

**Paper Reference(s) 9CH0/03**  
**Pearson Edexcel Level 3 GCE**

## **Chemistry**

**Advanced**

**PAPER 3: General and Practical Principles in Chemistry**

## **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.**

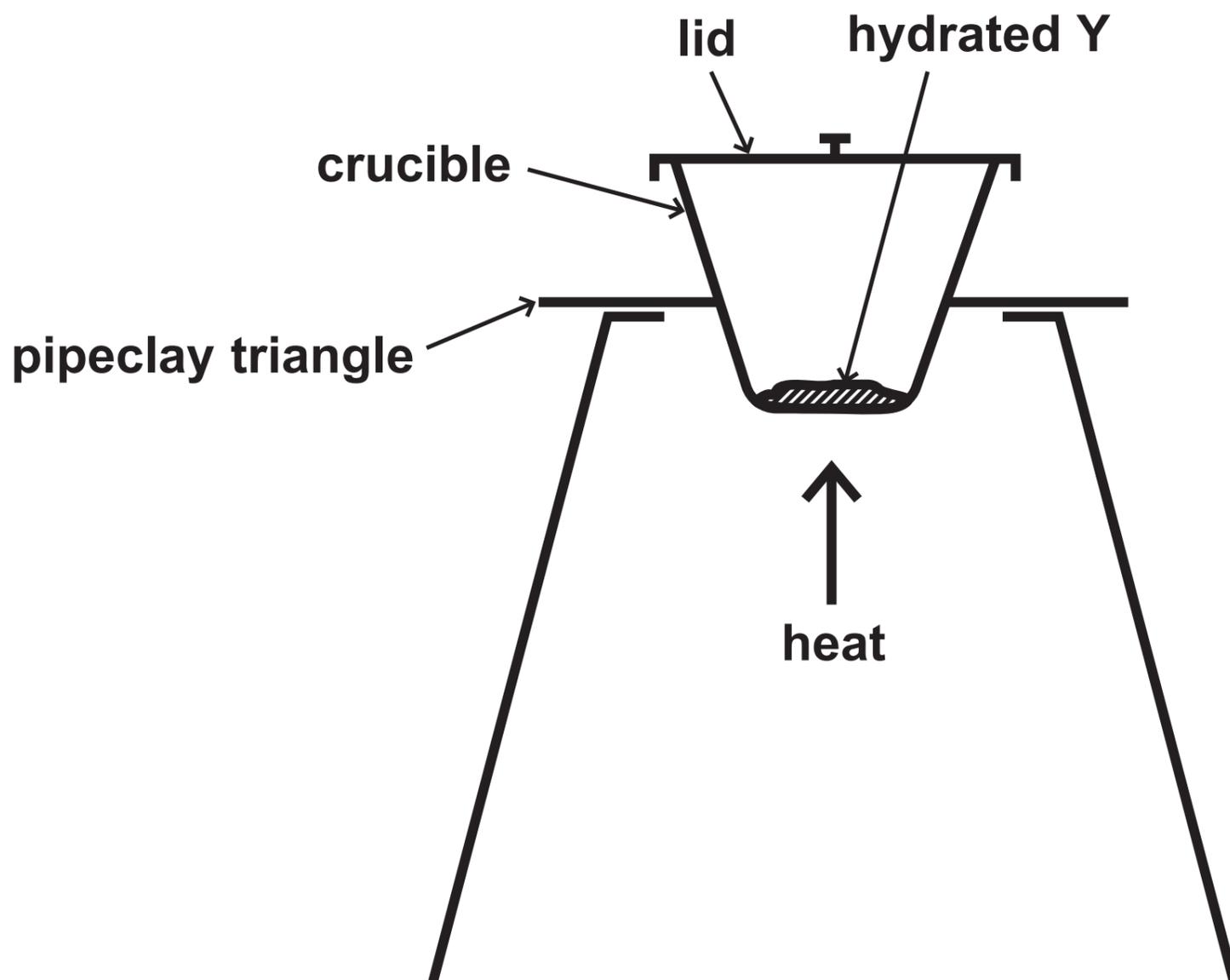
**Contents****Page**

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

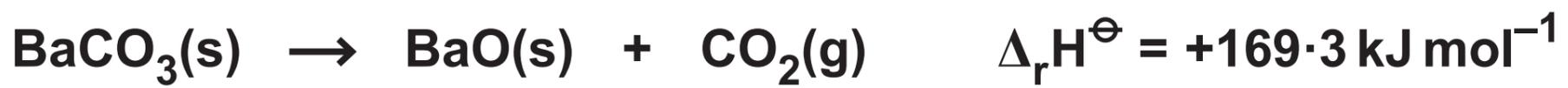
## Question 1(b)

