

Multiple Choice Answers

Q1: D

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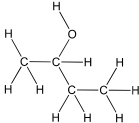
Q2: D

Q3: C

Multiple Choice Answers

Q4: C

Q5: D

6(a)	<p><i>displayed formula of butan-2-ol structure with O—H shown</i></p> 
6(b)(i)	2-bromobutane
6(b)(ii)	substitution
6(b)(iii)	<p><i>reagent</i> M1 NaCN or KCN</p>
	<p><i>conditions</i> M2 ethanolic AND heat (under reflux)</p>
6(b)(iv)	<p>(1) $\text{C}_4\text{H}_9\text{CN} + (1)\text{H}^+ + 2\text{H}_2\text{O} \rightarrow (1)\text{C}_4\text{H}_9\text{CO}_2\text{H} + (1)\text{NH}_4^+$ ✓✓ <i>correct organic product showing carboxylic acid functional group</i> M1 $\text{C}_4\text{H}_9\text{CO}_2\text{H}$ / $\text{C}_4\text{H}_9\text{COOH}$</p>
	M2 balanced equation with a $\text{C}_5\text{H}_{10}\text{O}_2$ or equivalent structure as product
6(b)(v)	2200–2250 (cm^{-1} due to) $\text{C}\equiv\text{N}$ / triple bond between C and N.