

Paper Reference(s) 4CH1/1C 4SD0/1C  
Pearson Edexcel International GCSE (9–1)

## Chemistry

UNIT: 4CH1

Science (Double Award) 4SD0

PAPER: 1C

## Diagram Booklet

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

<b>Surname</b>					
<b>Other names</b>					
<b>Centre Number</b>					
<b>Candidate Number</b>					

**INSTRUCTIONS**

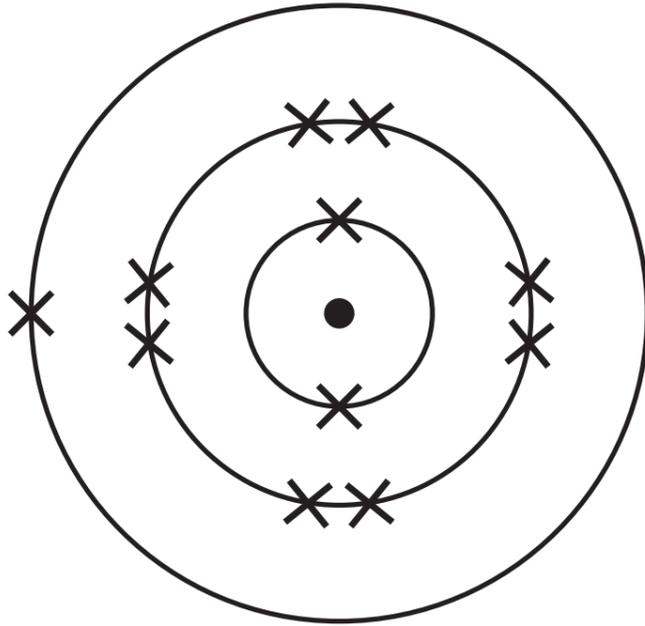
There may be spare copies of some diagrams in case you need them.

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

**Contents****Page**

<b>4</b>	<b>Question 1</b>
<b>5</b>	<b>Question 2(a)</b>
<b>6</b>	<b>Question 2(a) (Spare copy)</b>
<b>7</b>	<b>Question 3(a)</b>
<b>8</b>	<b>Question 4(a)</b>
<b>9</b>	<b>Question 4(b)</b>
<b>10</b>	<b>Question 4(b) (Spare copy)</b>
<b>11</b>	<b>Question 4(c)</b>
<b>12</b>	<b>Question 5(a)(iv)</b>
<b>13</b>	<b>Question 5(a)(iv) (Spare copy)</b>
<b>14</b>	<b>Question 6</b>
<b>15</b>	<b>Question 6(b) and 6(c)</b>
<b>16</b>	<b>Question 6(b) and 6(c) (Spare copy)</b>
<b>17</b>	<b>Question 7(c)</b>
<b>18</b>	<b>Question 8(a)</b>
<b>19</b>	<b>Question 8(b)</b>
<b>20</b>	<b>Question 10(b)</b>
<b>21</b>	<b>Question 10(b) (Spare copy)</b>
<b>22</b>	<b>Question 10(c)</b>

