ENGLAND GCSE COMBINED SCIENCE AQA TRILOGY HIGHER · UNIT 15 · 25 QUESTIONS

Chemical Analysis — 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 **A cup of coffee is hot. How is energy transferred to the air?**

- A by conduction and convection
- B by evaporation only, from the top
- C by radiation only, from the surface
- D by condensation on the cold cup

Understand It with Pulse | Flag a mistake

2 **An ice cream cone melts in the Sun. What is happening to the particles in the ice cream?**

- A they gain energy and move more
- B they get smaller
- C they lose energy and slow down a lot
- D they stop moving

Understand It with Pulse | Flag a mistake

3 **Lemons contain citric acid. What is the pH of lemon juice likely to be?**

A 2

B 12

C 14

D 7

Understand It with Pulse | Flag a mistake

4 **Silver coins are made of a metal. Which property do metals have?**

A they do not conduct electricity at all

B they conduct electricity

C they dissolve in water

D they are brittle

Understand It with Pulse | Flag a mistake

5 **Paintbrushes are used with paint. What is paint an example of?**

A an element

B a pure substance

C a compound

D a formulation

Understand It with Pulse | Flag a mistake

6 **Glass marbles in a tray are used as a model for particles in a solid. What do the marbles show?**

A particles flow past each other easily

B particles are far apart from each other

C particles move freely through space

D particles vibrate in fixed positions

Understand It with Pulse | Flag a mistake

7 **How do you test for carbonate ions?**

- A a lilac flame
- B silver nitrate gives a precipitate
- C acid gives off carbon dioxide
- D a squeaky pop

Understand It with Pulse | Flag a mistake

8 **How many atoms of hydrogen are there in one molecule of methane?**

- A 4
- B 3
- C 5
- D 6

Understand It with Pulse | Flag a mistake

9 **A sample containing copper is put in a flame. What colour is the flame?**

- A green
- B bright yellow
- C crimson red
- D pale lilac

Understand It with Pulse | Flag a mistake

10 **In a chromatogram, a spot moves 4 cm and the solvent moves 8 cm. What is the Rf value?**

- A 0.65
- B 0.6
- C 0.5
- D 1

Understand It with Pulse | Flag a mistake

11 **What is the test for hydrogen?**

A bromine water turns colourless

B a glowing splint relights

C limewater turns cloudy

D a lighted splint pops

Understand It with Pulse | Flag a mistake

12 **How many atoms of sodium are there in one molecule of sodium chloride?**

A 2

B 1

C 0

D 3

Understand It with Pulse | Flag a mistake

13 **What colour flame does sodium give in a flame test?**

A brick red

B lilac

C green

D yellow

Understand It with Pulse | Flag a mistake

14 **A sample containing calcium is put in a flame. What colour is the flame?**

A pale lilac

B crimson red

C orange-red

D bright yellow

Understand It with Pulse | Flag a mistake

15 **In a chromatogram, a spot moves 2 cm and the solvent moves 8 cm. What is the Rf value?**

A 0.4

B 0.5

C 0.25

D 0.35

Understand It with Pulse | Flag a mistake

16 **What is the test for carbon dioxide?**

A bromine water turns colourless

B limewater turns cloudy

C a glowing splint relights

D a lighted splint pops

Understand It with Pulse | Flag a mistake

17 **A sample containing lithium is put in a flame. What colour is the flame?**

- A crimson
- B orange-red flame
- C pale lilac
- D bright yellow

Understand It with Pulse | Flag a mistake

18 **How many atoms of hydrogen are there in one molecule of water?**

- A 4
- B 3
- C 2
- D 1

Understand It with Pulse | Flag a mistake

19 **How do you test for hydrogen gas?**

- A it turns damp litmus red
- B it turns limewater cloudy
- C it relights a glowing splint
- D it burns with a squeaky pop

Understand It with Pulse | Flag a mistake

20 **In a chromatogram, a spot moves 3 cm and the solvent moves 8 cm. What is the Rf value?**

- A 0.75
- B 0.47
- C 0.38
- D 0.53

Understand It with Pulse | Flag a mistake

21 How many atoms of oxygen are there in one molecule of water?

- A 2
- B 3
- C 0
- D 1

Understand It with Pulse | Flag a mistake

22 What colour flame does potassium give in a flame test?

- A green
- B brick red
- C lilac
- D yellow

Understand It with Pulse | Flag a mistake

23 **A sample containing potassium is put in a flame. What colour is the flame?**

- A crimson red
- B lilac
- C orange-red flame
- D bright yellow

Understand It with Pulse | Flag a mistake

24 **In a chromatogram, a spot moves 4 cm and the solvent moves 10 cm. What is the Rf value?**

- A 0.4
- B 0.8
- C 0.5
- D 0.55

Understand It with Pulse | Flag a mistake

25

What is the test for oxygen?

A bromine water turns colourless

B limewater turns cloudy

C a glowing splint relights

D a lighted splint pops

Understand It with Pulse

Flag a mistake

ANSWER KEY

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

© 2026 Brett Robbins. All Rights Reserved.