ENGLAND GCSE CHEMISTRY EDEXCEL FOUNDATION · UNIT 4 · 25 QUESTIONS

Extracting Metals and Equilibria — 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 made from flour, sugar and eggs. Which ingredient provides protein?

A sugar

B water

C flour

D eggs

Understand It with Pulse

Flag a mistake

2 **Silver coins are made of a metal. Which property do metals have?**

A they do not conduct electricity at all

B they are brittle

C they conduct electricity

D they dissolve in water

Understand It with Pulse | Flag a mistake

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

A carbon dioxide

B nitrogen

C oxygen

D sulfur dioxide

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

6 **An ice cream cone is put in a freezer. What happens to the liquid?**

A it boils

B it condenses

C it freezes

D it evaporates

Understand It with Pulse | Flag a mistake

7 **Why does iron displace copper from copper sulfate?**

A iron is less reactive than copper

B iron dissolves in water more easily

C copper is more reactive than iron

D iron is more reactive than copper

Understand It with Pulse | Flag a mistake

8 **What happens to an equilibrium if the pressure is increased?**

A the reaction stops completely at once

B it stays exactly where it was before

C it shifts to the side with more molecules in the gas

D it shifts to the side with fewer molecules

Understand It with Pulse | Flag a mistake

9 **Why does aluminium need electrolysis to extract it?**

A it is found pure in the ground

B it melts at too low a temperature

C it is too reactive for carbon

D it does not conduct electricity at all

Understand It with Pulse | Flag a mistake

10 **In the Haber process, 1 mole of nitrogen reacts with 3 moles of hydrogen. How many moles of hydrogen react with 2 moles of nitrogen?**

- **A** 12
- **B** 7
- **C** 5
- **D** 6

Understand It with Pulse | Flag a mistake

11 **What does the Haber process make?**

- **A** nitric acid, used to make fertilisers
- **B** ammonium nitrate, used as a fertiliser
- **C** ammonia
- **D** nitrogen gas for the air

Understand It with Pulse | Flag a mistake

12 **How are metals below carbon in the reactivity series extracted?**

- A by dissolving them in water first
- B by electrolysis, which needs a lot of energy
- C by reduction with carbon
- D by heating them on their own in air

Understand It with Pulse | Flag a mistake

13 **In the Haber process, 1 mole of nitrogen reacts with 3 moles of hydrogen. How many moles of hydrogen react with 3 moles of nitrogen?**

- A 8
- B 9
- C 10
- D 18

Understand It with Pulse | Flag a mistake

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

A yes, copper is more reactive

B yes, zinc is more reactive

C no, copper is more reactive

D no, zinc is less reactive

Understand It with Pulse | Flag a mistake

15 **What are the raw materials for the Haber process?**

A ammonia and water

B hydrogen and carbon monoxide

C nitrogen and hydrogen

D nitrogen and oxygen from the air

Understand It with Pulse | Flag a mistake

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

A it melts easily

B carbon does not react with it

C it is cheap to do

D it is too reactive for carbon

Understand It with Pulse | Flag a mistake

17 **What is reduction?**

A loss of oxygen

B gain of oxygen by a substance

C gain of a metal from an ore

D loss of a metal from an ore

Understand It with Pulse | Flag a mistake

18 **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

19 **Which metal is the most reactive?**

A copper, which is used for wires

B potassium

C iron, which is used for nails

D zinc, which coats steel

Understand It with Pulse | Flag a mistake

20 **What is the reactivity series?**

- A a list of metals in alphabetical order
- B a list of metals in order of their melting points
- C a list of metals in order of their cost
- D a list of metals in order of reactivity

Understand It with Pulse | Flag a mistake

21 **In the Haber process, 1 mole of nitrogen reacts with 3 moles of hydrogen. How many moles of hydrogen react with 4 moles of nitrogen?**

- A 24
- B 11
- C 12
- D 13

Understand It with Pulse | Flag a mistake

22 **What happens to equilibrium if the temperature rises?**

A it moves to give out heat

B it stays in the same place

C the reaction stops

D it moves to take in heat

Understand It with Pulse | Flag a mistake

23 **Which metal is least reactive?**

A magnesium

B gold

C zinc

D iron

Understand It with Pulse | Flag a mistake

24 **What happens when zinc is added to copper sulfate solution?**

- A zinc displaces copper
- B copper displaces zinc from the solution
- C nothing happens, as zinc is less reactive
- D zinc dissolves and the solution turns blue

Understand It with Pulse | Flag a mistake

25 **What is oxidation?**

- A gain of a metal from an ore
- B loss of a metal from an ore
- C gain of oxygen
- D loss of oxygen from a substance

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

© 2026 Brett Robbins. All Rights Reserved.