



# Organic Chemistry Multiple Choice Questions

## Set 2

You may use a periodic table to help you answer these questions.

Tick **one** box.

1. Crude oil is formed mainly from the remains of which organisms?

- A. plankton ☐
- B. seaweed ☐
- C. shellfish ☐
- D. whales ☐

2. What is a hydrocarbon molecule made of?

- A. a mixture of elements ☐
- B. carbon and hydrogen atoms only ☐
- C. carbon, hydrogen and oxygen atoms ☐
- D. water and carbon particles ☐

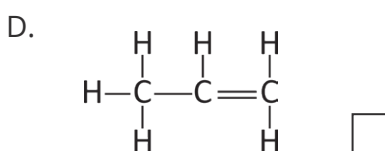
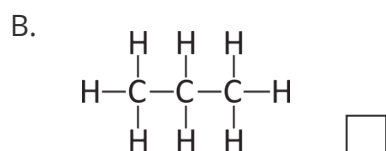
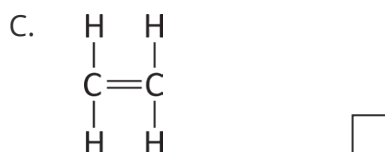
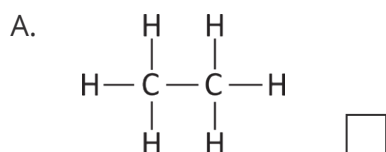
3. Which method is used to separate crude oil?

- A. chromatography ☐
- B. crystallisation ☐
- C. filtration ☐
- D. fractional distillation ☐

4. What is the trend in the viscosity of hydrocarbons as the size of the hydrocarbon molecule increases?

- A. the viscosity decreases ☐
- B. the viscosity increases ☐
- C. the viscosity stays the same ☐
- D. there is no clear relationship between the viscosity and the size of the molecule ☐

5. Which displayed formula below represents propane?



6. What is the correct word equation for the complete combustion of propane?
- A. propane + oxygen  $\rightarrow$  propane oxide ☐
- B. propane + oxygen  $\rightarrow$  carbon dioxide + hydrogen ☐
- C. propane + oxygen  $\rightarrow$  carbon dioxide + water ☐
- D. propane + oxygen  $\rightarrow$  carbon monoxide + water ☐
7. What is the name of the molecule represented by the formula  $C_4H_{10}$ ?
- A. butane ☐
- B. butene ☐
- C. propane ☐
- D. propene ☐
8. Which of the following conditions is required for both catalytic cracking and steam cracking?
- A. high pH ☐
- B. high temperature ☐
- C. low pH ☐
- D. low temperature ☐
9. Which of the following is a correct balanced equation for the cracking of decane?
- A.  $C_{10}H_{22} \rightarrow C_8H_{18} + C_2H_4$  ☐
- B.  $C_{10}H_{22} \rightarrow C_5H_{11} + C_5H_{11}$  ☐
- C.  $C_{10}H_{22} \rightarrow C_8H_{18} + C_2H_6$  ☐
- D.  $C_{10}H_{22} \rightarrow C_6H_{14} + C_4H_{10}$  ☐
10. A student had two hydrocarbons, labelled as X and Y. They added a few drops of bromine water to each hydrocarbon. When added to X, the bromine water did not change colour, but when added to Y, the bromine water changed from orange to colourless. What can the student conclude about X and Y?
- A. both X and Y are alkanes ☐
- B. both X and Y are alkenes ☐
- C. X is an alkane and Y is an alkene ☐
- D. X is an alkene and Y is an alkane ☐