## Question 1



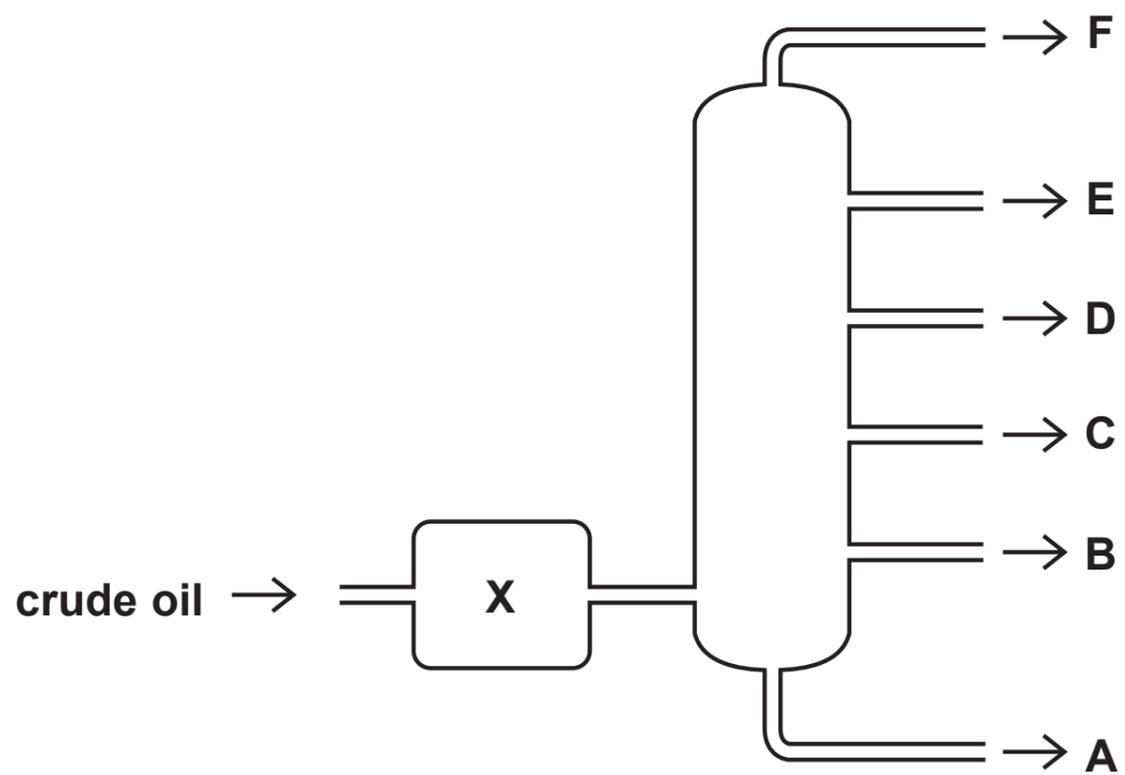
## Question 2(a)

<b>Physical change</b>	<b>Change of state</b>
<b>water to ice</b>	
<b>steam to water</b>	
<b>solid wax to liquid wax</b>	
<b>iodine crystals to iodine vapour</b>	

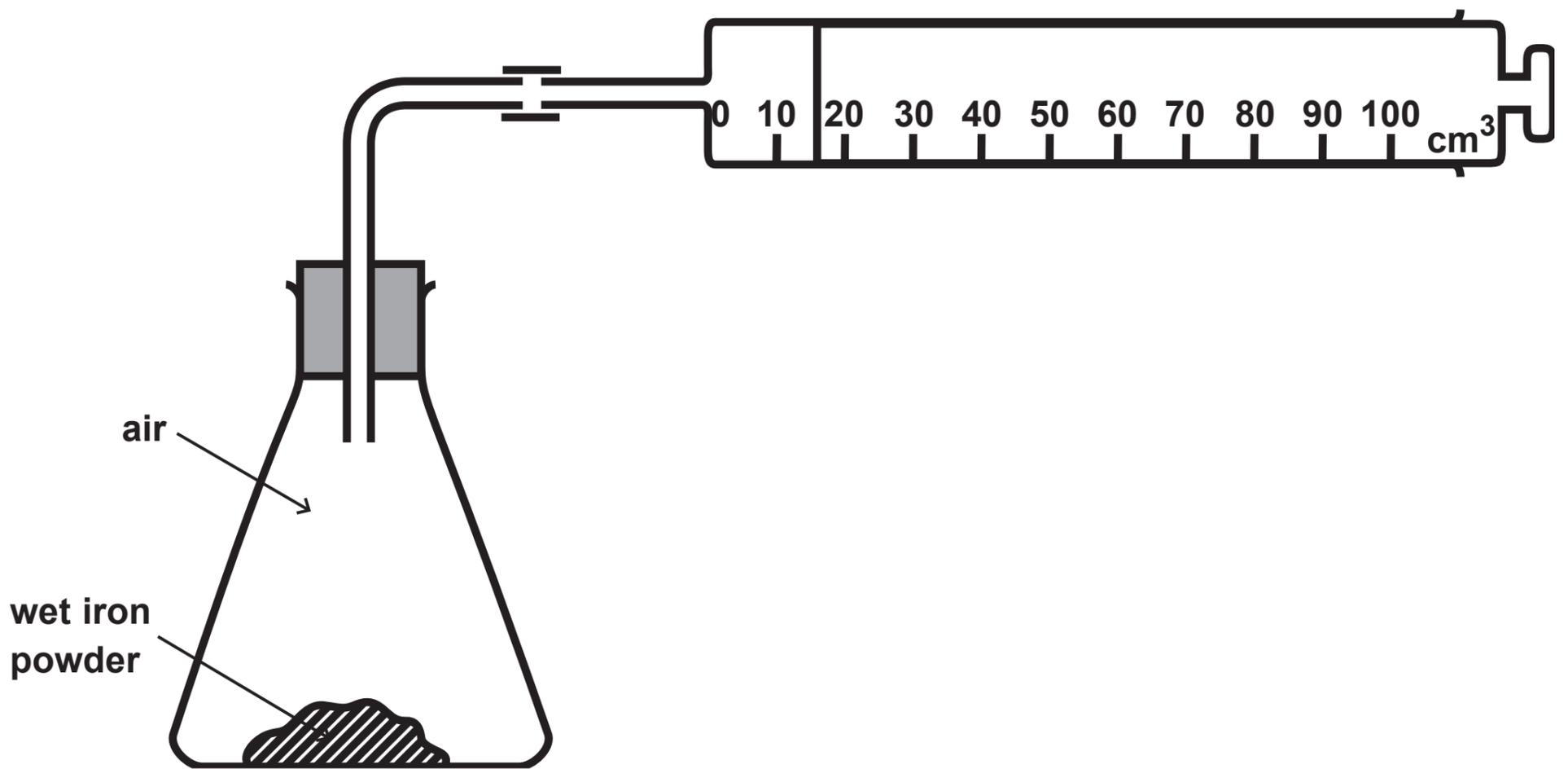
## Question 2(a)

