

# SEPARATION TECHNIQUES 4

## MARK SCHEME

**Q1.**

Question	Answer	Extra information	Marks
	W		1
	Y		1
Total marks			2

**Q2.**

Question	Answer	Extra information	Marks
	heat to vaporise (the crude oil)		1
	vapours condense		1
	at different temperatures		1
Total marks			3

**Q3.**

Question	Answer	Extra information	Marks
	by filtering /decanting/centrifuging (to remove yeast)	ignore sieving	1
	(fractional) distillation (to separate ethanol from water)	accept a description of (fractional) distillation	1
Total marks			2

**Q4.**

Question	Answer	Extra information	Marks
(a)	(improve) appearance	allow add colour allow these food colourings have not been proven to cause hyperactive behaviour in young children	1
(b)	X		1
(c)	any <b>three</b> from: <ul style="list-style-type: none"> <li>• S contains six / 6 colourings</li> <li>• P contains five / 5 colourings</li> <li>• both S and P contain the same five / 5 colourings</li> <li>• both contain W and Y</li> </ul>	if neither of first 2 bullet points given allow 1 mark for S contains more colours than P or converse	3

	<ul style="list-style-type: none"> <li>• both sweets (may) cause hyperactivity</li> <li>• neither contain X and Z</li> </ul>	ignore unsafe	
Total marks			5

**Q5.**

Question	Answer	Extra information	Marks
	filter / decant (to remove the yeast)	allow answers in either order accept description of decanting ignore sieve	1
	(fractional) distillation / distil	accept evaporation then condensation	1
Total marks			2