ENGLAND GCSE CHEMISTRY OCR GATEWAY FOUNDATION · UNIT 4 · 25 QUESTIONS

Predicting and Identifying Reactions and Products — 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 **Silver coins are made of the element silver. What is the chemical symbol for silver?**

- A S
- B Si
- C Sv
- D Ag

Understand It with Pulse | Flag a mistake

2 **A cup of coffee is hot. How is energy transferred to the air?**

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

Understand It with Pulse | Flag a mistake

3 **Lemons taste sour. What does sour taste show?**

- A an acid is present
- B an alkali is present
- C a salt is present
- D a metal is present

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

5 **A castle is built of limestone. What is limestone made of?**

- A magnesium oxide, a white powder
- B calcium carbonate
- C sodium chloride, common salt
- D calcium sulfate, found in plaster

Understand It with Pulse | Flag a mistake

6 **A chocolate cake is made from flour, sugar and eggs. Which ingredient provides protein?**

- A water
- B flour
- C sugar
- D eggs

Understand It with Pulse | Flag a mistake

7 **What gas is made when magnesium reacts with dilute acid?**

- A oxygen
- B carbon dioxide
- C hydrogen
- D chlorine

Understand It with Pulse | Flag a mistake

8 **What does a more reactive metal do to the oxide of a less reactive metal?**

- A it gives oxygen to the oxide
- B it turns it into a gas
- C it takes the oxygen away
- D it does nothing at all

Understand It with Pulse | Flag a mistake

9 **Magnesium is more reactive than copper. What happens when magnesium is added to copper sulfate solution?**

- A nothing happens at all
- B copper displaces magnesium
- C the solution turns yellow
- D magnesium displaces copper

Understand It with Pulse | Flag a mistake

10 **A sample containing sodium is put in a flame. What colour is the flame?**

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

Understand It with Pulse | Flag a mistake

11 **Which metal is least reactive?**

- A iron
- B gold
- C zinc
- D magnesium

Understand It with Pulse | Flag a mistake

12 **Why is aluminium extracted by electrolysis?**

A it is too reactive for carbon

B carbon does not react with it

C it melts easily

D it is cheap to do

Understand It with Pulse | Flag a mistake

13 **What is a reversible reaction?**

A a reaction that needs a catalyst

B a reaction that makes two products

C a reaction that never finishes

D a reaction that can go both ways

Understand It with Pulse | Flag a mistake

14 **What colour flame does potassium give in a flame test?**

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

Understand It with Pulse | Flag a mistake

15 **What can gas chromatography separate?**

- A mixtures of gases
- B metals from their ores
- C acids from alkalis only
- D solids from liquids only

Understand It with Pulse | Flag a mistake

16 **What are the products when an acid reacts with a metal carbonate?**

A salt, water and carbon dioxide

B water and oxygen only

C a salt and oxygen only

D a salt, water and hydrogen gas

Understand It with Pulse | Flag a mistake

17 **Which of these metals does not react with dilute acid?**

A iron

B magnesium

C zinc

D copper

Understand It with Pulse | Flag a mistake

18 **A metal is added to a salt solution and no reaction happens. What does that tell you?**

- A the salt is not soluble
- B the metal is less reactive than the metal in the salt
- C the metal is a gas
- D the metal is more reactive than the metal in the salt

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

20 **Will copper displace zinc from zinc sulfate?**

- A yes, copper is more reactive
- B no, zinc is more reactive
- C no, copper is less reactive
- D yes, zinc is less reactive

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

22 **What does mass spectrometry measure?**

- A the masses of particles
- B the colours of a flame
- C the temperature of a sample
- D the volume of a gas

Understand It with Pulse | Flag a mistake

23 **How can you tell that carbon dioxide is made in a reaction?**

- A limewater turns cloudy
- B a squeaky pop is heard
- C a yellow flame is seen
- D a glowing splint relights

Understand It with Pulse | Flag a mistake

24 **What is the reactivity series?**

A metals in reactivity order

B metals in order of their price

C metals in order of their mass

D metals in order of their colour

Understand It with Pulse | Flag a mistake

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

A pale lilac

B orange-red

C crimson red

D bright yellow

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

© 2026 Brett Robbins. All Rights Reserved.