<b>Isotope</b>	<b>Percentage abundance</b>
$^{20}\text{Ne}$	84.80
$^{21}\text{Ne}$	2.26
$^{22}\text{Ne}$	12.94

Question 3(c)



## Question 4

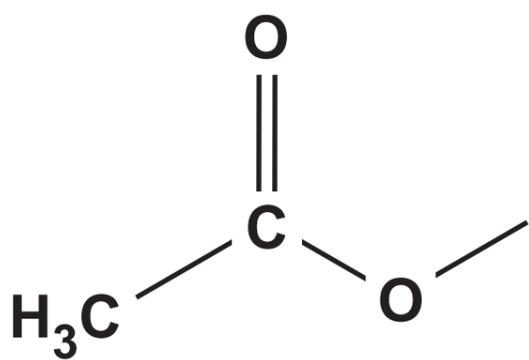


Substance	Standard molar entropy, $S^\ominus / \text{J K}^{-1} \text{ mol}^{-1}$
$\text{BaCO}_3(\text{s})$	112.1
$\text{BaO}(\text{s})$	70.4
$\text{CO}_2(\text{g})$	213.6

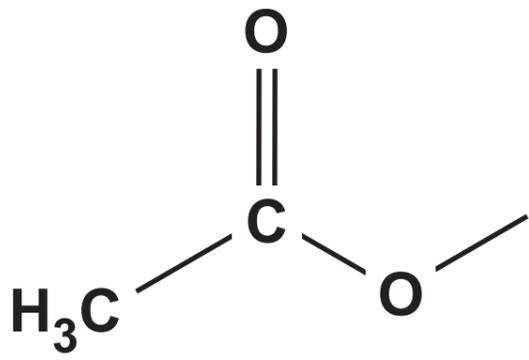
## Question 6(b)

<b>Chemical shift (<math>\delta</math>) / ppm</b>	<b>Splitting pattern of peak</b>	<b>Relative peak area</b>
<b>2.50</b>	<b>singlet</b>	<b>3</b>
<b>1.56</b>	<b>quartet</b>	<b>4</b>
<b>1.43</b>	<b>singlet</b>	<b>3</b>
<b>0.92</b>	<b>triplet</b>	<b>6</b>

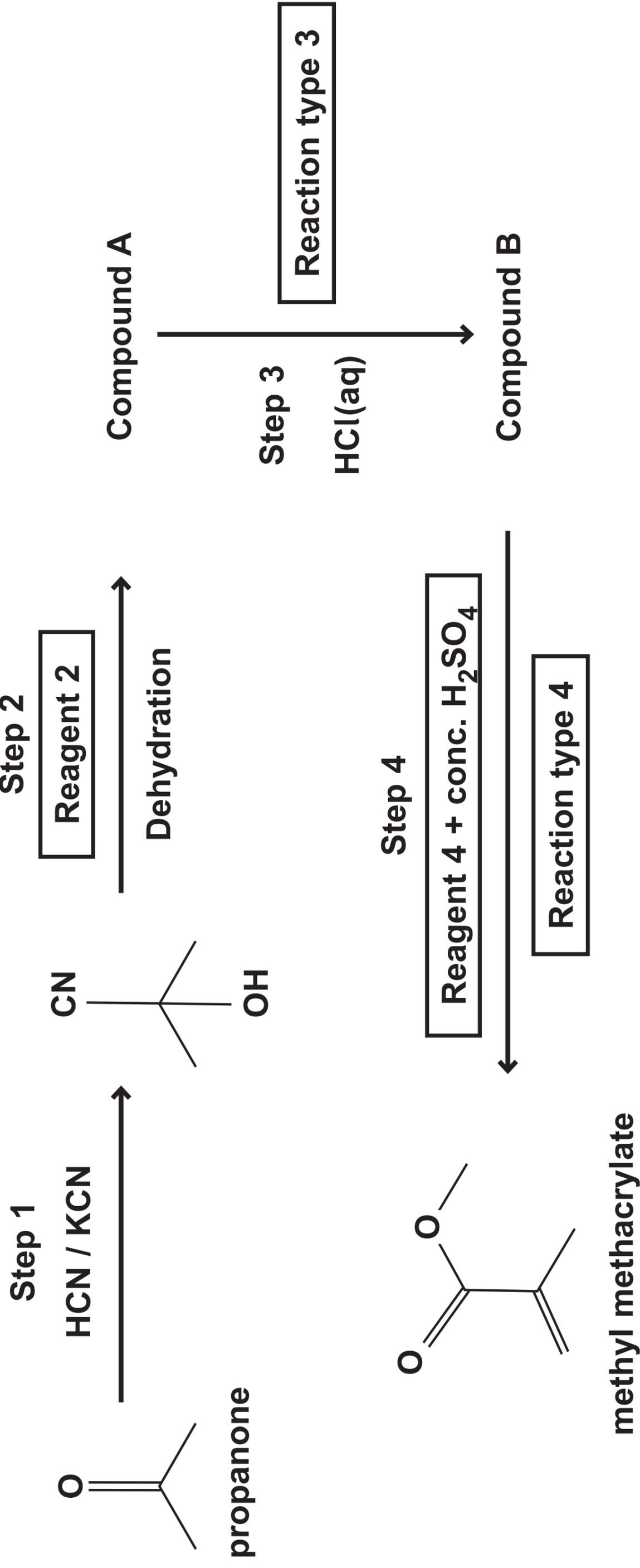
## Question 6(b)



