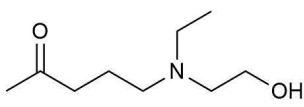
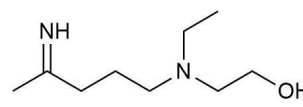
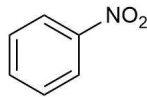
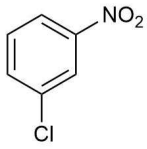
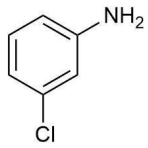
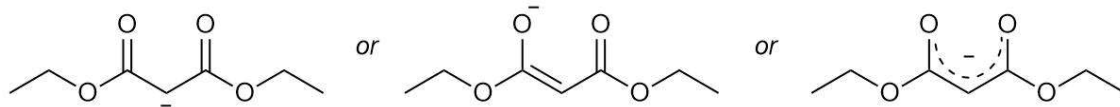
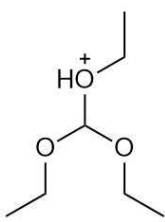
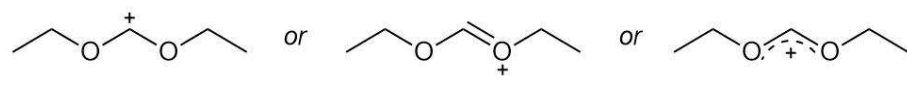
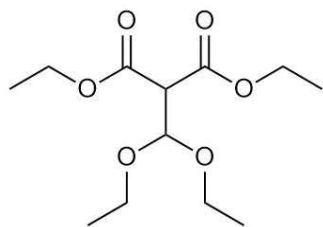


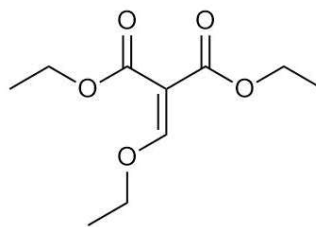
5.	This question is about Donald Trump and the coronavirus	Mark								
(a)	5-chloropentan-2-one	<input checked="" type="checkbox"/>								
(b)	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>B</p>  <p>One mark</p> </div> <div style="text-align: center;"> <p>C</p>  <p>One mark</p> </div> </div>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>								
(c)	<table style="width: 100%; border: none;"> <tr> <td style="text-align: center; width: 25%;">Br₂ / UV light</td> <td style="text-align: center; width: 25%;">KMnO₄</td> <td style="text-align: center; width: 25%;">✓ H₂ / Ni catalyst</td> <td style="text-align: center; width: 25%;">acidified K₂Cr₂O₇</td> </tr> <tr> <td style="text-align: center;">OsO₄</td> <td style="text-align: center;">ethylamine</td> <td style="text-align: center;">O₂ / UV light</td> <td style="text-align: center;">H₂SO₄ catalyst</td> </tr> </table>	Br ₂ / UV light	KMnO ₄	✓ H ₂ / Ni catalyst	acidified K ₂ Cr ₂ O ₇	OsO ₄	ethylamine	O ₂ / UV light	H ₂ SO ₄ catalyst	<input checked="" type="checkbox"/>
Br ₂ / UV light	KMnO ₄	✓ H ₂ / Ni catalyst	acidified K ₂ Cr ₂ O ₇							
OsO ₄	ethylamine	O ₂ / UV light	H ₂ SO ₄ catalyst							
(d)	<p>D</p>  <p>One mark</p>	<p>E</p>  <p>One mark</p>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>							
	<p>F</p>  <p>One mark. Reduction of NO₂ group to NH₂ can be credited as ECF for F if there consistent position of Cl from E to F.</p>		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>							
(e)	<p>Anion V⁻</p>  <p>Any one of the above structures scores two marks. No partial credit.</p>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>								
	<p>Cation W⁺</p> 	<input checked="" type="checkbox"/>								
(e)	<p>Cation X⁺</p>  <p>Any one of the above structures scores two marks. No partial credit. No ECF.</p>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>								

Intermediate Y



One mark. No ECF.

Reagent Z

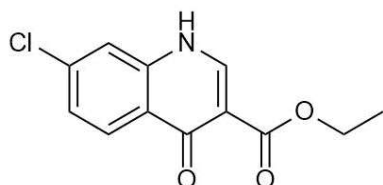


One mark. No ECF.



(f)

G



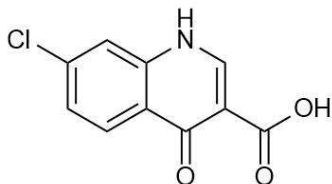
or



Either of the above structures scores two marks. No partial credit.



H



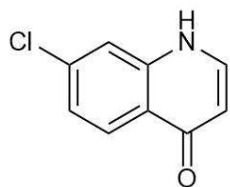
or



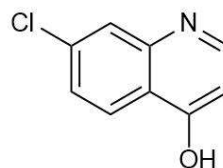
Either of the above structures scores two marks. No partial credit. The anion or the sodium salt of the carboxylic acid also should be given full credit. No ECF.



I



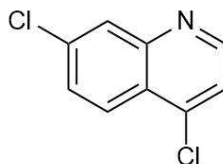
or



Either of the above structures scores two marks. No partial credit. No ECF.



J



No ECF.



Total out of 21

21