

AQA, OCR, Edexcel

GCSE Science

GCSE Chemistry

Crude Oil and Cracking

Answers

M M E

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Total Marks: /37

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Crude oil, hydrocarbons and alkanes

Q1: Give a description of how crude oil is formed and where it is found?

A= Found in rocks (1 mark). It is the remains of plants/animals/fossils produced over millions of years (1 mark).

(2 marks)

Q2: What is crude oil mostly made up of?

A= It is a mixture of (1 mark) different length hydrocarbons (1 mark)

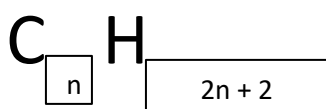
(2 marks)

Q3: What is the name given to the hydrocarbons that are found in crude oil?

A= Alkanes

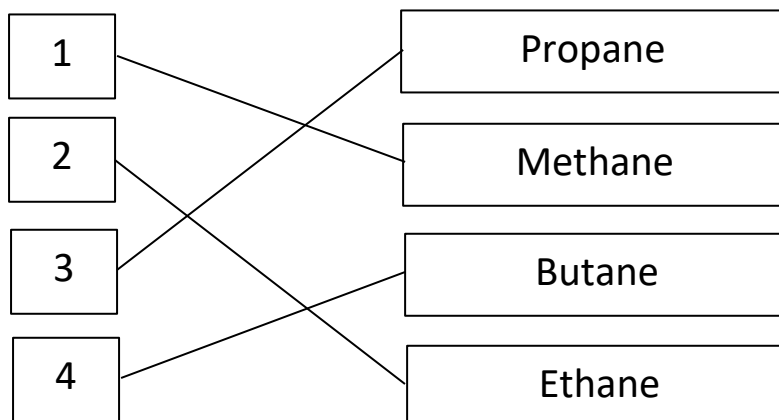
(1 mark)

Q4: Complete the general formula for the compounds found in crude oil.



(2 marks)

Q5: Match up the alkane with the number in the homologous series.



(4 marks)

Q6: Draw the alkane with the formula C_4H_{10} .

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Properties of hydrocarbons

Q11: Give two examples of properties of hydrocarbons that are dependent upon the size of the hydrocarbon molecule.

A= boiling point, viscosity and flammability

(2 marks)

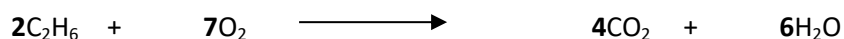
Q12: Complete the sentences using the words in the boxes.

The combustion of hydrocarbon fuels releases **energy (1 mark)**. During combustion, the **carbon (1 mark)** and **hydrogen (1 mark)** in the fuels are oxidised.

The complete combustion of a hydrocarbon produces **carbon dioxide (1 mark)** and **water (1 mark)**.

(5 marks)

Q13: Balance the equation for the complete combustion of this hydrocarbon.



(4 marks)

Cracking and alkenes

Q14: What is cracking?

A= Hydrocarbons are broken down (1 mark) to produce smaller more useful molecules (1 mark).

(2 marks)

Q15: Give an example of a method by which cracking can be carried out.

A= catalytic cracking/ steam cracking

(1 mark)

Q16: Alkenes along with alkanes can be produced from cracking. How do we test for alkenes and what do we see?

A= tested with bromine water (1 mark) it will turn bromine water colourless (1 mark).

(2 marks)

Q17: What are alkenes used for?

A= they are used to produce polymers/ are the starting material for other chemicals .

(1 mark)