

O Level Combined Chemistry MCQs

Fractional Distillation of Crude Oil Test 1.0

Q1

When crude oil is distilled, several products are obtained. What is the correct order of their boiling points?

	lowest boiling point \longrightarrow			highest boiling point
A	diesel	paraffin	petrol	lubricating oil
B	paraffin	petrol	lubricating oil	diesel
C	petrol	paraffin	diesel	lubricating oil
D	petrol	diesel	lubricating oil	paraffin

Q2

Octane is a fuel that is found in petrol. Which of the following statements is true about octane?

- A Combustion of octane is an endothermic process.
- B It has a higher boiling point than methane.
- C It is an unsaturated compound.
- D It undergoes addition reaction with bromine.

Q3

In how many of the following can kerosene be used as the energy source?

aircraft	air conditioning units	cars
domestic cooking	heavy lorries	power stations

- A 1
- B 2
- C 3
- D 4

Q4

The following useful products were obtained by cracking a long-chained alkane:

product	use
X	used as a fuel
Y	used to make plastics

What could be the products X and Y?

	X	Y
A	ethanol	propane
B	hydrogen	ethene
C	methane	ethane
D	steam	ethene

Q5

Which fractions obtained from the distillation of petroleum are commonly used as fuels in engines?

- A petrol, diesel and paraffin
- B methane and naphtha
- C naphtha and bitumen
- D petrol, paraffin and bitumen

Q6

Crude oil is fractionally distilled into useful fractions.

Which option matches the fraction to its use?

	fraction	use
A	bitumen	feedstock for the petrochemical industry
B	diesel oil	fuel for aircraft engines
C	petrol	fuel for engines in buses, lorries and trains
D	petroleum gas	fuel for cooking and heating

Q7

The table shows the boiling point of four fractions, T, U, V and W, obtained when crude oil is fractionally distilled.

fraction	T	U	V	W
boiling range/°C	40 – 75	150 – 240	300 – 350	> 350

Which statement is correct?

- A Fraction T contains smaller molecules than Fraction V.
- B Fraction T has a higher percentage of carbon than Fraction W.
- C Fraction U is more flammable than Fraction T.
- D Fraction V is more viscous than Fraction W.

Q8

Which statement about petroleum is not correct?

- A It can be separated into useful substances by fractional distillation.
- B It consists mainly of hydrocarbons.
- C It is found underground in many parts of the world.
- D Its main use is for making lubricants and polishes.

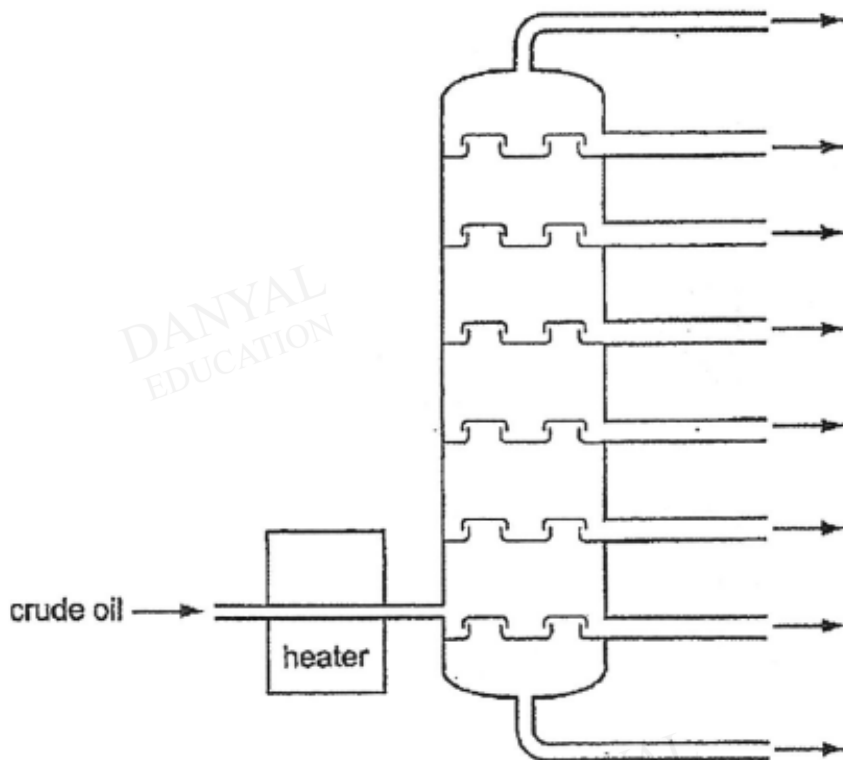
Q9

Which is the correct use of the different fractions in crude oil?

	fraction	use
A	bitumen	lubricating machine parts
B	kerosene	fuel for aircraft
C	naphtha	pave road
D	petrol	making chemicals

Q10

The diagram shows the apparatus used in fractional distillation of crude oil.



Which statement about the fractional distillation of crude oil is correct?

- A The molecules collected at the bottom of the column are the most flammable.
- B The molecules collected at the bottom of the column have the lowest boiling point.
- C The molecules collected at the top of the column are used as fuel for buses and lorries.
- D The molecules reaching the top of the column have the smallest relative molecular masses.

Answers

Fractional Distillation of Crude Oil Test 1.0

Q1 C

Q2 B

Q3 B

Q4 B

Q5 A

Q6 D

Q7 A

Q8 D

Q9 B

Q10 D

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