<b>Physical change</b>	<b>Change of state</b>
<b>water to ice</b>	
<b>steam to water</b>	
<b>solid wax to liquid wax</b>	
<b>iodine crystals to iodine vapour</b>	

## Question 3(a)



## Question 4(a)



## Question 4(b)

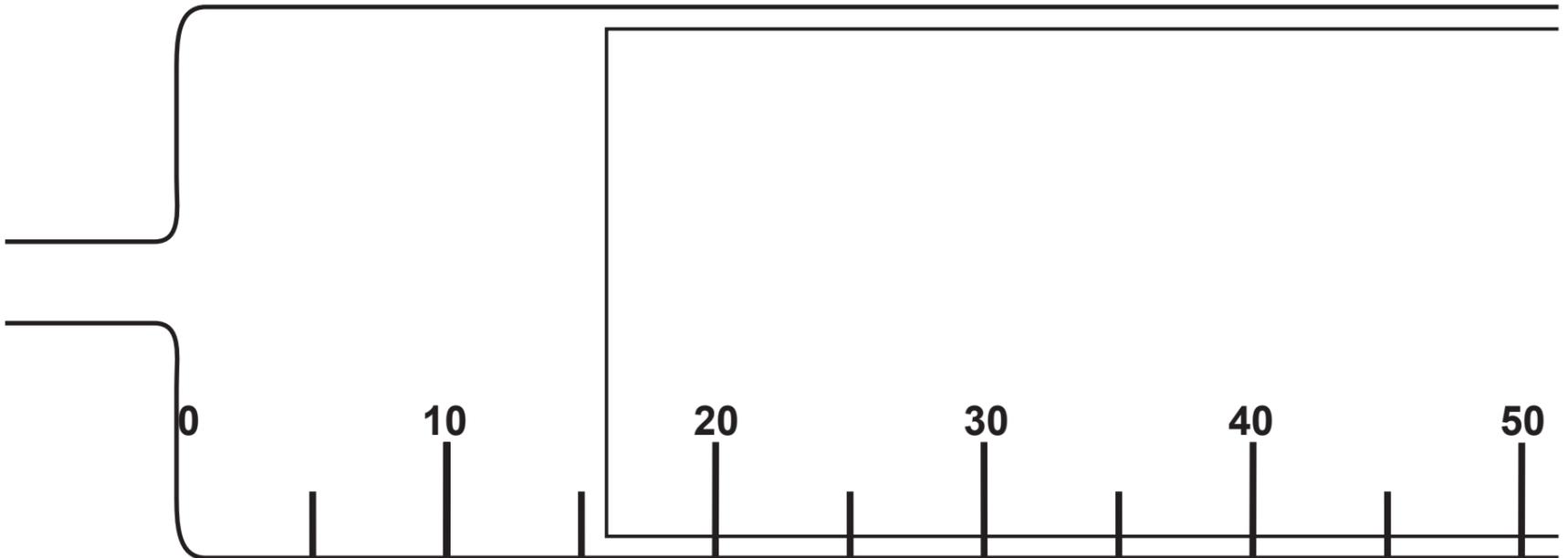


TABLE 1

<b>syringe reading at start</b>	
<b>syringe reading at end</b>	
<b>change in volume in cm<sup>3</sup></b>	<b>65</b>

