

13. An introduction to AS Level organic chemistry

13.1 Formulas, functional groups and the naming of organic compounds

Paper 2

Marking Scheme

Q1.

(a)(ii)	propanenitrile	1
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Q2.

(a)(i)	3-methylbut-1-ene	1
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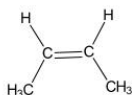
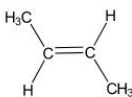
Q3.

(a)(ii)	2-hydroxypropanoic acid	1
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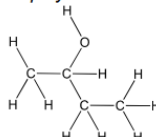
Q4.

(a)(i)	(compounds / molecules) containing only / entirely carbon and hydrogen (atoms)	1
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Q5.

(a)(i)		structural formula	name	4
	A	$\text{CH}_3\text{CH}_2\text{CH}=\text{CH}_2$	but-1-ene OR 1-butene	
	B		cis / Z but-2-ene OR cis / Z 2-butene	
	C		trans / E but-2-ene OR trans / E 2-butene	
	D	$\text{CH}_2=\text{C}(\text{CH}_3)_2$	(2) methyl prop(-1-)ene	
M1 correct identification of but-1-ene (for A) M2 correct identification of but-2-ene for B and C M3 identification of cis / trans (Z / E) for B and C (in correct order) M4 correct name of D				

Q6.

(a)	displayed formula of butan-2-ol structure with O—H shown 	1
(b)(i)	2-bromobutane	1

Q7.

(c)(i)	$C_{18}H_{15}P$	1
(c)(ii)	stage 1 = reduction stage 2 = substitution	2
(c)(iii)	$G = C_2H_5CH_2OH$ $H = C_2H_5CH=CHC_2H_5$	2

Q8.

(a)	(2,3-)dimethylbut-2-ene	1
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Q9.

(a)		1
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Q10.

(c)(i)	2(-)iodo(-)2(-)methylbutane	1
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Q11.

(a)	3-chloroprop-1-ene	1
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Q12.

(a)(i)	(n-)propyl ethanoate	1
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Q13.

(c)(i)	$C_3H_6O_2$	1
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Q14.

(a)(i)	(2,2-)dimethylpropanal	1
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