

**Paper Reference(s)    4CH1/2C**  
**Pearson Edexcel International GCSE (9–1)**

**Chemistry**  
**UNIT: 4CH1**  
**PAPER: 2C**

**Tuesday 13 June 2023 – Morning**

**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.**

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## **Spare Copies**

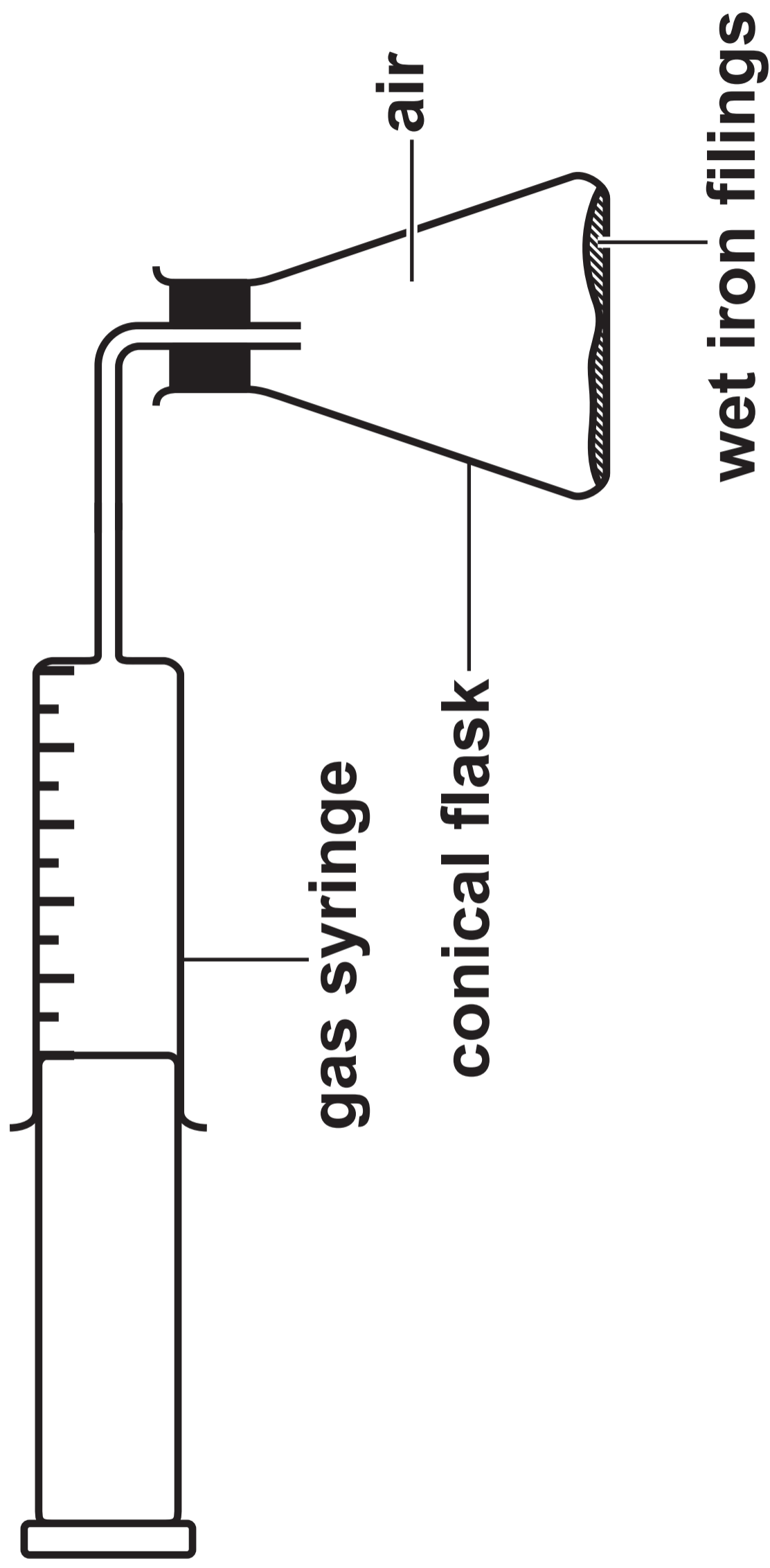
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## Question 2(c)