## Question 4(b)

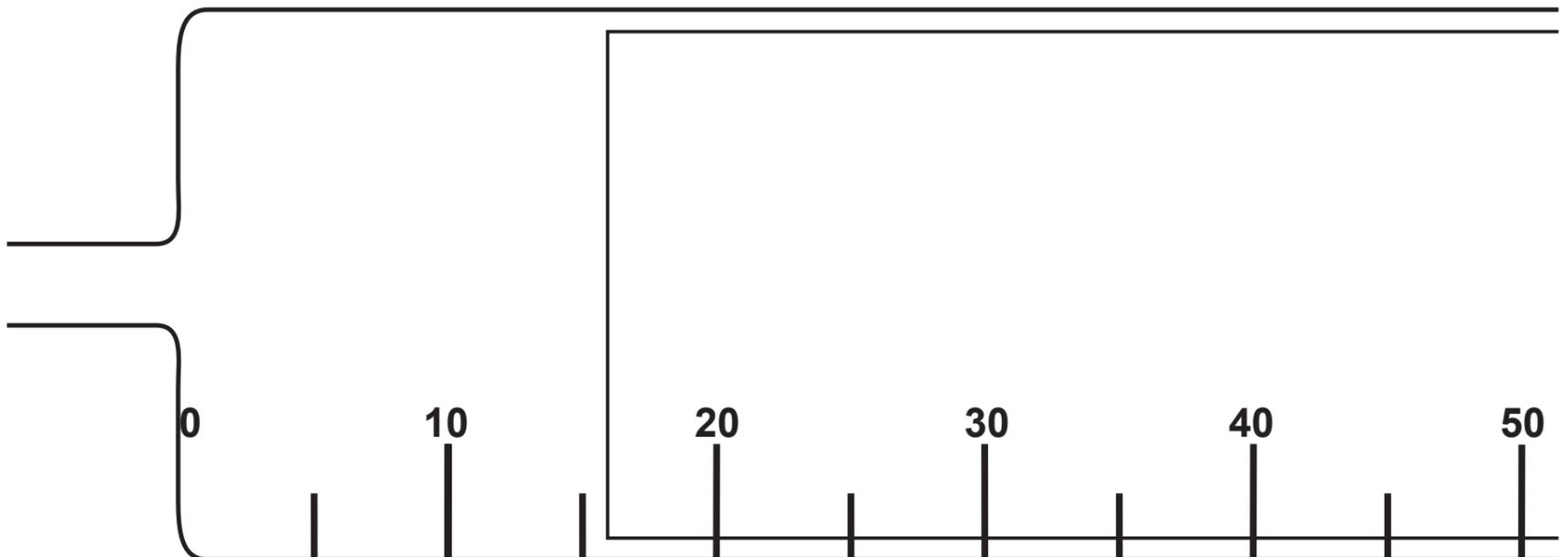


TABLE 1

<b>syringe reading at start</b>	
<b>syringe reading at end</b>	
<b>change in volume in cm<sup>3</sup></b>	<b>65</b>

