

A Level Chemistry B (Salters)
H433/01 Fundamentals of chemistry

Developing Fuels

Question Set 2

Multiple Choice Questions

1 Polymer **X** is $-\text{CH}(\text{OH})-\text{CH}(\text{COOCH}_3)-\text{CH}(\text{OH})-\text{CH}(\text{COOCH}_3)-$

What is the monomer of polymer **X**?

- A $\text{CH}(\text{OH})-\text{CH}(\text{COOH})$
- B $\text{C}(\text{OH})=\text{C}(\text{COOCH}_3)-\text{C}(\text{OH})=\text{C}(\text{COOCH}_3)$
- C $\text{CH}(\text{OH})=\text{CH}(\text{COOCH}_3)$
- D $\text{CH}_2-\text{CH}(\text{COOH})$

Your answer

[1]

2 An engine runs on ethanol.

What would **not** be found in the exhaust from this engine?

- A SO_2
- B CO_2
- C NO
- D CO

Your answer

[1]

3 Why are many bond enthalpies described as *averages*?

- A They are averaged out over many molecules with different kinetic energies.
- B They are averaged out over different compounds containing the same bond.
- C They are the averages of the bond in liquid and gaseous compounds.
- D They are average values from different data books.

Your answer

[1]

4 What is the correct name of an isomer of pent-1-ene?

- A cyclopentene
- B pent-4-ene
- C 1-methylbut-2-ene
- D 3-methylbut-1-ene

Your answer

[1]

5 Which statement about NO_x pollution is correct?

- A It is only produced in petrol engines.
- B It can cause acid rain.
- C It is not removed at all by catalytic converters.
- D It consists mainly of NO₃ gas.

Your answer

[1]

6 What is the volume of CO₂ (in dm³) measured at RTP when 20g CaCO₃ completely decompose?

- A 0.20
- B 2.4
- C 4.8
- D 24

Your answer

[1]

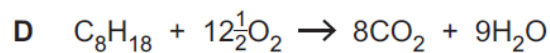
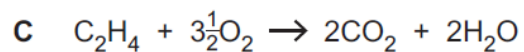
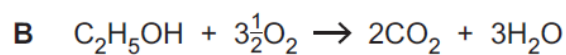
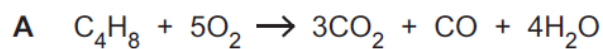
7 In which row of the table does the formula match the systematic name and the homologous series?

	Formula	Systematic name	Homologous series
A	C ₆ H ₁₂	cyclohexane	cycloalkane
B	C ₅ H ₁₁ OH	pentan-1-ol	aldehyde
C	C ₃ H ₆	prop-1-ene	alkane
D	C ₇ H ₁₆	septane	alkane

Your answer

[1]

8 Which equation is correct?



Your answer

[1]

9 Sodium carbonate and hydrochloric acid react as follows.



0.010 mol of Na_2CO_3 is mixed with 0.015 mol of HCl . What volume of CO_2 is formed (in cm^3 at RTP)?

A 180

B 240

C 360

D 720

Your answer

[1]

Total Marks for Question Set 2: 9

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