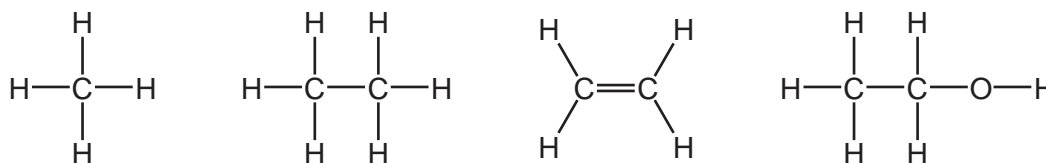


1 Which formula is that of an alkene?

- A** C<sub>2</sub>H<sub>6</sub>                      **B** C<sub>3</sub>H<sub>6</sub>                      **C** C<sub>3</sub>H<sub>8</sub>                      **D** C<sub>4</sub>H<sub>10</sub>

2 The structures of four organic compounds are shown.



Which statement is **not** correct?

- A** Only one of the compounds is an alcohol.  
**B** Only one of the compounds is an alkane.  
**C** Only one of the compounds is unsaturated.  
**D** Only three of the compounds are hydrocarbons.

3 Which statement about alkane molecules is correct?

- A** They burn in oxygen.  
**B** They contain carbon, hydrogen and oxygen atoms.  
**C** They contain double bonds.  
**D** They contain ionic bonds.

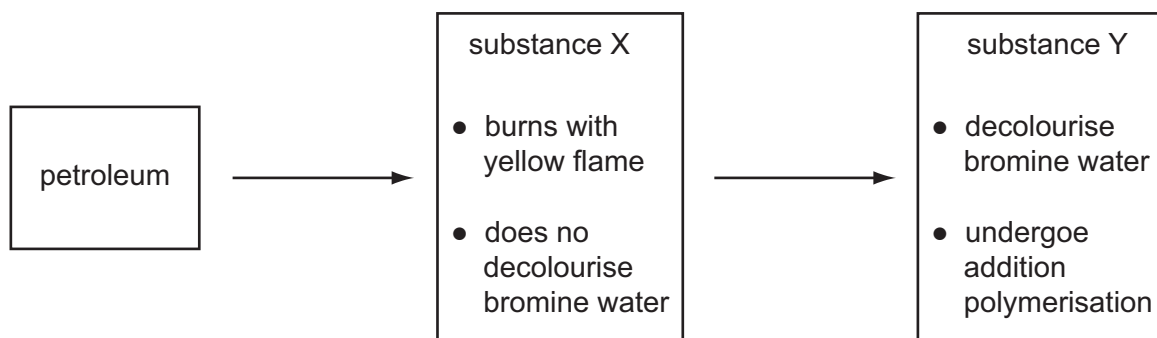
4 Which statement about alkanes is correct?

- A** Ethane has one more carbon atom and one more hydrogen atom than methane.  
**B** They are converted to alcohols by reaction with steam.  
**C** They contain carbon-carbon double bonds.  
**D** They form carbon dioxide and water on combustion.

5 Which substance is methane?

	volatility	electrical conductivity at room temperature	solubility in water
<b>A</b>	high	good	soluble
<b>B</b>	high	poor	insoluble
<b>C</b>	low	good	soluble
<b>D</b>	low	poor	insoluble

6 The diagram shows a flow diagram.



Which type of organic compounds are X and Y?

	substance X	substance Y
<b>A</b>	alcohol	alkane
<b>B</b>	alkane	alkene
<b>C</b>	alkene	alkane
<b>D</b>	alkane	alcohol

7 Which columns describe the hydrocarbons ethane and ethene?

	1	2	3	4
state at room temperature	gas	gas	liquid	liquid
reaction with oxygen	burns	burns	burns	burns
reaction with aqueous bromine	no reaction	decolourises bromine	no reaction	decolourises bromine

- A 1 (ethane) and 2 (ethene)
- B 1 (ethane) and 4 (ethene)
- C 2 (ethene) and 3 (ethane)
- D 3 (ethane) and 4 (ethene)

8 Which equation represents incomplete combustion of ethane?

- A  $C_2H_6 + O_2 \rightarrow 2CO + 3H_2$
- B  $C_2H_6 + 2O_2 \rightarrow 2CO_2 + 3H_2$
- C  $2C_2H_6 + 5O_2 \rightarrow 4CO + 6H_2O$
- D  $2C_2H_6 + 7O_2 \rightarrow 4CO_2 + 6H_2O$

9 What is the main constituent of natural gas?

- A carbon dioxide
- B ethane
- C hydrogen
- D methane

10 The table shows the formulae of members of the alkane series.

name of compound	formula
methane	$\text{CH}_4$
ethane	$\text{C}_2\text{H}_6$
propane	?
butane	$\text{C}_4\text{H}_{10}$
pentane	$\text{C}_5\text{H}_{12}$

What is the formula of propane?

