ENGLAND GCSE CHEMISTRY OCR TWENTY FIRST CENTURY HIGHER · UNIT 3 · 25 QUESTIONS

Chemicals of the Natural Environment — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button so it can be fixed.

1 **Lemons contain citric acid. What do acids make with metals?**

- A a salt and water, never hydrogen
- B water only, nothing else
- C a salt and oxygen gas
- D a salt and hydrogen

Understand It with Pulse | Flag a mistake

2 **Silver coins conduct electricity well. Why?**

A they are shiny and reflective

B they are cold

C they have free electrons

D they are heavy

Understand It with Pulse | Flag a mistake

3 **A thermometer shows a patient's temperature is 39 degrees Celsius. Is this above or below normal body temperature?**

A below normal

B above normal

C impossible to tell

D exactly normal

Understand It with Pulse | Flag a mistake

4 **A river is polluted by fertiliser. What grows too fast in the water?**

- A reeds
- B fish
- C trees
- D algae

Understand It with Pulse | Flag a mistake

5 **Paintbrushes are cleaned in water. Why does the paint wash off?**

- A the paint dissolves
- B the paint melts in the water
- C the paint burns in the water
- D the paint freezes in the water

Understand It with Pulse | Flag a mistake

6 **A chocolate cake is baked. Is baking a chemical change?**

A sometimes

B yes

C no

D never

Understand It with Pulse | Flag a mistake

7 **What is the relative formula mass of the alkane C_2H_6?**

A 28

B 42

C 30

D 32

Understand It with Pulse | Flag a mistake

8 **What is the formula of ethene?**

- A C_3H_6
- B CH_4
- C C_2H_4
- D C_2H_6

Understand It with Pulse | Flag a mistake

9 **Why is water the only waste product of a hydrogen fuel cell?**

- A oxygen absorbs the waste products
- B the fuel cell runs on pure water
- C hydrogen burns cleanly in oxygen
- D the cell filters out all waste gases

Understand It with Pulse | Flag a mistake

10 **An alkane has 7 carbon atoms. How many hydrogen atoms does one molecule have?**

- A 18
- B 16
- C 14
- D 12

Understand It with Pulse | Flag a mistake

11 **An alkane with 10 carbon atoms is cracked. One product is an alkene with 4 carbon atoms. How many carbon atoms does the other product have?**

- A 5
- B 7
- C 8
- D 6

Understand It with Pulse | Flag a mistake

12 **What is a chemical cell?**

A a cell that stores electricity from the mains

B a cell that splits water with electricity

C a cell that makes heat from chemicals

D a battery that makes electricity

Understand It with Pulse | Flag a mistake

13 **What is condensation polymerisation?**

A polymers break into small molecules

B monomers burn to make a polymer

C monomers join with nothing lost at all ever

D monomers join and lose a small molecule

Understand It with Pulse | Flag a mistake

14 **What conditions are used to make ethanol from ethene?**

A cold water and no catalyst

B hydrogen and a cold catalyst

C steam and a catalyst

D oxygen and a very high pressure

Understand It with Pulse | Flag a mistake

15 **When copper sulfate solution is electrolysed with carbon electrodes, what is made at the cathode?**

A oxygen gas from the water

B hydrogen gas from the water

C sulfur from the sulfate ions

D copper

Understand It with Pulse | Flag a mistake

16 **What does ethanol burn to make?**

A carbon and hydrogen

B oxygen and water only

C carbon dioxide and water

D carbon monoxide and hydrogen

Understand It with Pulse | Flag a mistake

17 **What happens to the boiling point of alkanes as the molecules get bigger?**

A it stays the same

B it decreases

C it increases

D it falls to zero

Understand It with Pulse | Flag a mistake

18 **What is made when ethanoic acid reacts with a carbonate?**

A a salt and oxygen gas only in the test

B a salt and hydrogen gas only in the test

C water and hydrogen gas only in the test

D a salt, water and carbon dioxide

Understand It with Pulse | Flag a mistake

19 **What forms at the cathode during the electrolysis of copper sulfate solution?**

A bromine

B lead

C hydrogen

D copper

Understand It with Pulse | Flag a mistake

20 **What is the difference between addition and condensation polymerisation?**

- A condensation loses a small molecule
- B addition loses a small molecule as well
- C condensation uses only alkenes
- D addition uses only alcohols

Understand It with Pulse | Flag a mistake

21 **What are alkenes used to make?**

- A fuels for cars and lorries
- B salts for cooking
- C acids for cleaning
- D polymers

Understand It with Pulse | Flag a mistake

22 **What is poly(ethene) made from?**

A ethene

B ethane

C ethanoic acid

D ethanol

Understand It with Pulse | Flag a mistake

23 **What is made at the negative electrode in aluminium extraction?**

A oxygen gas from the air

B carbon dioxide gas

C cryolite from the mixture

D aluminium

Understand It with Pulse | Flag a mistake

24 **What is the half equation for the formation of hydrogen gas?**

- **A** $2H \rightarrow H_2$
- **B** $H_2 \rightarrow 2H^+ + 2e^-$
- **C** $2H^+ + 2e^- \rightarrow H_2$
- **D** $H^+ + e^- \rightarrow H$

Understand It with Pulse | Flag a mistake

25 **What is the half equation for chlorine forming at the anode?**

- **A** $2Cl^- + 2e^- \rightarrow Cl_2$
- **B** $2Cl^- \rightarrow Cl_2$
- **C** $2Cl^- \rightarrow Cl_2 + 2e^-$
- **D** $Cl_2 + 2e^- \rightarrow 2Cl^-$

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. D
2. C
3. B
4. D
5. A
6. B
7. C
8. C
9. C
10. B
11. D
12. D
13. D
14. C
15. D
16. C
17. C
18. D
19. D
20. A
21. D
22. A
23. D
24. C
25. C

© 2026 Brett Robbins. All Rights Reserved.