

Past-paper walk-through

Fuels ■ 11.3

eXercise

Questions in this set

- 0620/21 N25 Q32 ■ 1 mark
- 0620/22 N25 Q36 ■ 1 mark
- 0620/22 J25 Q34 ■ 1 mark

Question 32

0620/21 N25 ■ Q32 ■ 1 mark

32 Petroleum is separated by fractional distillation.

Which statement about the fractions produced is correct?

- A** Bottled gas for heating and cooking is obtained from the naphtha fraction.
- B** Diesel oil is used as a fuel for jet aircraft.
- C** Substances used to make polishes are obtained from the lubricating fraction.
- D** The kerosene fraction contains many useful waxes.

Solution 32

Answer: **C**

Why

- Fractions come off in order of boiling point, shortest chains first.
- Refinery gas – not naphtha – supplies bottled gas for heating and cooking.
- Match each fraction to its own use: naphtha is a chemical feedstock and kerosene is jet fuel.

Question 36

0620/22 N25 ■ Q36 ■ 1 mark

36 Which row shows the products obtained by the cracking of a large alkane?

	alkene	hydrogen	water
A	✓	✓	✓
B	✓	✓	✗
C	✓	✗	✓
D	✗	✓	✓

key

✓ = yes

✗ = no

Solution 36

Answer: **B**

Why

- Cracking splits a long alkane into a shorter alkane and an alkene.
- Hydrogen can also be released.
- No water is produced – there is no oxygen involved anywhere in cracking.

Question 34

0620/22 J25 ■ Q34 ■ 1 mark

34 Petroleum can be separated into useful fractions by fractional distillation.

Which row shows a correct use of the named fraction?

	fraction	use
A	bitumen	lubricant
B	naphtha	fuel for home heating
C	kerosene	jet fuel
D	refinery gas	making chemicals

Solution 34

Answer: **C**

Why

- Fractions come off in order of boiling point, and their uses follow their chain length.
- Kerosene is the aircraft fuel; bitumen is used for road surfaces, not lubrication.
- Naphtha is a chemical feedstock, so “jet fuel from kerosene” is the correct pairing.