

1 Ethene forms an addition polymer as shown.



Which terms describe this polymer?

- A** a saturated compound called poly(ethane)
 - B** a saturated compound called poly(ethene)
 - C** an unsaturated compound called poly(ethane)
 - D** an unsaturated compound called poly(ethene)
- 2 Which statement about carboxylic acids is **not** correct?
- A** Aqueous ethanoic acid has a pH below pH 7.
 - B** They contain the functional group -COOH .
 - C** They produce carbon dioxide when reacted with a metal carbonate.
 - D** Methyl orange turns yellow in aqueous ethanoic acid.
- 3 What are the properties of a dilute solution of ethanoic acid?

	smell	appearance
A	odourless	colourless
B	odourless	red
C	pungent smell	colourless
D	pungent smell	red

4 Which statements are correct for ethanoic acid?

- 1 It contains a carbon-oxygen double bond.
- 2 It contains two carbon atoms.
- 3 It decolourises bromine water.
- 4 It contains an –OH group.

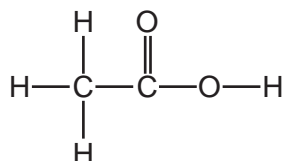
A 1 and 2 only

B 1 and 3

C 1, 2 and 4

D 2, 3 and 4

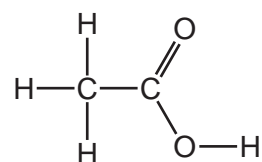
5 The structure of a compound, Y, is shown.



Which row describes some of the physical properties of Y?

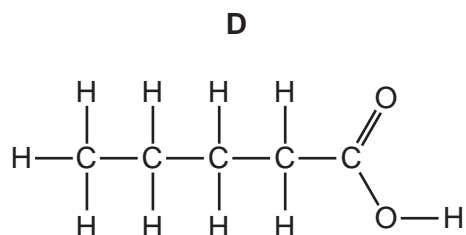
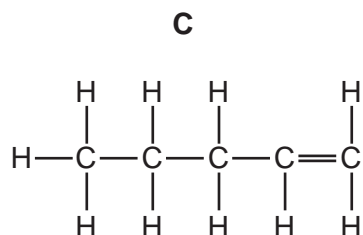
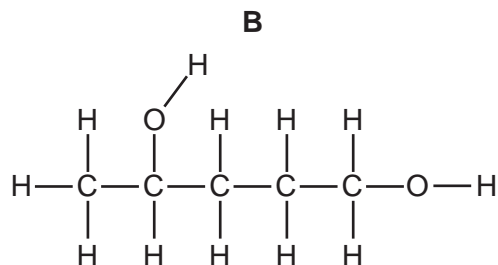
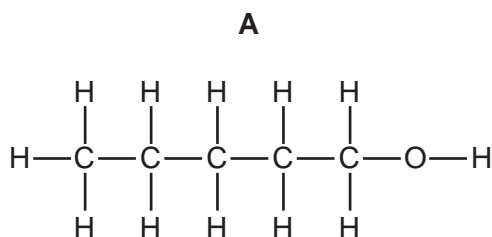
	colourless	characteristic smell	dissolves in water
A	no	no	no
B	no	no	yes
C	yes	yes	no
D	yes	yes	yes

6 Which statement describes the compound shown below?



- A** It is a colourless flammable gas.
- B** It is a liquid which decolourises bromine water.
- C** It is a liquid with a characteristic smell.
- D** It is formed when ethane reacts with steam.

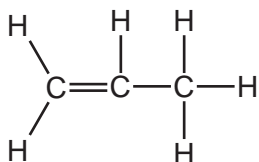
7 Which diagram shows the structure of pentanoic acid?



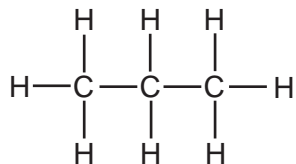
8 Three types of organic compound are alkanes, alkenes and alcohols.

Which structure does **not** belong to any of these three types of compound?

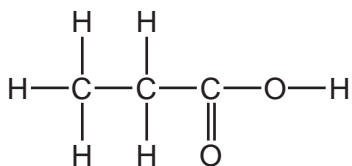
A



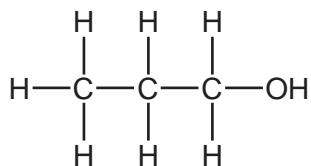
B



C

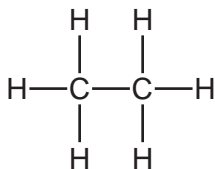


D

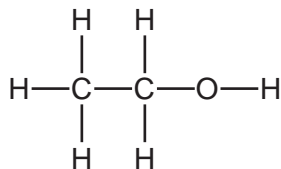


9 Which structure shows a carboxylic acid?

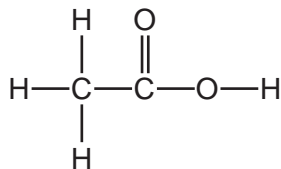
A



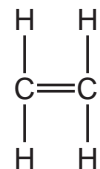
B



C



D



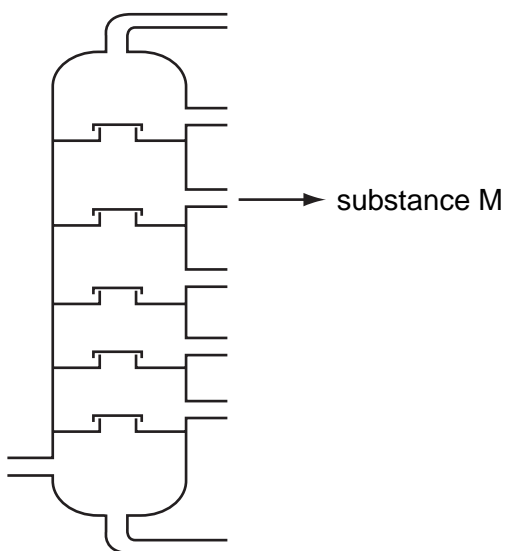
10 The table shows bonds that are present and bonds that are not present in compound X.

bond	
C-C	✓
C=C	x
C-H	✓
C-O	✓
C=O	✓
O-H	✓

What type of compound is X?

- A a carboxylic acid
- B an alcohol
- C an alkane
- D an alkene

11 The diagram shows an industrial process. Substance M is one of the substances produced by this process and is used as aircraft fuel.



What is this process and what is substance M?

	process	substance M
A	fractional distillation	paraffin
B	fractional distillation	petrol
C	thermal decomposition	paraffin
D	thermal decomposition	petrol