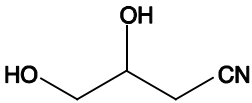
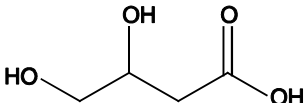
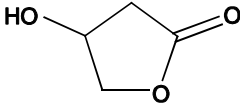
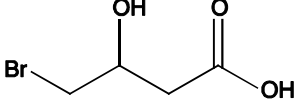
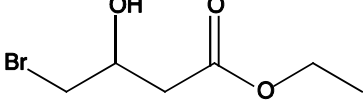
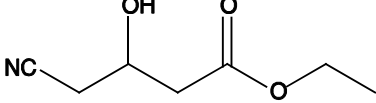
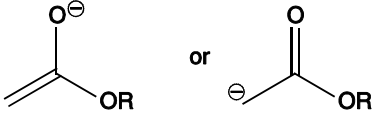
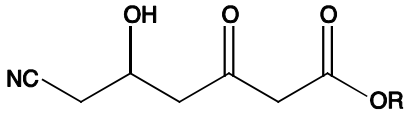
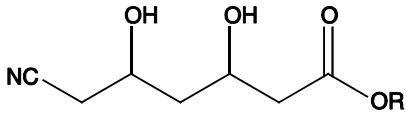
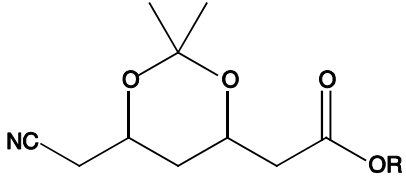
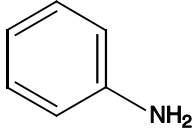
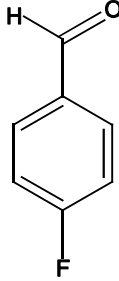


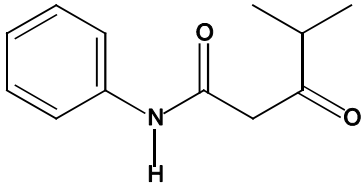
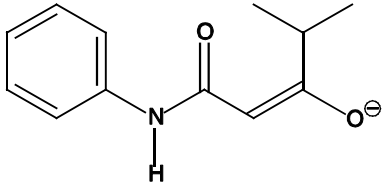
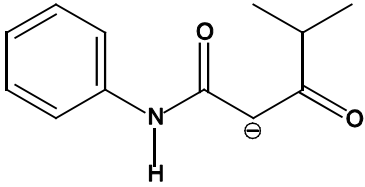
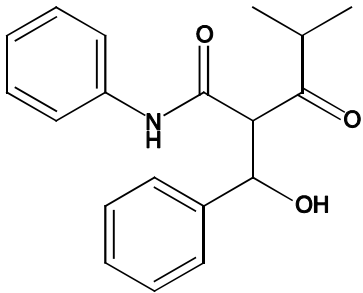
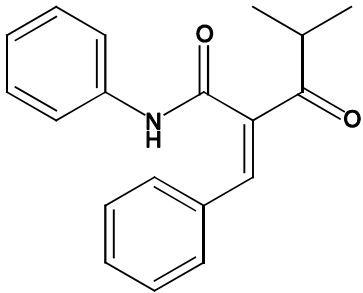
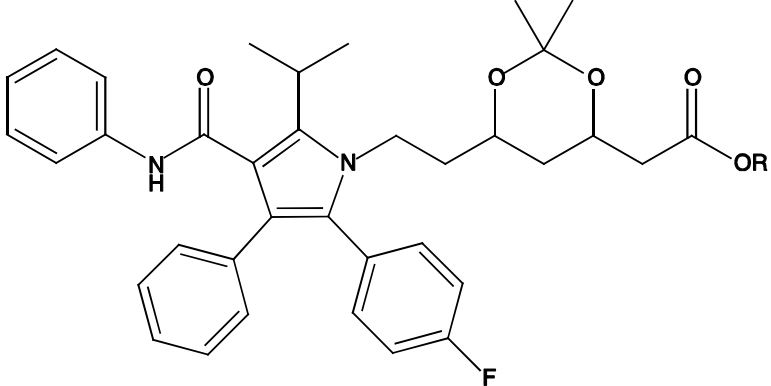
Question 4

	Answer	Marks												
a)	<p>B</p> 	1												
	<p>C</p> 	1												
	<p>D</p> 	1												
	<p>E</p> 	1												
	<p>F</p> 	1												
	<p>G</p>  <table border="1" data-bbox="394 1381 1256 1535"> <tbody> <tr> <td>absorption / cm⁻¹</td> <td>~ 3300 (broad)</td> <td>1775</td> <td>2250-2275</td> <td>3374</td> <td>1700-1740</td> </tr> <tr> <td>bond</td> <td>O-H</td> <td>C=O in a small ring</td> <td>C≡N</td> <td>N-H</td> <td>C=O</td> </tr> </tbody> </table> <p>One mark for correct structure for G; one mark for each correct entry in table</p>	absorption / cm ⁻¹	~ 3300 (broad)	1775	2250-2275	3374	1700-1740	bond	O-H	C=O in a small ring	C≡N	N-H	C=O	6
absorption / cm ⁻¹	~ 3300 (broad)	1775	2250-2275	3374	1700-1740									
bond	O-H	C=O in a small ring	C≡N	N-H	C=O									
b)	<p>Anion I</p>  <p>2 marks (1 mark for this alternative)</p>	2												

Question 4 continued

	Answer	Marks
c)	<p>J</p>  <p>K</p>  <p>L</p> 	3
d)	<p>Phenylamine</p>  <p>4-fluorobenzaldehyde</p> 	2

Question 4 continued

	Answer	Marks
e)	<p>O</p>  <p>P</p>  <p>or</p>  <p>Q</p>  <p>S</p>  <p>(Full credit should be given if phenyl rings are shown as C₆H₅, or Ph)</p>	4
f)	<p>U</p> 	1
Total for Question 4		23