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ORGANIC CHEMISTRY

Organic Compounds: Organic compounds are compounds containing carbon.
Exceptions are carbondioxide and calcium carbonates.

Hydrocarbons: Hydrocarbons are the compounds containing **Hydrogen** and **Carbon only.**

Fossil fuels: Fuels are substances that burnt easily to give out thermal energy.

eg Coal (solid fossil fuel made up of carbon)

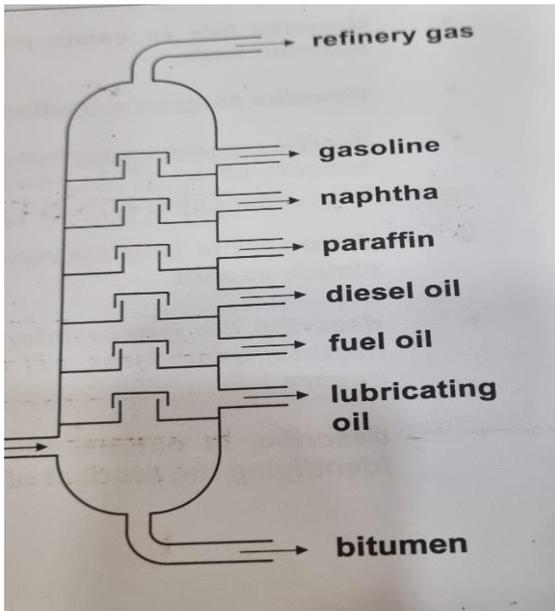Natural gas(gaseous which is made up of methane)

Petroleum also called as crude oil (liquid and it is a mixture of hydrocarbons)

hydrocarbons in petroleum is separated by fractional distillation of crude oil. They are

separated because of difference in there boiling points. First petroleum is heated

and it vaporised in to column. As the hot vapour rises up it begins to cool and condense,Lighter

fractions have low boiling point so collected at the top of column. Heavier fractions have higher

boiling point so collected at the lower sections of the fractionating column.

The smaller the molecule, the lower the boiling point.This is because
there are **weak intermolecular** *forces of attraction and so* a small amount of
energy is required to overcome these forces.

The larger the molecule , the higher the boiling point.*This is because*
there are **stronger intermolecular forces of attraction** *and so more*
energy is required to overcome these forces of attraction.

"
boiling temperature increases and the length of carbon chain *increases going down the column.*"

Refinery gas : *for bottled gas for heating and cooking*
gasoline fraction: *fuel (petrol) in cars*
Naphtha: for making chemicals
Paraffin/kerosene: *for jet fuel*
Diesel oil/gas oil: *fuel in diesel engines*
fuel oil: *fuel for ships and home heating systems*
Lubricating oils: *for lubricants , waxes and polishes*
Bitumen: for making roads

fraction	number of C atoms	state	melting and boiling point	density
refinery gas	1–4	gas	increases	increases
gasoline	5–10	liquid		
kerosene	10–16	liquid		
diesel oil	16–20	liquid		
fuel oil	20–30	liquid		

Flammability
Decreases