## Question 4(c)

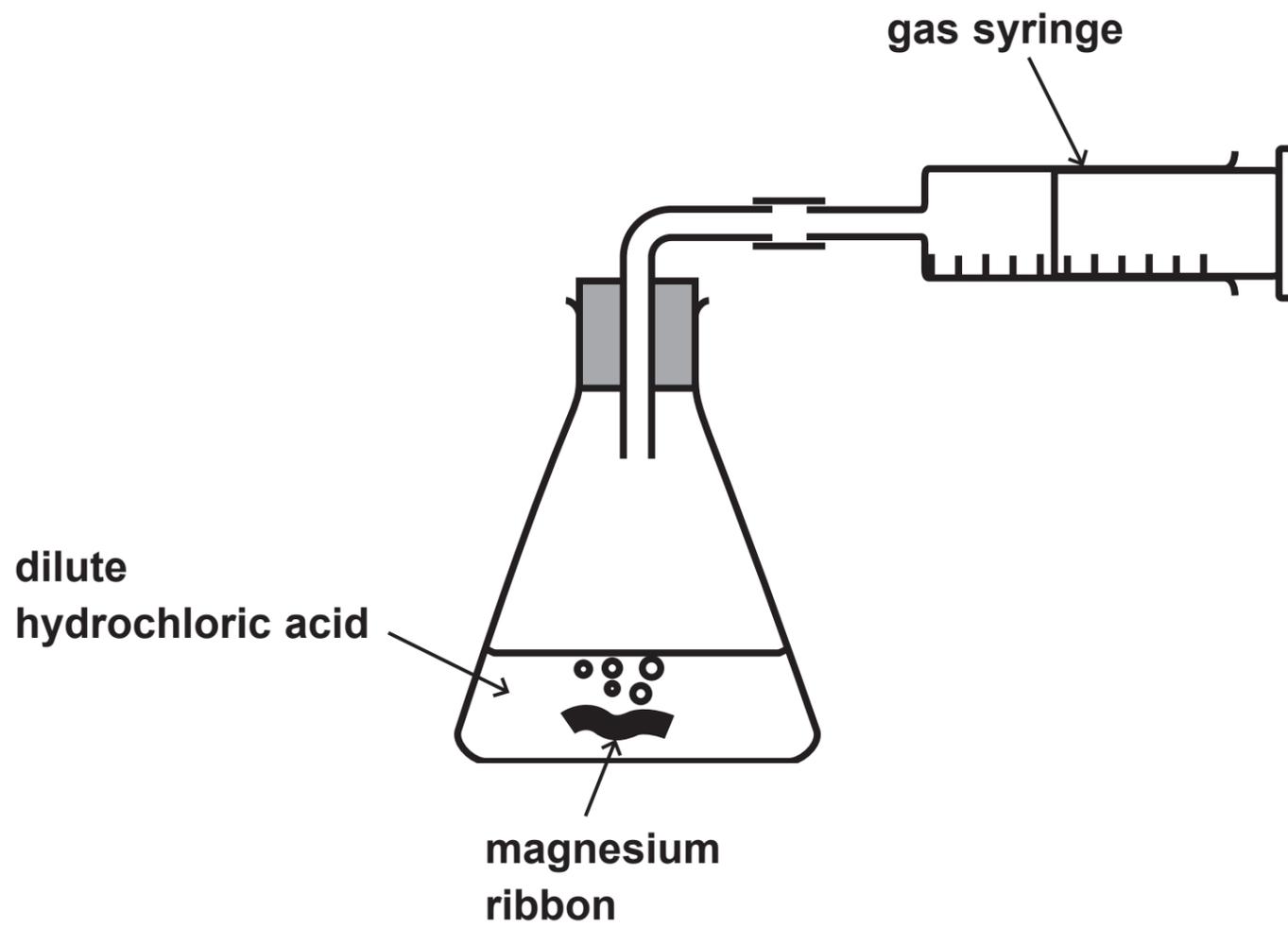
TABLE 2

<b>volume of air in conical flask and glass tube in cm<sup>3</sup></b>	<b>260</b>
<b>syringe reading at start</b>	<b>90</b>
<b>syringe reading at end</b>	<b>22</b>

