ENGLAND GCSE COMBINED SCIENCE AQA TRILOGY HIGHER · UNIT 11 · 25 QUESTIONS

Chemical Changes — 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 chocolate cake is baked. Is baking a chemical change?**

- A sometimes
- B never
- C no
- D yes

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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 stop moving
- C they get smaller
- D they lose energy and slow down a lot

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

- A 12
- B 14
- C 2
- D 7

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4 **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

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5 **A castle built of limestone is damaged by acid rain. Which gas causes acid rain?**

A carbon dioxide

B nitrogen

C sulfur dioxide

D oxygen

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

A the paint melts in the water

B the paint dissolves

C the paint burns in the water

D the paint freezes in the water

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7 **A solution has a hydrogen ion concentration of 10^{-3}mol per cubic decimetre. What is its pH?**

- **A** 4
- **B** 3
- **C** 2
- **D** 5

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

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

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9 **What forms at the cathode during the electrolysis of sodium chloride solution?**

A hydrogen

B chlorine

C lead

D bromine

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10 **Will copper displace zinc from its salt solution?**

A only with a catalyst

B no

C yes

D only when heated

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11 **How many moles are there in 20 g of a substance with a relative formula mass of 20 ?**

A 2

B 3

C 0.5

D 1

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12 **What do acids produce in water?**

A chloride ions

B hydroxide ions

C hydrogen ions

D oxygen

Understand It with Pulse | Flag a mistake

13 **Why is gold found uncombined in the Earth?**

A it is very reactive

B it is very unreactive

C it is made by volcanoes

D it dissolves in water

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14 **Which acid makes a nitrate salt?**

A hydrochloric acid

B ethanoic acid

C sulfuric acid

D nitric acid

Understand It with Pulse | Flag a mistake

15 **A solution has a hydrogen ion concentration of 10^{-1}mol per cubic decimetre. What is its pH?**

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

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

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

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17 **What forms at the anode during the electrolysis of sodium chloride solution?**

A hydrogen

B chlorine

C bromine

D lead

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18 **How many moles are there in 80 g of a substance with a relative formula mass of 20 ?**

A 8

B 2

C 4

D 12

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19 **Which salt is made from sulfuric acid and copper oxide?**

A copper sulfate

B copper chloride

C copper nitrate

D copper carbonate

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20 **Which metal is least reactive?**

A gold

B zinc

C iron

D magnesium

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21 **What forms at the cathode during the electrolysis of molten lead bromide?**

A bromine

B chlorine

C hydrogen

D lead

Understand It with Pulse | Flag a mistake

22 **Will iron displace copper from its salt solution?**

A only when heated

B only with a catalyst

C yes

D no

Understand It with Pulse | Flag a mistake

23 How many moles are there in 80 g of a substance with a relative formula mass of 40 ?

- A 2
- B 1
- C 6
- D 4

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24 A solution has a hydrogen ion concentration of 10^{-7}mol per cubic decimetre. What is its pH?

- A 8
- B 7
- C 6
- D 9

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25

What forms at the anode during the electrolysis of molten lead bromide?

A chlorine

B lead

C hydrogen

D bromine

Understand It with Pulse

Flag a mistake

ANSWER KEY

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

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