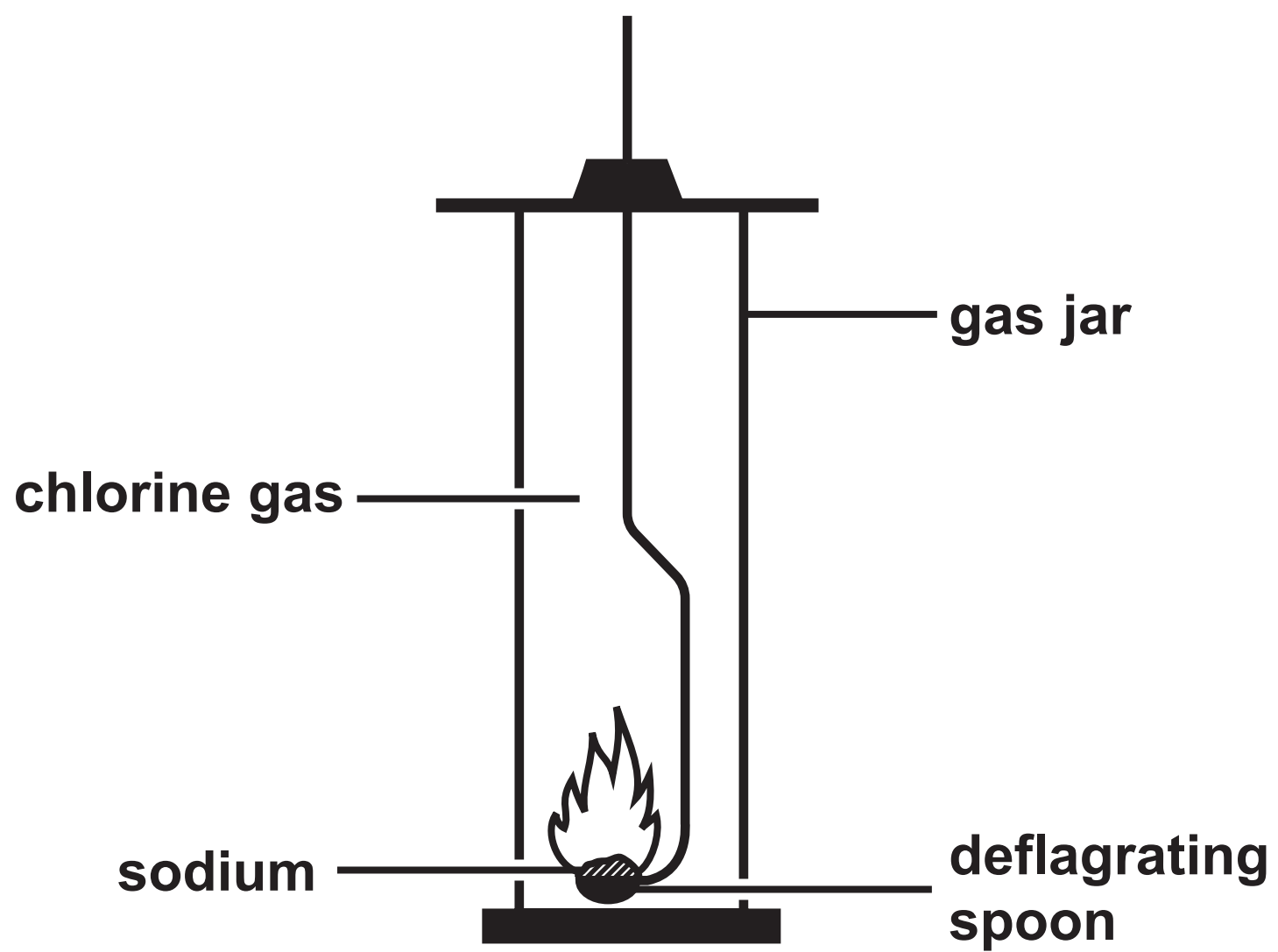
## Question 5(a)

