



MEGA LECTURE

TOPIC 7 Exercise 4 – Fractional Distillation, Cracking and Combustion

1. Petroleum is separated into its fractions by fractional distillation
 - a) What are fractions?
 - b) Explain how a fractionating column works in five key points.
 - c) Write a list of the fractions, in order of increasing boiling point, and give a use for each.
 - d) Why is fractional distillation important?

2. Many of the fractions are then subjected to a process called cracking.
 - a) Name the two types of cracking. State the conditions required for each and give one useful product of each process.
 - b) Why is cracking economically important?

3. Most of the fractions produced during fractional distillation are used as fuels.
 - a) Write an equation for the complete combustion of octane.
 - b) Write two equations for the incomplete combustion of octane.
 - c) Give two reasons why incomplete combustion is undesirable.

4.
 - a) Identify five pollutants produced during the combustion of alkanes.
 - b) Explain why each is harmful.
 - c) Explain how two of these pollutants are removed from exhaust fumes. Write an equation to illustrate your answer.

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