

ALCOHOLS & CARBOXYLIC ACIDS 2

MARK SCHEME

Q1.

Questions	Answers	Extra information	Marks
	CO ₂	note the order of these products must be correct wrong way round = 1 mark	1
	H ₂ O		1
Total marks			2

Q2.

Questions	Answers	Extra information	Marks
(a)	3		1
(b)	1		1
(c)	4		1
(d)	2		1
Total marks			4

Q3.

Questions	Answers	Extra information	Marks
(a)	2		1
(b)	2		1
(c)	3		1
(d)	2		1
Total marks			4

Q4.

Questions	Answers	Extra information	Marks
(a)	3		1
(b)	2		1
(c)	3		1
(d)	3		1
Total marks			4

Q5.

Questions	Answers	Extra information	Marks
(a)(i)	fermentation		1
(ii)	cloudy there is carbon dioxide / CO ₂		1 1
(b)(i)	(the amount of ethanol used) increases (from 1970) to 1989 then it decreases from 1989 (to 2000)	if no year(s) or incorrect year(s) indicated then max 1 correct year(s) only needs to be indicated once to gain full marks accept values in range 1987-1992	1 1
(ii)	any one from: Brazil had more oilfields cost of crude oil had decreased cost of ethanol / sugar (cane) had increased demand for ethanol / sugar (cane) had increased availability of ethanol / sugar (cane) had decreased climate change affects growing sugar (cane)	accept availability of land to grow sugar (cane) had decreased	1
Total marks			6

Q6.

Questions	Answers	Extra information	Marks
(i)	fermentation		1
(ii)	any two from: • sugar cane/plants absorb carbon dioxide • growing sugar cane/plants reduces global warming • renewable		2

	resource/sustainable		
(iii)	<p>any two from:</p> <ul style="list-style-type: none"> • destruction of habitats/forests (to grow sugar cane/crops) • fermentation releases carbon dioxide • production plants cause visual pollution • pollution from the transportation of sugar cane / Ethanol • growing sugar cane / plants uses a lot of land 		2
Total marks			5

Q7.

Questions	Answers	Extra information	Marks
	6		1
	oxygen		1
Total marks			2

Q8.

Questions	Answers	Extra information	Marks
(i)	raw materials are renewable	accept does not use crude oil	1
(ii)	alcohol does not need to be distilled	accept alcohol produced is pure	1
	process is continuous		1
Total marks			3