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**0 6** . **1** The hydrocarbon  $C_{16}H_{34}$  can be cracked.

Balance the equation for cracking  $C_{16}H_{34}$

[1 mark]



**0 6** . **2** Describe the differences between cracking and distillation.

[2 marks]

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**0 6** . **3** What type of reaction is cracking?

[1 mark]

Tick **one** box.

Combustion

Decomposition

Neutralisation

Precipitation



**Question 6**

Question	Answers	Extra information	Mark	AO / Spec. Ref.
06.1	4 (C <sub>2</sub> H <sub>4</sub> )		1	AO2/1 5.7.1.4
06.2	cracking involves a catalyst distillation does not <b>or</b> distillation does not involve a chemical change but cracking does		1 1	AO1/1 5.7.1.1 5.7.1.2
06.3	Decomposition		1	AO1/1 5.7.1.4

**Question 6 continues on the next page**

Question 6 continued

Question	Answers	Extra information	Mark	AO / Spec. Ref.
06.4	<b>Level 3:</b> A logically structured evaluation with links involving several comparisons. Nearly all points made are relevant and correct.		5–6	AO3/1b 5.10.1.1 5.10.2.1
	<b>Level 2:</b> Some valid comparisons made between the two types of bag. There may be some incorrect or irrelevant points.		3–4	
	<b>Level 1:</b> A vague response with few correct and relevant points and with no direct comparisons.		1–2	
	No relevant content		0	
	<b>Indicative content</b> Accept converse in terms of plastic bags for all statements <ul style="list-style-type: none"> <li>• Paper bags are made from a renewable resource</li> <li>• Plastic bags are made from a finite resource</li> <li>• Paper bags require more energy to manufacture</li> <li>• Paper bags produce more waste</li> <li>• Paper bags are biodegradable</li> <li>• Paper bags create more CO<sub>2</sub></li> <li>• CO<sub>2</sub> created by paper bags offset by photosynthesis in growing wood</li> <li>• Paper bag requires much more fresh water</li> <li>• Paper bags cannot be recycled</li> <li>• Agree because non-renewability less important than other factors <b>or</b> disagree because of converse <b>or</b> can't say because data inconclusive/incomplete</li> </ul>			
<b>Total</b>			<b>10</b>	