## Question 6(b)



## Question 7(a)



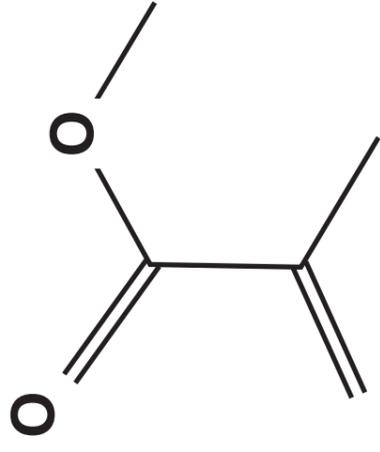
## Question 7(a)(ii)

<b>Reagent 2</b>	
<b>Structure of compound A</b>	
<b>Reaction type 3</b>	
<b>Structure of compound B</b>	
<b>Reagent 4</b>	
<b>Reaction type 4</b>	

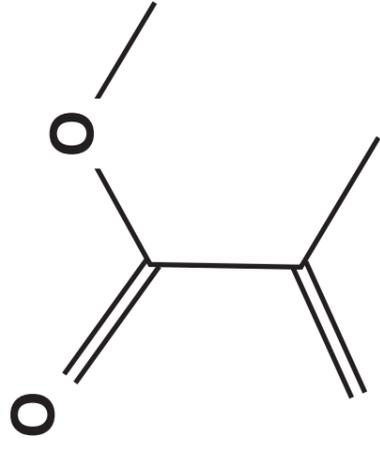
## Question 7(a)(ii)

<b>Reagent 2</b>	
<b>Structure of compound A</b>	
<b>Reaction type 3</b>	
<b>Structure of compound B</b>	
<b>Reagent 4</b>	
<b>Reaction type 4</b>	

## Question 7(a)(iii)



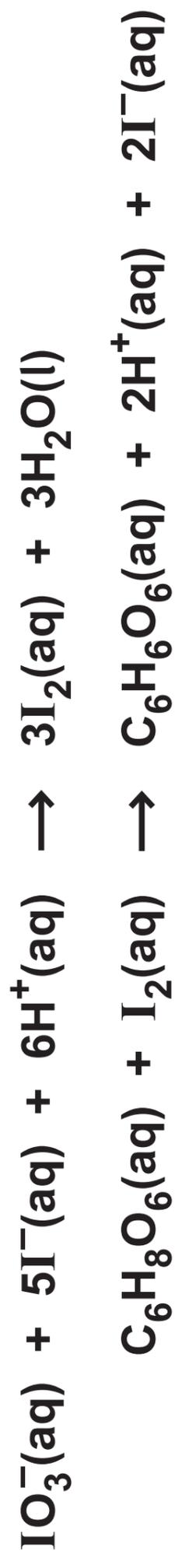
## Question 7(a)(iii)