FIGURE 8

pollutant	mass of pollutant given out in g per kilometre driven	
	petrol engine	diesel engine
carbon dioxide	210	180
carbon monoxide	1·5	0·10
unburnt hydrocarbons	0·13	0·020
nitrogen oxides	0·36	2·0
particulates	0·0060	0·046
sulfur dioxide	0·0089	0·0037

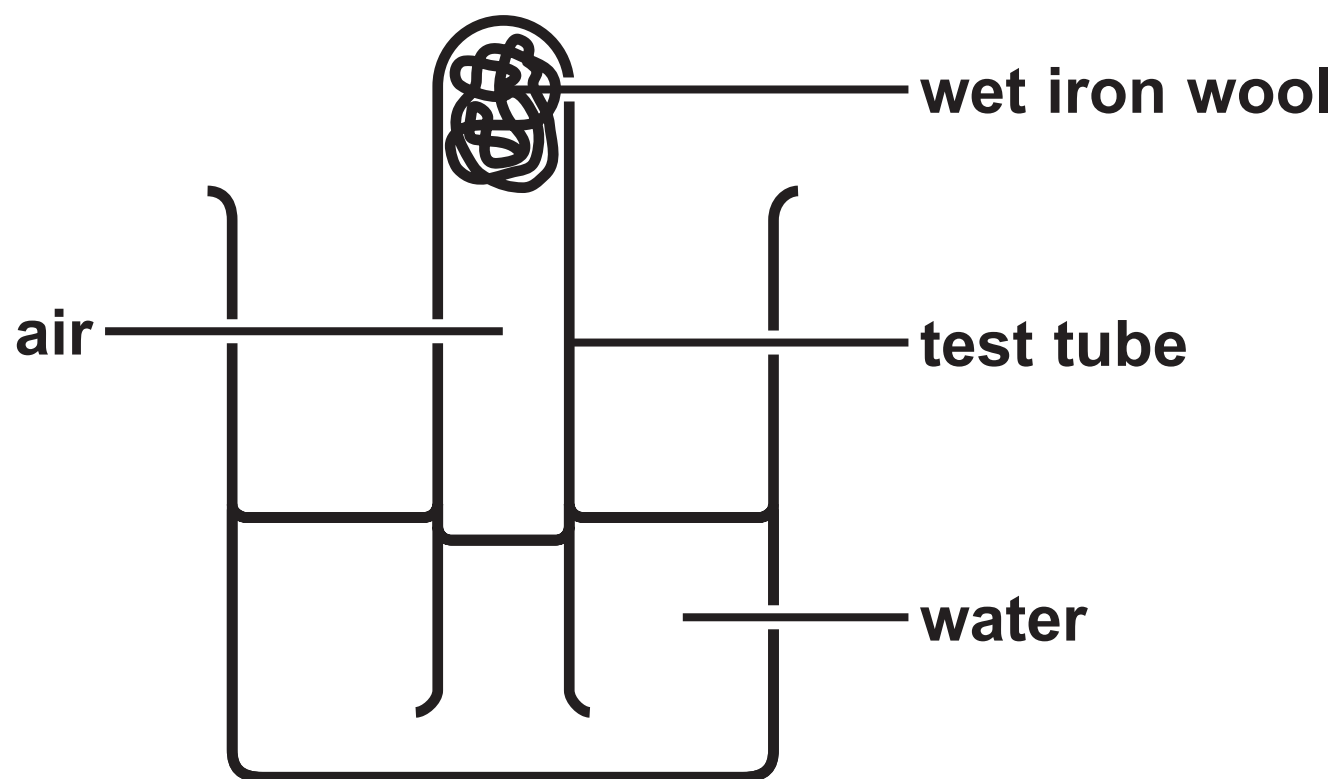
## Question 6(c)

