

# 14.6 Alcohols

## Question Paper

Level	IGCSE
Subject	Chemistry (0620)
Exam Board	Cambridge International Examinations (CIE)
Topic	Organic Chemistry
Sub-Topic	14.6 Alcohols
Booklet	Question Paper

**Time Allowed:** 32 minutes

**Score:** /26

**Percentage:** /100

**Grade Boundaries:**

A*	A	B	C	D	E	U
>85%	75%	60%	45%	35%	25%	<25%

1 What is used in the production of ethanol from ethene?

- A hydrogen and oxygen
- B oxygen only
- C steam
- D yeast

2 Which term describes the formation of ethanol from glucose?

- A cracking
- B distillation
- C fermentation
- D polymerisation

3 Which statement about ethanol is correct?

- A It burns in air to form ethene and water.
- B It is prepared from ethene by fermentation.
- C It is prepared from glucose in an addition reaction.
- D It is the only product when ethene reacts with steam.

4 Ethanol can be formed by

- 1 fermentation
- 2 reaction between steam and ethene

Which of these processes uses a catalyst?

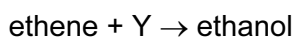
	1	2
<b>A</b>	✓	✓
<b>B</b>	✓	x
<b>C</b>	x	✓
<b>D</b>	x	x



8 Which row correctly describes the production of ethanol and its properties?

	can be made from glucose	can be made from ethene	is used as a fuel	is used as a solvent
<b>A</b>	✓	✓	✓	✓
<b>B</b>	✓	x	✓	✓
<b>C</b>	x	✓	✓	x
<b>D</b>	x	✓	x	✓

9 Ethene reacts with Y to produce ethanol.



What is Y?

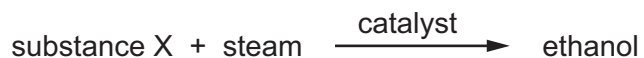
- A** hydrogen
- B** oxygen
- C** steam
- D** yeast

10 Ethanol is made by fermentation.

How is ethanol obtained from the fermentation mixture?

- A** chromatography
- B** crystallisation
- C** electrolysis
- D** fractional distillation

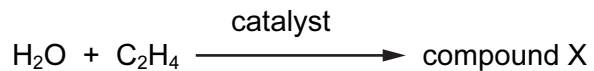
11 Ethanol can be manufactured from substance X.



What is substance X?

- A** carbon dioxide
- B** ethene
- C** hydrogen
- D** oxygen

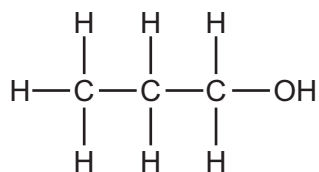
12 The equation shows an industrial process.



What is the name of compound X?

- A ethane
- B ethanoic acid
- C ethanol
- D methanol

13 Which type of compound is shown?



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

14 Which statements about ethanol are correct?

- 1 It can be made by fermentation.
- 2 It is an unsaturated compound.
- 3 It burns in air and can be used as a fuel.

- A 1, 2 and 3      B 1 and 2 only      C 1 and 3 only      D 2 and 3 only

15 Ethanol is produced from either ethene or sugar.

Which type of chemical reaction is used in each case?

	ethene → ethanol	sugar → ethanol
<b>A</b>	addition	fermentation
<b>B</b>	addition	fractional distillation
<b>C</b>	distillation	fermentation
<b>D</b>	distillation	fractional distillation

16 The table shows the boiling points of four members of the homologous series of alcohols.

compound		boiling point / °C
name	formula	
methanol	CH <sub>3</sub> OH	65
ethanol	C <sub>2</sub> H <sub>5</sub> OH	78
propanol	C <sub>3</sub> H <sub>7</sub> OH	X
butanol	C <sub>4</sub> H <sub>9</sub> OH	117

What is the value of X?

- A** 55 °C      **B** 82 °C      **C** 98 °C      **D** 115 °C

17 Which of the statements about ethanol are correct?

- 1 Ethanol can be formed by an addition reaction.
- 2 Ethanol can be formed by fermentation.
- 3 When ethanol burns in air, it forms carbon dioxide and water.

- A** 1, 2 and 3      **B** 1 and 2      **C** 1 and 3      **D** 2 and 3

18 Which process is **not** used during the production of ethanol?

- A addition of steam to ethene
- B fermentation
- C fractional distillation
- D reacting ethane with oxygen

19 Which row is correct for ethanol?

	burns	made by fermentation
A	✓	✓
B	✓	x
C	x	✓
D	x	x

20 Which statement about ethanol is **not** correct?

- A It can be used as a fuel.
- B It can be used as a solvent.
- C It is formed by reaction between steam and ethane.
- D Its functional group is –OH.

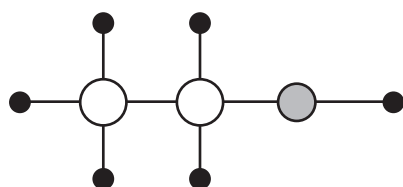


21 Ethanol is an important chemical produced by the .....1..... of .....2..... .

Which words correctly complete gaps 1 and 2?

	1	2
<b>A</b>	combustion	ethane
<b>B</b>	combustion	glucose
<b>C</b>	fermentation	ethane
<b>D</b>	fermentation	glucose

22 The diagram represents the molecule of an organic compound.



key

○ = carbon

● = oxygen

● = hydrogen

What is the name of the compound?

- A** ethane
- B** ethanoic acid
- C** ethanol
- D** ethene

23 When glucose is fermented, ethanol is formed together with

- A** carbon dioxide.
- B** ethene.
- C** methane.
- D** oxygen.

- 24 Compounds containing five carbon atoms in a molecule may have names beginning with 'pent...'.  
What is the name of the compound shown?



key

○ = carbon

● = oxygen

● = hydrogen

- A** pentane  
**B** pentanoic acid  
**C** pentanol  
**D** pentene
- 25 What is **not** essential for the formation of ethanol by fermentation?
- A** light  
**B** sugar  
**C** yeast  
**D** water
- 26 Ethene reacts with Y to produce ethanol.



What is Y?

- A** hydrogen  
**B** oxygen  
**C** steam  
**D** yeast