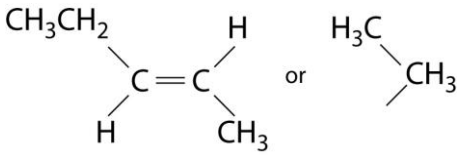
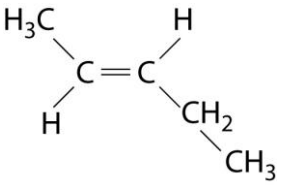
Answers to examination-style questions

Answers	Marks	Examiner's tips
1 2–aminopropanoic acid or 2–aminopropionic acid	**1**	
2 optically inactive; or equal mixture of enantiomers / optical isomers; planar carbonyl group (stated or drawn); attack from above or below (either side).	**3**	The **molecule** is not planar – only the carbonyl (C=O) group. Attack can be stated or drawn.
3 a) optical; equal mixture of enantiomers; plane polarised light; rotated in opposite/different directions	**4**	
b) carbocation; planar; attack from either side equally likely;	**3**	The planarity must refer to carbocation or intermediate.
4 a) 2–methylbutan–1–ol	**1**	
b) optical	**1**	
c)  allow $C_2H_5CH = CHCH_3$	**1**	
5 Same molecular formula and same structure but atoms are arranged differently in space.	**2**	An easy definition to learn. Make sure the difference between structural and stereoisomerism is known.
 no free rotation about the C=C; pent–2–ene;	**3**	
2–hydroxypropanoic acid; optical;	**2**	
plane polarised light; rotated by the same amount in opposite directions;	**2**	