FIGURE 9



## Question 7(d)

FIGURE 10



## Question 8(b)

FIGURE 11

test	result
appearance of <b>V</b>	white solid
see whether solid <b>V</b> conducts electricity	the solid does not conduct electricity
see whether a solution of <b>V</b> conducts electricity	the solution conducts electricity
heat solid <b>V</b> to 400 °C	the solid does not melt
add some sodium hydroxide solution to solid <b>V</b> and warm	a pungent gas, <b>W</b> , is released which turns damp litmus paper blue
add some dilute nitric acid, followed by drops of silver nitrate solution, to a solution of <b>V</b>	a cream precipitate, <b>X</b> , is produced

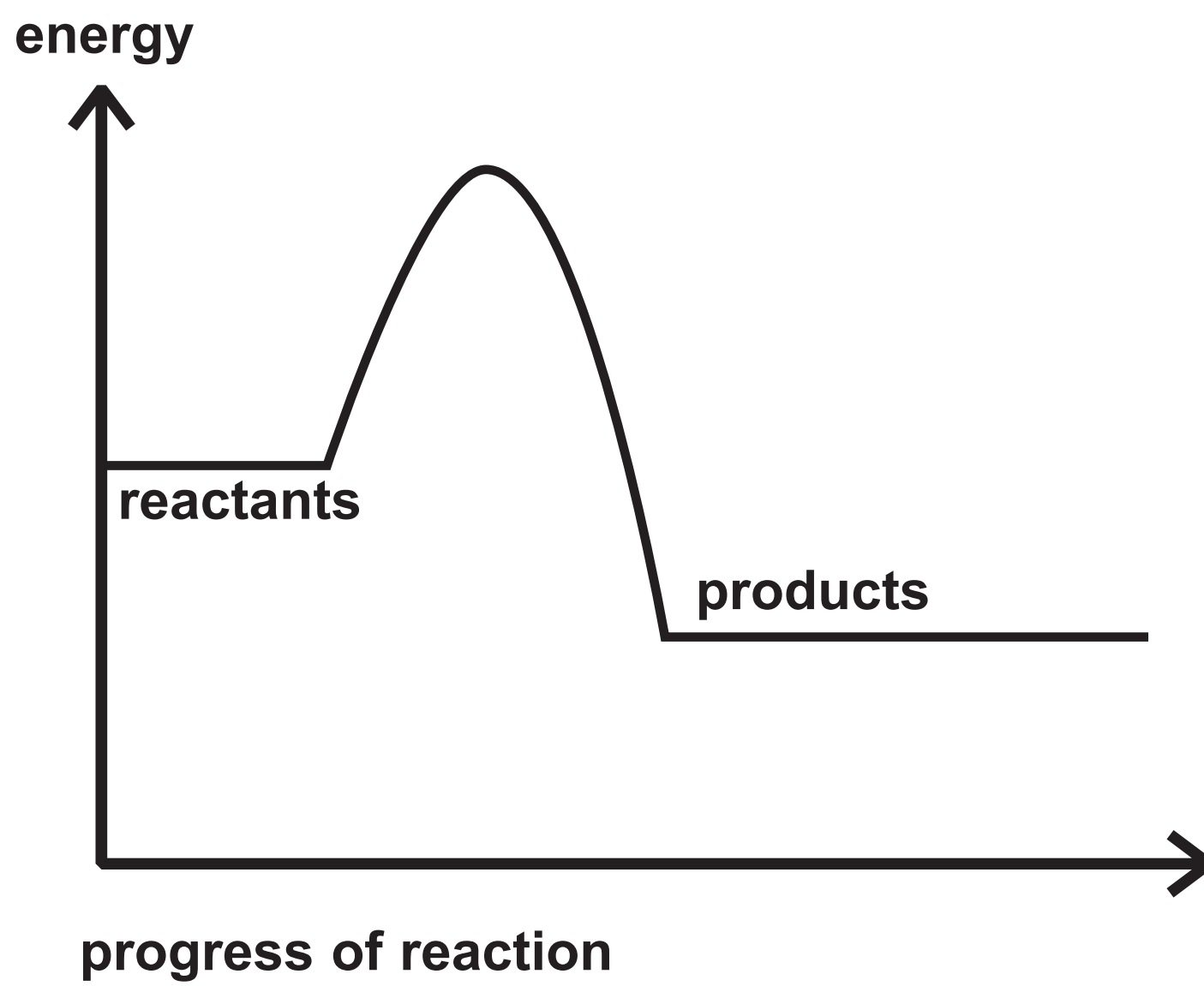
## Question 9(a)(ii)

