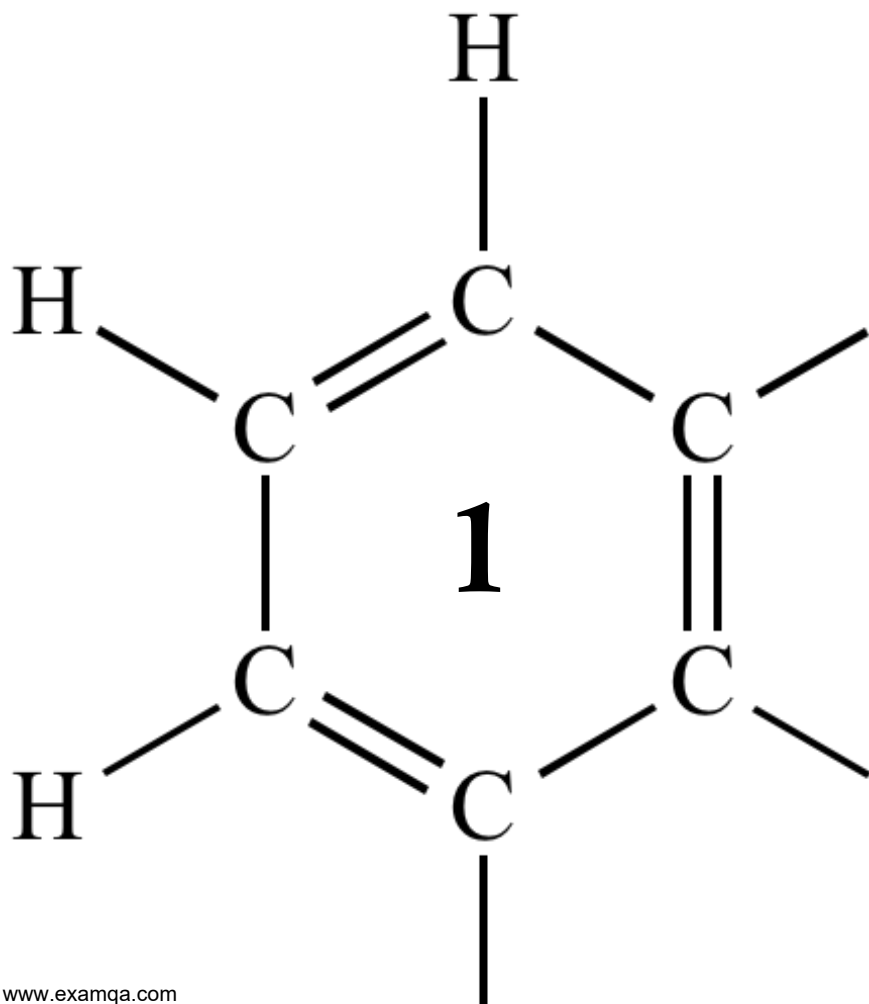


AQA A2 CHEMISTRY
ISOMERISM ~ CARBONYLS

ALCOHOLS

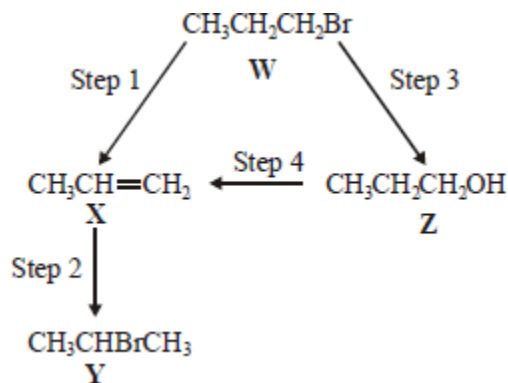


1 Which one of the following is **not** a correct general formula for the non-cyclic compounds listed?

- A alcohols $C_nH_{2n+2}O$
- B aldehydes $C_nH_{2n+1}O$
- C esters $C_nH_{2n}O_2$
- C primary amines $C_nH_{2n+3}N$

(Total 1 mark)

2 For this question refer to the reaction scheme below.



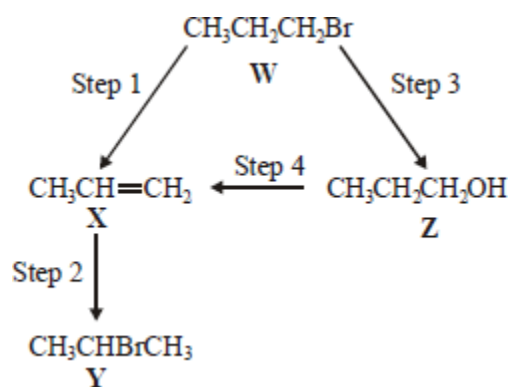
Which one of the following statements is **not** correct?