**Question 5(a)(iv)****Isomer 1****Isomer 2**

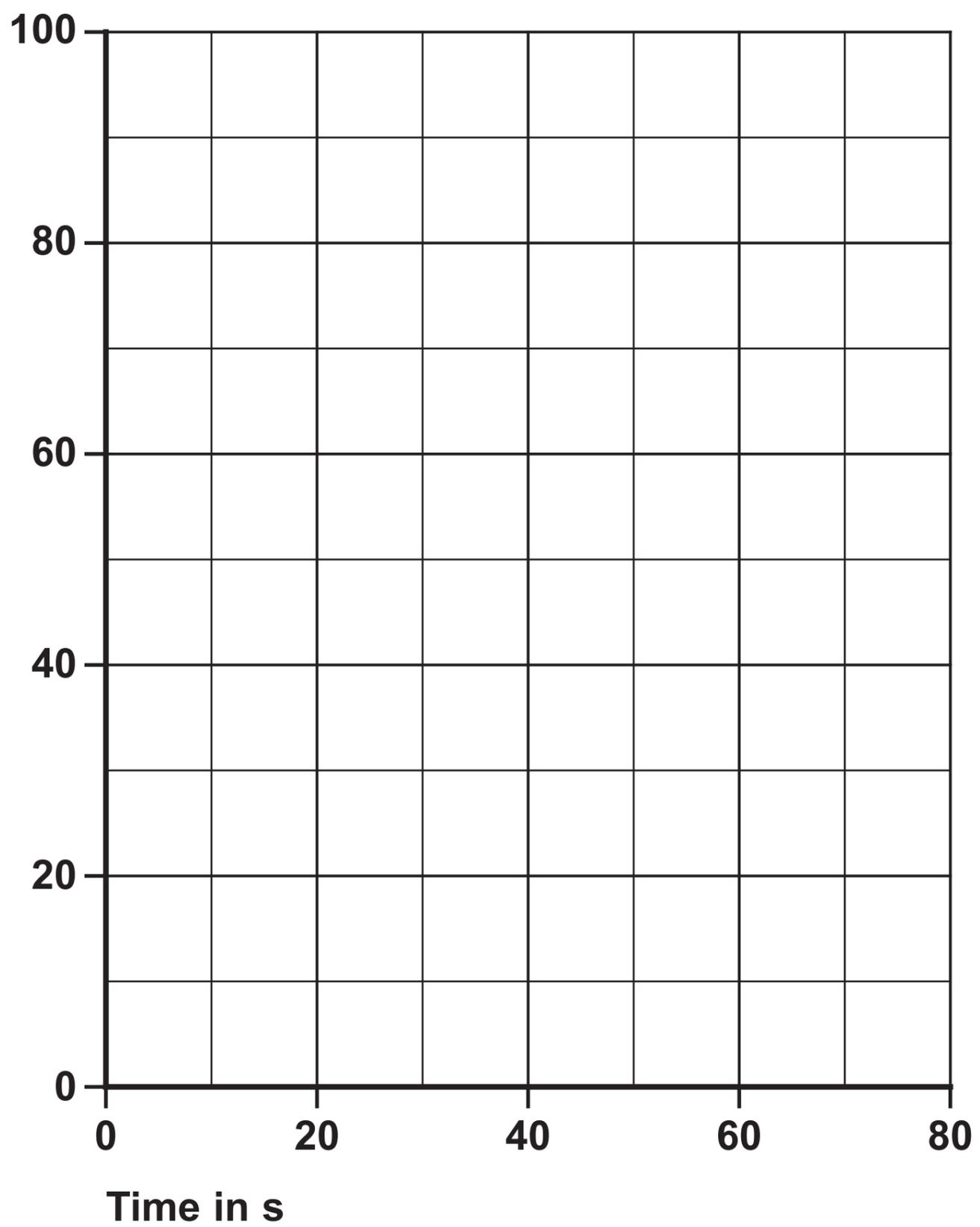
**Question 5(a)(iv)****Isomer 