ENGLAND GCSE CHEMISTRY AQA HIGHER · UNIT 4 · 10 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 castle built of limestone is damaged by acid rain. Which gas causes acid rain?**

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

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

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3 **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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4 **What happens to the pH when an acid is diluted?**

- A it increases
- B it stays the same
- C it falls to zero
- D it decreases

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5 **Why is cryolite added to aluminium oxide in its electrolysis?**

- A it stops the carbon anodes burning
- B it makes the reaction go faster
- C it makes the aluminium purer
- D it lowers the melting point

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

- A chlorine
- B lead
- C bromine
- D hydrogen

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

A copper sulfate

B copper nitrate

C copper chloride

D copper carbonate

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8 **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 stop moving

D they lose energy and slow down a lot

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9 **What is the half equation for oxygen gas forming at the anode?**

- **A** $4O^{2-} \rightarrow 2O_2 + 4e^-$
- **B** $2O^{2-} \rightarrow O_2 + 4e^-$
- **C** $O_2 \rightarrow 2O^{2-} + 4e^-$
- **D** $2O^{2-} + 4e^- \rightarrow O_2$

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

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

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ANSWER KEY

1. D
2. B
3. A
4. A
5. D
6. D
7. A
8. A
9. B
10. B

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