

20. Polymerisation

20.1 Addition polymerisation

Paper 2

Marking Scheme

Q1.

(c)(i)		1
	bromoethene	
(c)(ii)	 OR 	1

Q2.

(c)(i)		1
(c)(ii)	non-biodegradable OR poisonous / harmful HCl made when burnt	1

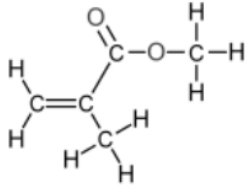
Q3.

(d)	 OR $\text{CH}_2\text{CH}(\text{CO}_2^{-}\text{Na}^{+})$ OR $\text{CH}_2=\text{CH}(\text{COO}^{-}\text{Na}^{+})$ OR , etc.	1
(e)(i)	carbon dioxide / CO_2	1
(e)(ii)	CO / hydrocarbons AND toxic / poisonous / harmful to health / (catalyses formation of) photochemical smog	1

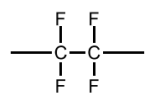
Q4.

(e)(vi)	 OR 	1
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Q5.

(c)(i)	$C_{12}H_{26} \rightarrow 2C_2H_4 + C_8H_{18}$	1
(c)(ii)	addition polymerisation	1
(c)(iii)	<i>two from</i> save space in landfill avoid litter prevent eyesore non-biodegradable conserves non-renewable resources harmful incineration products harmful to wildlife	2
(c)(iv)		
	correct monomer	1
	fully displayed	1

Q6.

(c)(i)	addition	1
(c)(ii)		1
(c)(iii)	molecule unreactive / inert	1
(c)(iv)	non-biodegradable creates toxic / harmful gases / HF / CO ₂ / CO if burnt	2