FIGURE 12

bond	bond energy in $\text{kJ mol}^{-1}$
H—H	436
F—F	158
H—F	562

## Question 9(b)

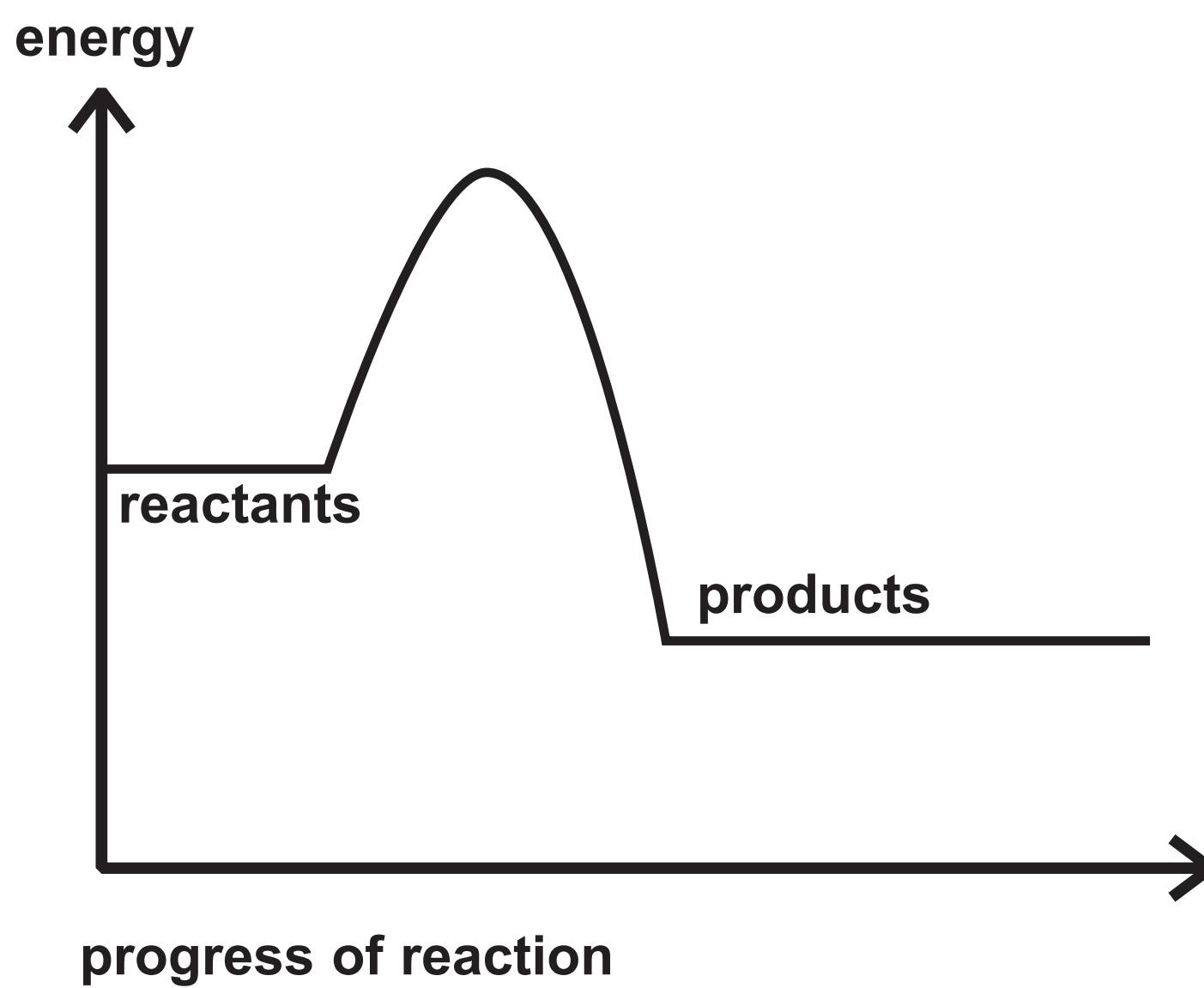