- A Reaction of **W** with sodium cyanide followed by hydrolysis of the resulting product gives propanoic acid.
- B Mild oxidation of **Z** produces a compound that reacts with Tollens' reagent, forming a silver mirror.
- C **Z** reacts with ethanoic acid to produce the ester propyl ethanoate.
- C **W** undergoes addition polymerisation to form poly(propene).

(Total 1 mark)

3

For this question refer to the reaction scheme below.



Which one of the following statements is **not** correct?

- A** **W** and **Y** are structural isomers.
- B** **Z** is a primary alcohol.
- C** **Y** gives two peaks in its proton n.m.r. spectrum.
- C** **X** has geometrical isomers.

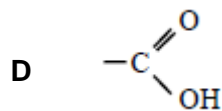
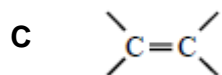
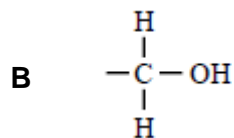
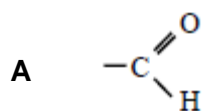
(Total 1 mark)

4

Certain chemical tests were performed on the pain-relief drug ibuprofen. The results of these tests are given in the table below.

Test	Result
Aqueous sodium carbonate	Effervescence
Bromine water	Remained orange
Acidified potassium dichromate(VI) and heat	Remained orange
Fehling's solution and heat	Remained blue

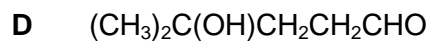
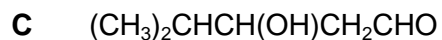
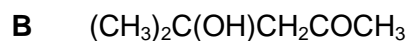
Which one of the following functional groups do these results suggest that ibuprofen contains?



(Total 1 mark)

5

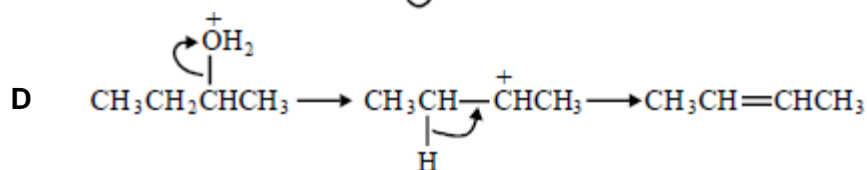
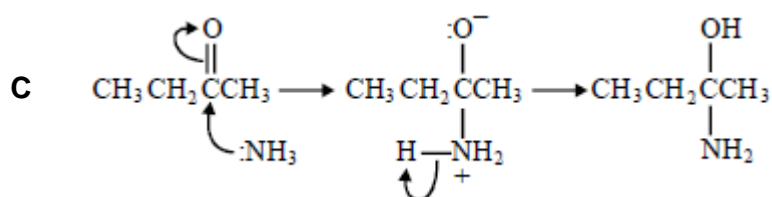
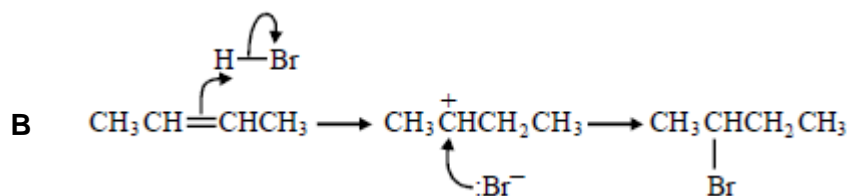
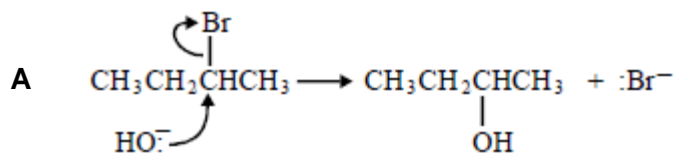
Which one of the following isomers is not oxidised under mild reaction conditions?



(Total 1 mark)

6

In which of the following is a curly arrow used incorrectly?



(Total 1 mark)

7

CH_2O is the empirical formula of

- A methanol
- B methyl methanoate
- C ethane-1,2-diol
- D butanal

(Total 1 mark)

8

Which one of the following does **not** represent an oxidation?

- A propene \rightarrow propane
- B propan-1-ol \rightarrow propanal
- C propan-1-ol \rightarrow propanoic acid
- D propanal \rightarrow propanoic acid

(Total 1 mark)

9

Which one of the following is **not** a suitable method for the preparation of ethanol?

- A oxidation of ethane
- B hydration of ethene
- C reduction of ethanal
- D hydrolysis of bromoethane

(Total 1 mark)