1****Isomer 2**

## Question 6



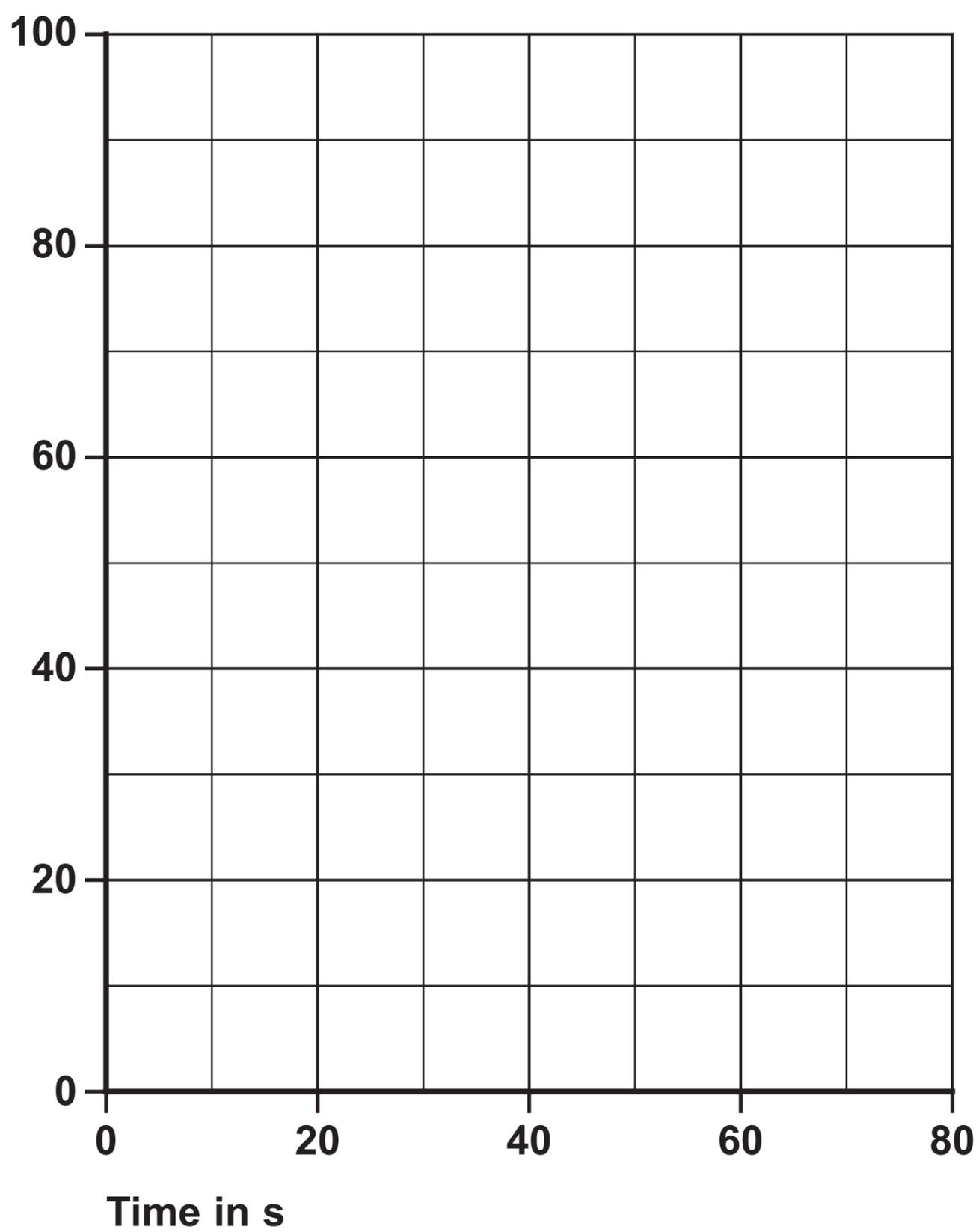
## Question 6(b) and 6(c)

