ENGLAND GCSE CHEMISTRY OCR GATEWAY HIGHER · UNIT 1 · 25 QUESTIONS

Particles — 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 hot air balloon cools down. What happens?**

- A it sinks
- B it rises faster
- C it stays still
- D it bursts

Understand It with Pulse | Flag a mistake

2 **Hardcover books are dropped. What happens to their speed as they fall?**

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

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3 **A swimming pool holds water. Why does a person float in the pool?**

A they are made of air

B they are heavier than water and sink

C the water pushes them down

D their density is close to water

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4 **A thermometer shows a patient's temperature is 39 degrees Celsius. Is this above or below normal body temperature?**

A below normal

B above normal

C exactly normal

D impossible to tell

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5 **Glass marbles in a tray are used as a model for particles in a solid. What do the marbles show?**

- A particles vibrate in fixed positions
- B particles move freely through space
- C particles flow past each other easily
- D particles are far apart from each other

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6 **Silver coins are made of the element silver. What is the chemical symbol for silver?**

- A S
- B Ag
- C Si
- D Sv

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7 **What did Bohr suggest about electrons?**

A they are stuck in a ball of charge

B they move about at random anywhere in the atom

C they sit inside the nucleus

D they sit in shells at fixed distances

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8 **What is the electronic structure of magnesium (atomic number 12)?**

A 2,8,8

B 2,7,3

C 2,8,1

D 2,8,2

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9 **An atom has 8 protons and 18 neutrons. What is its mass number?**

- A 28
- B 26
- C 8
- D 18

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10 **What is the mass of an electron compared with a proton?**

- A about the same
- B much larger
- C very small
- D zero

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11 How many electrons are in the outer shell of a Group 7 element?

- A 8
- B 2
- C 1
- D 7

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12 What is the mass number of an isotope with 6 protons and 8 neutrons?

- A 6
- B 20
- C 14
- D 8

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13 **An atom has 17 protons. How many electrons does the neutral atom have?**

A 19

B 18

C 17

D 16

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14 **Which group contains the noble gases?**

A Group 1

B Group 2

C Group 7

D Group 0

Understand It with Pulse | Flag a mistake

15 **An element, boron, has isotopes. 20 percent have a mass of 10 and 80 percent have a mass of 11. What is the relative atomic mass of boron?**

- A 11.3
- B 9.8
- C 10.8
- D 11.8

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16 **An element is in period 3 of the periodic table. How many electron shells do its atoms have?**

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

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17 **Which transition metal is used as a catalyst in the Haber process?**

A iron

B platinum

C copper

D nickel

Understand It with Pulse | Flag a mistake

18 **Why did other scientists not accept Newlands' Law of Octaves?**

A it worked for every element known

B it only worked for the first elements

C he had left too many gaps in it

D he had arranged them by atomic number

Understand It with Pulse | Flag a mistake

19 **Which transition metal is used in construction?**

A lithium

B calcium

C sodium

D iron

Understand It with Pulse | Flag a mistake

20 **An atom of magnesium loses 2 electrons. What is the charge on the ion formed?**

A +1

B -2

C 0

D +2

Understand It with Pulse | Flag a mistake

21 **In Rutherford's gold foil experiment, what happened to most alpha particles?**

A they were absorbed by the gold foil

B they turned into electrons in the foil

C they bounced straight back off the foil

D they passed straight through

Understand It with Pulse | Flag a mistake

22 **What is the electronic structure of fluorine (atomic number 9)?**

A 2,8

B 2,7

C 2,6

D 2,7,1

Understand It with Pulse | Flag a mistake

23 An atom has 19 protons and 8 neutrons. What is its mass number?

- A 27
- B 29
- C 19
- D 8

Understand It with Pulse | Flag a mistake

24 An atom has atomic number 8 and mass number 16. How many electrons does it have?

- A 16
- B 6
- C 8
- D 24

Understand It with Pulse | Flag a mistake

25 **Which electronic structure is a noble gas?**

A 2,8,8

B 2,8,7

C 2,6

D 2,8,1

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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