ENGLAND GCSE CHEMISTRY EDEXCEL HIGHER · UNIT 3 · 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 **Paintbrushes apply paint to a wall. What is the paint made of?**

- A a single compound, nothing else
- B a mixture of substances
- C pure water with nothing in it
- D a single element, nothing else

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

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

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

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4 **A cup of coffee is left for an hour. What happens to its temperature?**

- A it falls to room temperature
- B it rises above room temperature
- C it falls to zero degrees
- D it stays the same all day

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

- A carbon dioxide
- B sulfur dioxide
- C oxygen
- D nitrogen

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

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

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7 **What is the half equation for copper forming at the cathode?**

- **A** $2Cu^{2+} + 2e^{-} \rightarrow 2Cu$
- **B** $Cu + 2e^{-} \rightarrow Cu^{2+}$
- **C** $Cu^{2+} \rightarrow Cu + 2e^{-}$
- **D** $Cu^{2+} + 2e^{-} \rightarrow Cu$

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8 **How are insoluble salts made?**

- **A** by distillation
- **B** by filtration
- **C** by precipitation
- **D** by evaporation of the solvent

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

A sodium chloride

B sodium nitrate

C sodium sulfate

D sodium carbonate

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

A hydrogen

B chlorine

C bromine

D lead

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

A hydrogen

B chlorine gas from the salt

C oxygen gas from the water

D sodium metal from the solution

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

A 8

B 4

C 12

D 2

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

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

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14 **What is the difference between a strong acid and a weak acid?**

- A a strong acid has a higher pH
- B a strong acid is fully ionised
- C a strong acid is more concentrated
- D a strong acid is always dangerous

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15 **What gas is made at the positive electrode in aluminium extraction?**

- A carbon dioxide
- B aluminium metal from the ore
- C hydrogen gas from the acid used
- D oxygen gas from the air around it

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

- A only with a catalyst
- B yes
- C no
- D only when heated

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

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

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18 **Why is the precipitate washed with distilled water?**

- **A** to remove soluble impurities
- **B** to make the precipitate dry out fully
- **C** to add more precipitate
- **D** to dissolve the precipitate

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

A copper carbonate

B copper chloride

C copper sulfate

D copper nitrate

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

A hydrogen gas from the water

B copper

C sulfur from the sulfate ions

D oxygen gas from the water

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

A 0.5

B 1

C 2

D 3

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

A 2

B 0

C 1

D 3

Understand It with Pulse | Flag a mistake

23 **Which acid is a weak acid?**

A sulfuric acid

B nitric acid

C hydrochloric acid

D ethanoic acid

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

A aluminium

B cryolite from the mixture

C carbon dioxide gas

D oxygen gas from the air

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25

Why is an indicator used in a titration?

A to make the acid stronger

B to colour the salt crystals

C to stop the reaction

D to show the end point

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Flag a mistake

ANSWER KEY

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

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