ENGLAND GCSE CHEMISTRY AQA FOUNDATION · UNIT 4 · 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 rises in the oven. What makes it rise?**

- A the flour melts
- B the sugar freezes
- C a gas is made
- D the egg evaporates

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2 **A cup of coffee cools down. Energy is transferred to the surroundings. What type of change is this?**

- A a neutralisation
- B a chemical change
- C a reversible reaction
- D an energy transfer

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3 **A castle wall is made of stone. What type of rock is limestone?**

- A sedimentary
- B igneous
- C metamorphic
- D volcanic

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4 **An ice cream cone melts. What is the melting point of the ice cream?**

- A around 37 degrees Celsius
- B around 0 degrees Celsius
- C around minus 20 degrees Celsius
- D around 100 degrees Celsius

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5 **Paintbrushes apply paint to a wall. What is the paint made of?**

A a single compound, nothing else

B a single element, nothing else

C pure water with nothing in it

D a mixture of substances

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6 **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 hydrogen

D a salt and oxygen gas

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7 **Which two solutions make barium sulfate when mixed?**

A barium chloride and sodium sulfate

B barium chloride and sodium chloride

C sodium sulfate and sodium chloride

D barium nitrate and sodium chloride

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8 **What is the pH of a strong acid?**

A 1

B 7

C 14

D 10

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9 **When concentrated sodium chloride solution is electrolysed, what is made at the cathode?**

A oxygen gas from the water

B sodium metal from the solution

C hydrogen

D chlorine gas from the salt

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10 **Why is extracting aluminium by electrolysis expensive?**

A the process needs very high pressure

B cryolite is hard to find

C aluminium ore is very rare

D it uses a lot of electricity

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11 **Which salt is made from hydrochloric acid and sodium hydroxide?**

A sodium chloride

B sodium carbonate

C sodium sulfate

D sodium nitrate

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12 **How many moles are there in 40 g of a substance with a relative formula mass of 20 ?**

A 1

B 6

C 2

D 4

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

A yes

B only with a catalyst

C no

D only when heated

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

A chlorine

B lead

C bromine

D hydrogen

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15 **Which acid is a weak acid?**

A hydrochloric acid

B ethanoic acid

C nitric acid

D sulfuric acid

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

A 5

B 3

C 4

D 2

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17 **Why is the filtrate evaporated when making a salt?**

A to get crystals of the salt

B to make the salt melt

C to dissolve the salt again

D to remove the acid from it completely

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

A it melts easily

B carbon does not react with it

C it is too reactive for carbon

D it is cheap to do

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

A chloride ions

B hydrogen ions

C oxygen

D hydroxide ions

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20 **What is made at the anode when concentrated hydrochloric acid is electrolysed?**

A oxygen gas from the water

B hydrogen gas from the acid

C sodium metal from the solution

D chlorine

Understand It with Pulse | Flag a mistake

21 **Why do the carbon anodes in aluminium extraction need replacing?**

- **A** they dissolve in the aluminium
- **B** they melt in the hot electrolyte
- **C** they burn away in oxygen
- **D** they are used up making cryolite

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

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

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23 **Which metal is least reactive?**

A iron

B zinc

C magnesium

D gold

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

A bromine

B copper

C lead

D hydrogen

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

A 3

B 0

C 1

D 2

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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