**Question 7(b)**

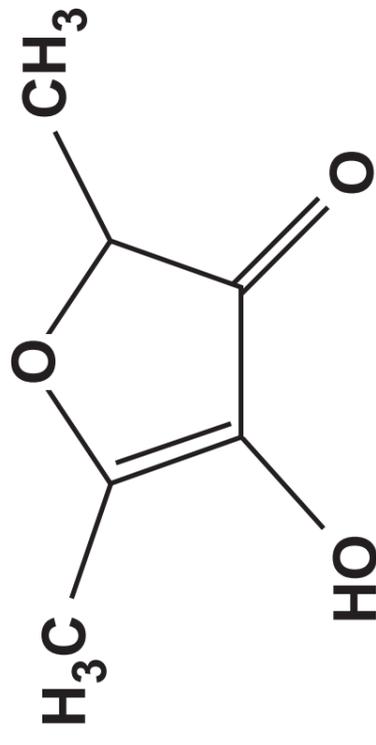
**Question 7(b)**

## Question 9(b)

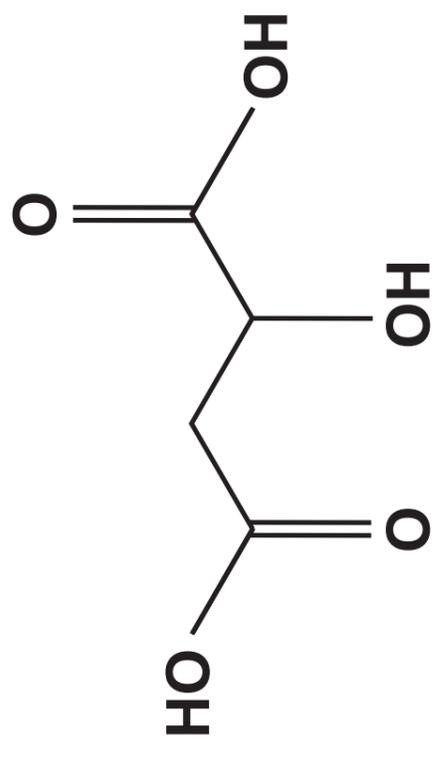


## Question 9(c)

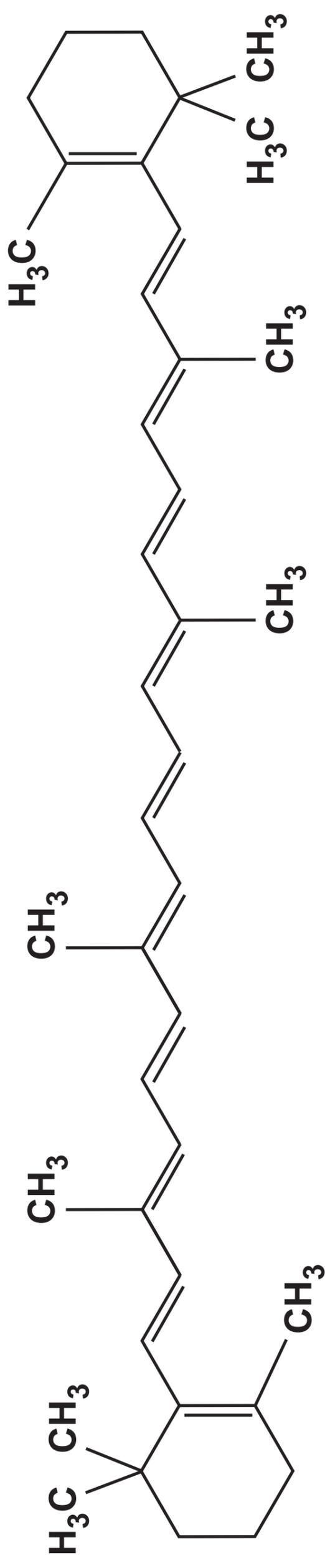
Compound D



Compound E