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

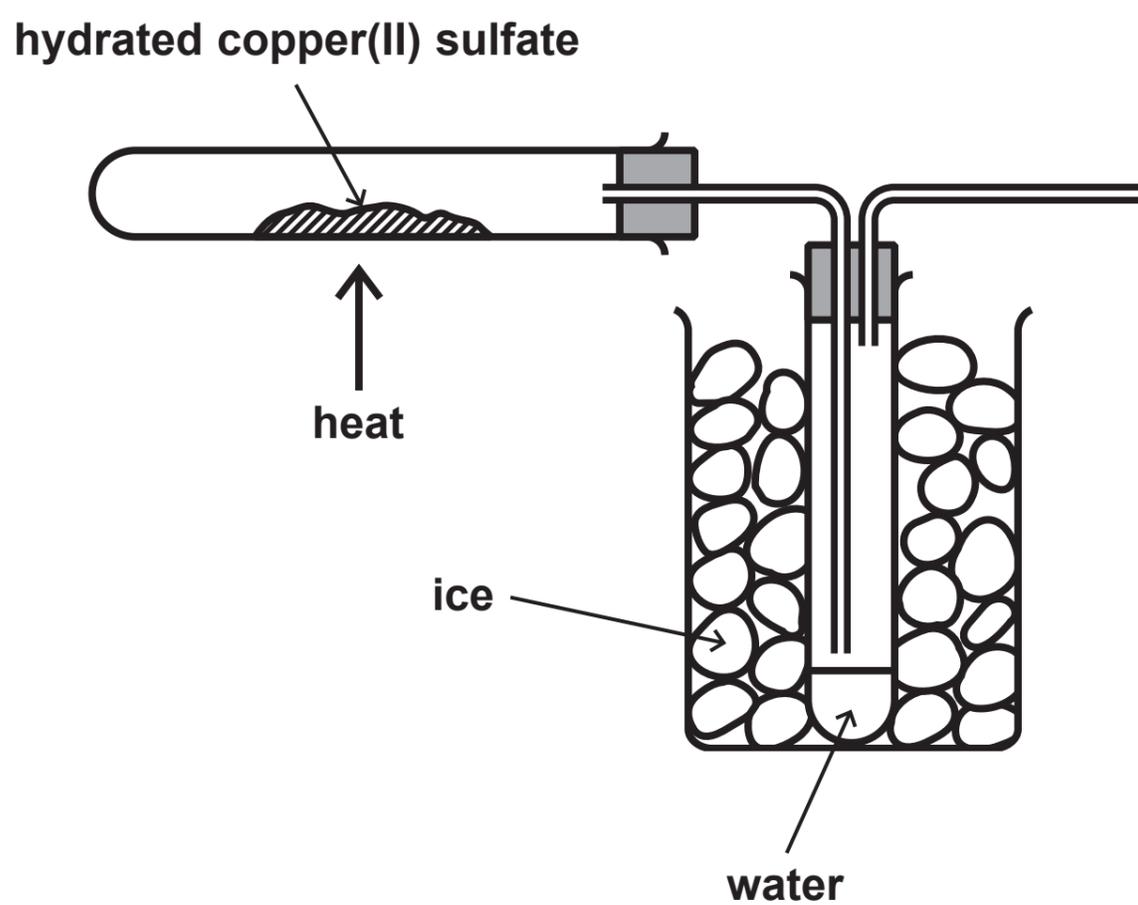


## Question 6(b) and 6(c)

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



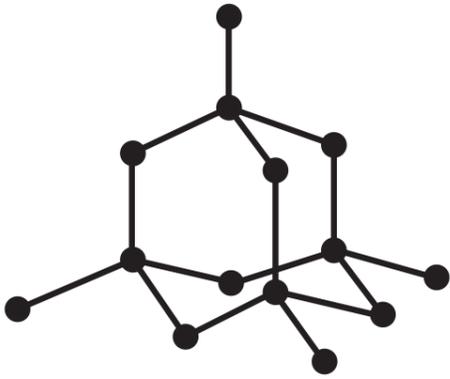
## Question 7(c)



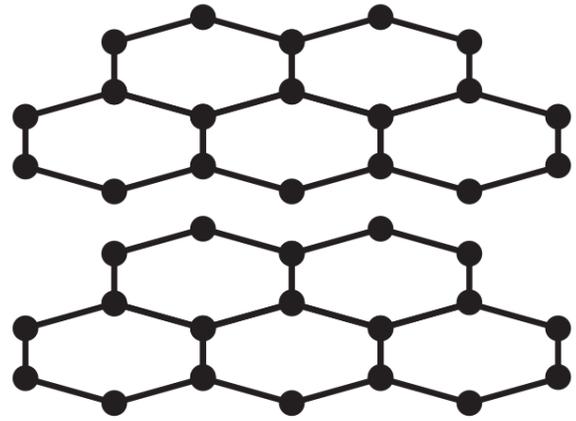
mass of empty tube in g	20.52
mass of tube and $\text{CuSO}_4 \cdot x\text{H}_2\text{O}$ in g	31.77
mass of tube and $\text{CuSO}_4$ in g	28.20

## Question 8(a)

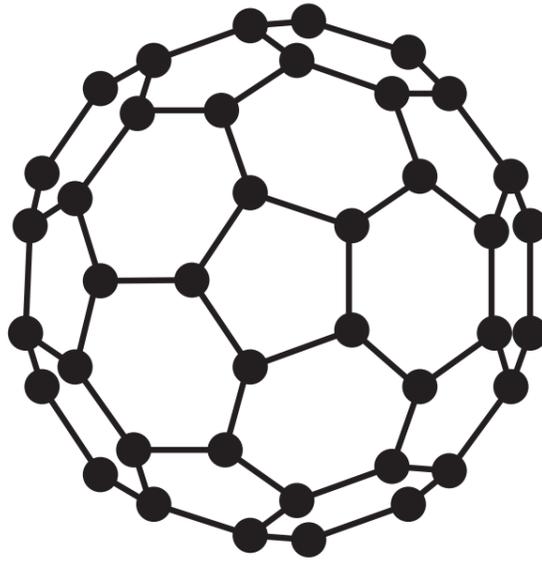
Diamond



Graphite



## Question 8(b)



<b>Substance</b>	<b>Approximate melting point in °C</b>
diamond	4000
graphite	3600
C <sub>60</sub> fullerene	600

## Question 10(b)

<b>Name</b>	ammonium sulfate		ammonium carbonate
<b>Formula</b>	$(\text{NH}_4)_2\text{SO}_4$	$\text{NH}_4\text{Cl}$	

## Question 10(b)

<b>Name</b>	ammonium sulfate		ammonium carbonate
<b>Formula</b>	$(\text{NH}_4)_2\text{SO}_4$	$\text{NH}_4\text{Cl}$	

## Question 10(c)

<b>Name</b>	<b>Formula</b>	<b>Percentage of nitrogen (%)</b>	<b>Approximate pH in solution</b>
ammonia	$\text{NH}_3(\text{g})$	82	11
ammonium nitrate	$\text{NH}_4\text{NO}_3(\text{s})$		5.5
ammonium sulfate	$(\text{NH}_4)_2\text{SO}_4(\text{s})$	21	5.5