

Fractional distillation of crude oil

Q1. (2018)

A)

0 6

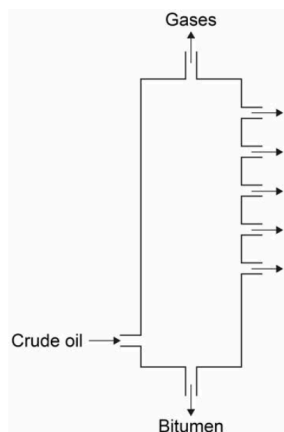
Crude oil is a mixture of hydrocarbons.

0 6 . 1

The hydrocarbons in crude oil are separated into fractions by fractional distillation.

Figure 13 shows a fractional distillation column.

Figure 13



Crude oil vapour passes up the column.

Complete the sentence.

Choose the answer from the box.

[1 mark]

condenses

dissolves

freezes

melts

Each fraction _____ at a different level.

B)

0 6 . 2

Why do the fractions separate?

[1 mark]

Tick **one** box.

The fractions have different boiling points.

☐

The fractions have different flammability.

☐

The fractions have different melting points.

☐

The fractions have different viscosity.

☐

Q2. (2020)

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 _____

Q3. (2020)

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 ☐

Q4. (2023)

0 1 . 4 The hydrocarbons in crude oil are separated into fractions using fractional distillation.

Complete the sentences.

Choose answers from the box.

[2 marks]

condense

evaporate

freeze

melt

In fractional distillation the crude oil is heated so

the hydrocarbons _____.

The fractions collect as the hydrocarbons cool and _____.

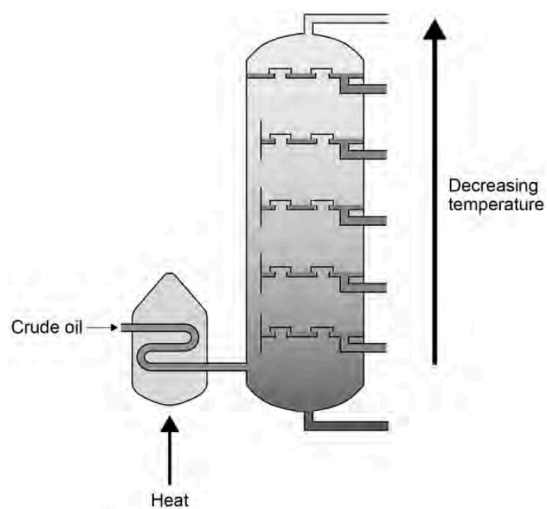
Q5. (2024)

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 Crude oil is a mixture of hydrocarbons.

Figure 4 represents industrial equipment used to separate crude oil into fractions.

Figure 4



Explain how crude oil is separated into fractions.

Use **Figure 4**.

[4 marks]