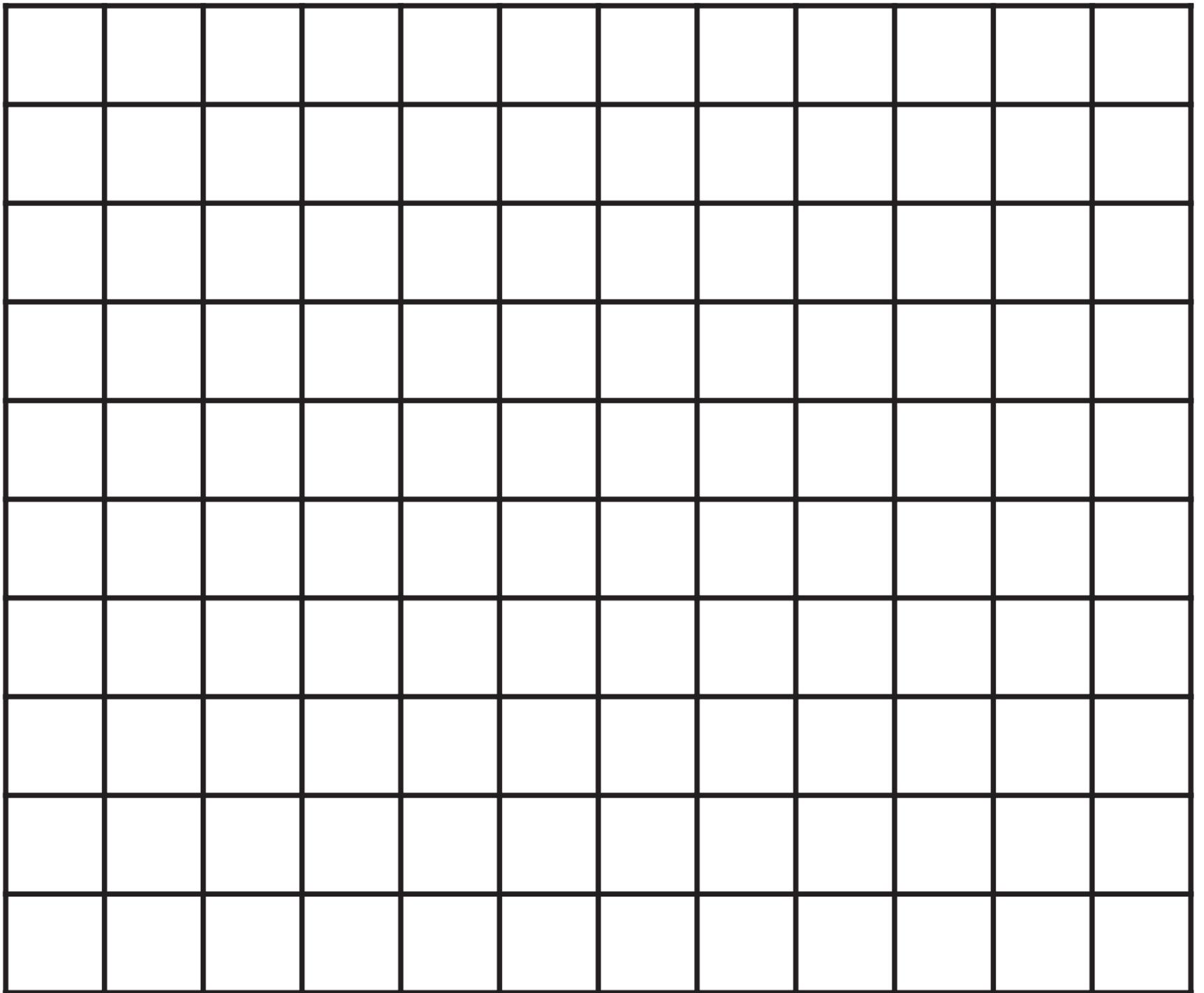


Compound F

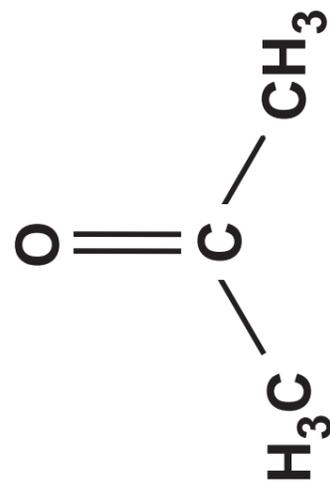




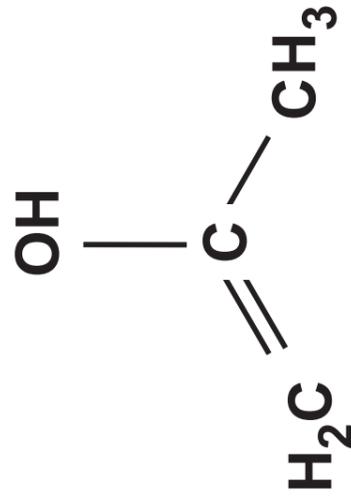
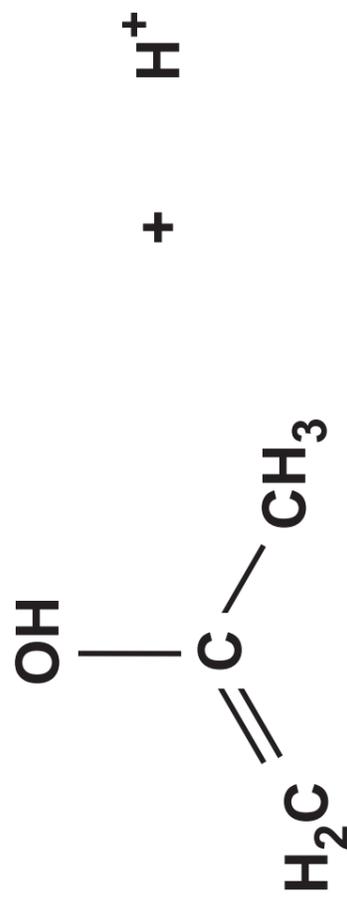
Question 10(b)(i)