4



## Question 3(a)

5

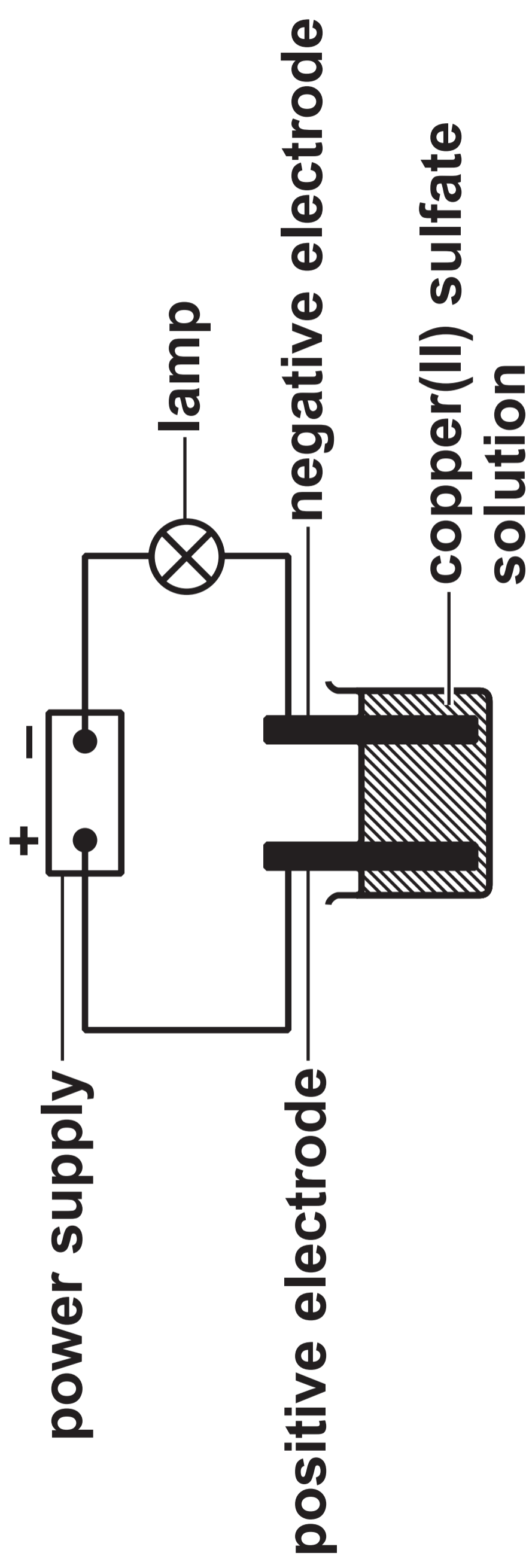


**Question 3(b)**

	<b>Hydration</b>	<b>Fermentation</b>
<b>Reagents</b>	<b>ethene and steam</b>	<b>aqueous glucose</b>
<b>Catalyst</b>		<b>enzymes in yeast</b>
<b>Temperature in °C</b>	<b>300</b>	
<b>Pressure in atmospheres</b>		<b>1</b>
<b>Rate of process</b>	<b>fast</b>	<b>slow</b>
<b>Purity of product</b>	<b>pure</b>	<b>impure</b>

## Question 5

7

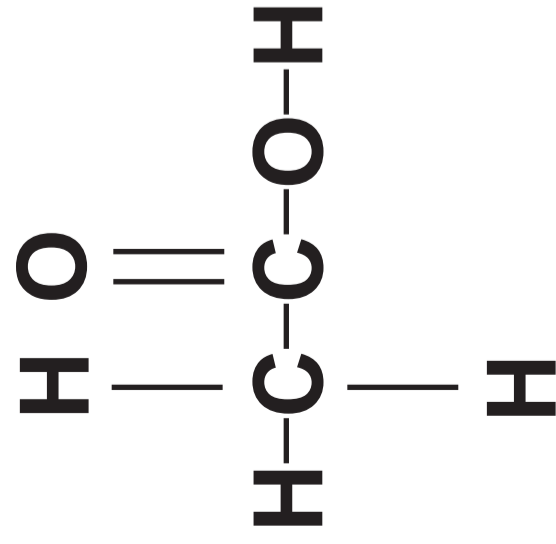


Question 5(d)(ii)

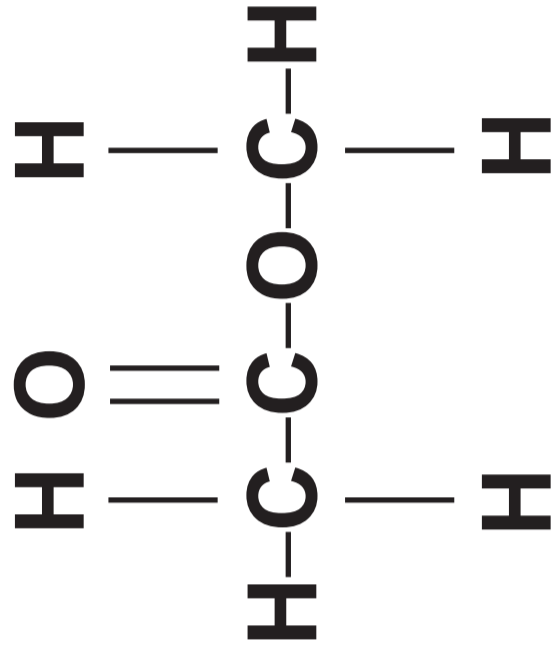
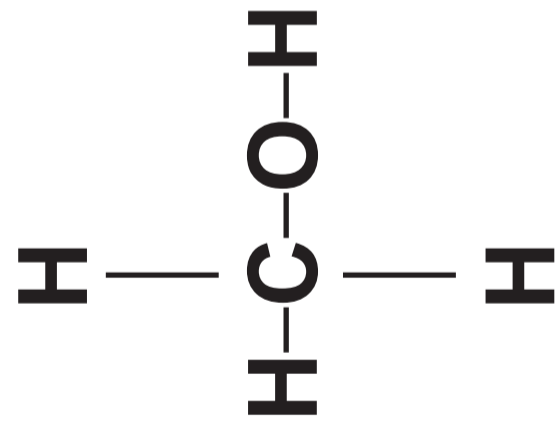


## Question 6

9



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Question 6(b)

Bond	C–H	C–C	C–O	C=O	O–H
Number of bonds in reactants	6	1	2	1	2
Number of bonds in products	6	1	2	1	2

## Question 3(a)

11



**Question 3(b)**

	<b>Hydration</b>	<b>Fermentation</b>
<b>Reagents</b>	<b>ethene and steam</b>	<b>aqueous glucose</b>
<b>Catalyst</b>		<b>enzymes in yeast</b>
<b>Temperature in °C</b>	<b>300</b>	
<b>Pressure in atmospheres</b>		<b>1</b>
<b>Rate of process</b>	<b>fast</b>	<b>slow</b>
<b>Purity of product</b>	<b>pure</b>	<b>impure</b>

## Question 5(d)(ii)

13