FIGURE 13





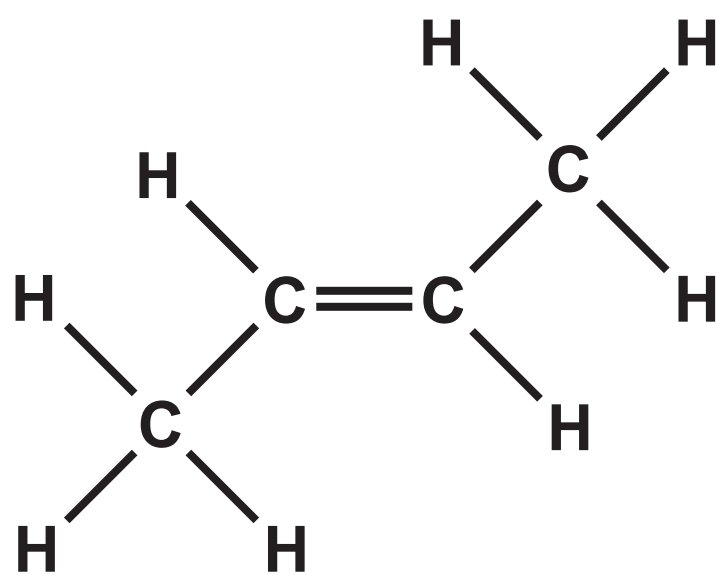
## Question 9(b)

FIGURE 13



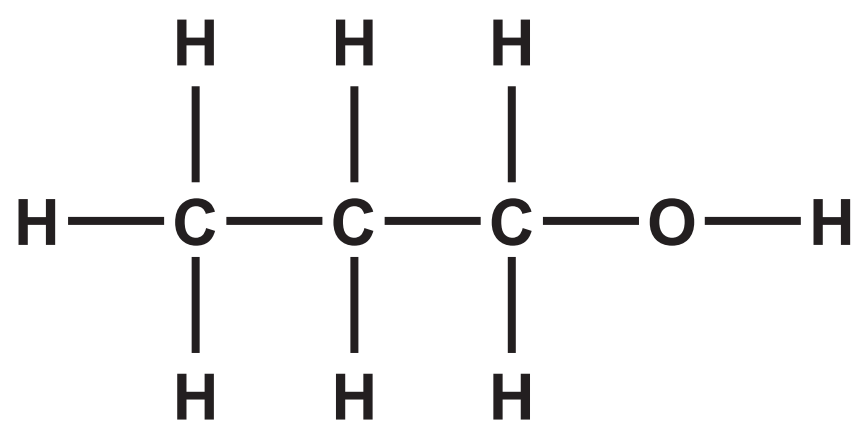
## Question 10(a)