## Question 10(c)

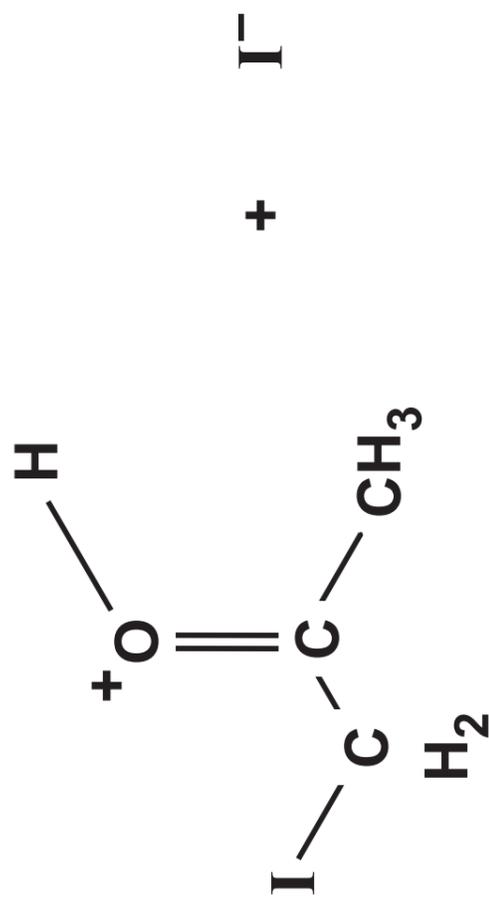


Step 1

+  $\text{H}^+$ 

Step 2

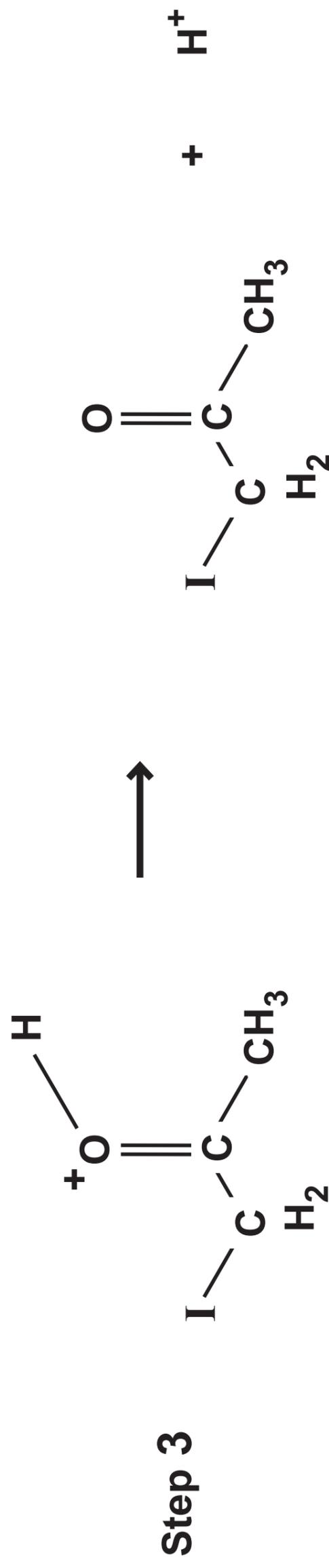
+

 $\text{I}_2$ 

(continued on the next page)

Turn over

Question 10(c) continued.



Overall reaction

