0 1   Crude oil is a mixture of hydrocarbons.

0 1 . 1   Complete the sentences.

Choose answers from the box.

[2 marks]

air	**enzymes**	**mud**	**plankton**	**trees**

Crude oil is the remains of _____ .

Millions of years ago biomass was buried under _____ .

0 1 . 2   There are three stages, **A**, **B** and **C**, in separating hydrocarbons from crude oil.

Stage **A**   Hydrocarbons evaporate

Stage **B**   Crude oil is heated

Stage **C**   Vapours condense

Give the correct order for stages **A**, **B** and **C**.

[1 mark]

First stage _____

Second stage _____

Third stage _____

0 1 . 3 What is the name of the process used in separating hydrocarbons from crude oil?

[1 mark]

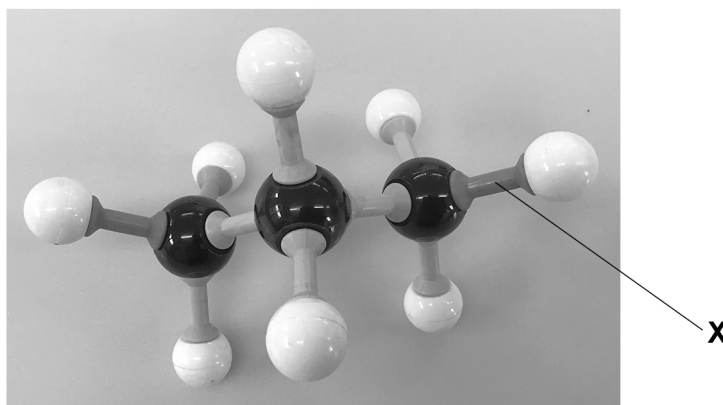Tick (✓) **one** box.

Chromatography ☐

Filtration ☐

Fractional distillation ☐

0 1 . 4 Alkanes are hydrocarbons.

Figure 1 represents an alkane.

Figure 1

What is the formula of the alkane in **Figure 1**?

[1 mark]

C _____ H _____

0 1 . 5 What does **X** represent in **Figure 1**?

[1 mark]

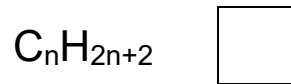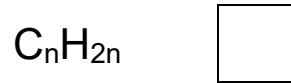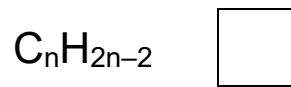Tick (✓) **one** box.

Covalent bond ☐

Ionic bond ☐

Metallic bond ☐

Turn over ▶

0 1 . 6 What is the general formula for alkanes?

[1 mark]

Tick (✓) **one** box.

C_nH_{2n-2} ☐

C_nH_{2n} ☐

C_nH_{2n+2} ☐

0 1 . 7 Hydrocarbons are used to make polymers. Polymers are used to make plastic bags.

In one year 8.0 billion plastic bags were used.

The next year there was a charge for plastic bags and only 1.3 billion plastic bags were used.

Calculate the decrease in the number of plastic bags used.

[1 mark]

Decrease = _____ billion

8

Question	Answers	Extra information	Mark	AO / Spec. Ref.
01.1	plankton mud	must be in this order	1 1	AO1 5.7.1.1
01.2	**B or** crude oil is heated **A or** hydrocarbons evaporate **C or** vapours condense	must be in this order all correct for **1** mark	1	AO1 5.7.1.2
01.3	fractional distillation		1	AO1 5.1.1.2 5.7.1.2
01.4	C_3H_8		1	AO2 5.7.1.1
01.5	covalent bond		1	AO2 5.2.1.4 5.2.2.4
01.6	C_nH_{2n+2}		1	AO1 5.7.1.1
01.7	6.7 (billion)	allow 6 700 000 000	1	AO2 5.10.2.2
Total			**8**	