FIGURE 14



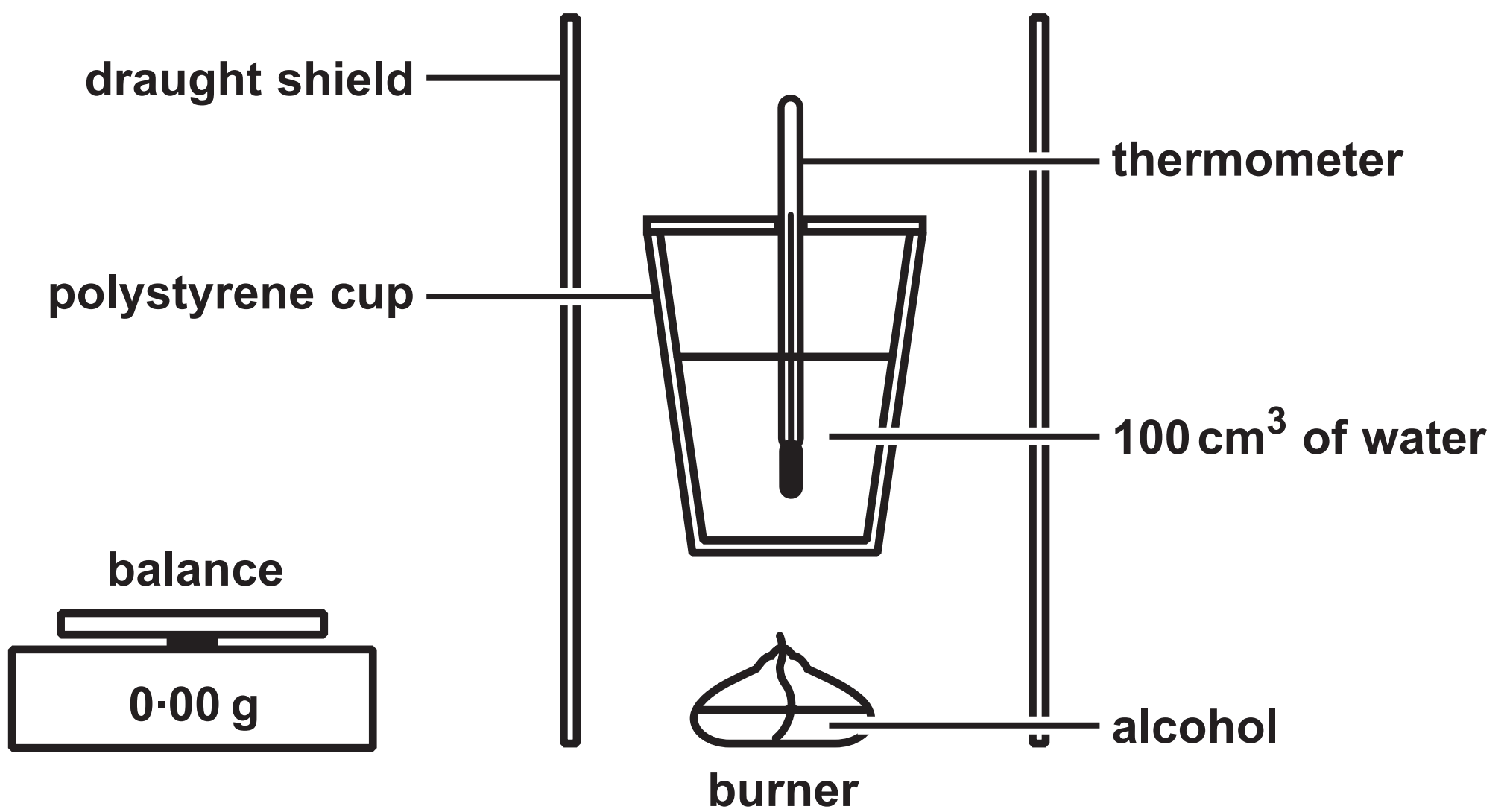
## Question 10(b)

FIGURE 15



## Question 10(b)(iii)

FIGURE 16



## Question 10(c)

FIGURE 17

