ENGLAND GCSE CHEMISTRY AQA FOUNDATION · UNIT 3 · 25 QUESTIONS

Quantitative Chemistry — 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 **Hardcover books are stacked on a table. What force pulls them down?**

- A tension
- B gravity
- C air resistance
- D friction

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

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

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3 **A calculator runs on a small current. What is current measured in?**

- A volts, the unit of voltage
- B amperes
- C watts, the unit of power
- D ohms, the unit of resistance

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4 **A thermometer is placed in hot water. What happens to the liquid inside the thermometer?**

- A it contracts
- B it freezes
- C it expands
- D it evaporates

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

A a salt and oxygen gas

B a salt and water, never hydrogen

C a salt and hydrogen

D water only, nothing else

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

A they are brittle

B they do not conduct electricity at all

C they conduct electricity

D they dissolve in water

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7 **What is the mass of 5 moles of a substance with a relative formula mass of 16?**

- A 90 g
- B 80 g
- C 40 g
- D 160 g

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8 **The maximum possible mass of product is 20 g. A student makes 8 g. What is the percentage yield?**

- A 80%
- B 40%
- C 50%
- D 30%

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9 **What is the relative formula mass of potassium chloride, KCl?**

- A 74.5
- B 82.5
- C 149
- D 70.5

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10 **A reaction makes 40 g of useful product from 80 g of reactants in total. What is the atom economy?**

- A 50%
- B 100%
- C 150%
- D 25%

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11 How many moles are there in 40 g of a substance with a relative formula mass of 16?

- A 7.5
- B 1.25
- C 2.5
- D 5

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12 What is the relative formula mass of calcium carbonate, $CaCO_3$?

- A 112
- B 84
- C 100
- D 60

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13 **A reaction should make 20 g of product but makes 16 g. What is the percentage yield?**

A 4%

B 125%

C 80%

D 36%

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14 **What is the mass of 4 moles of a substance with a relative formula mass of 58.5?**

A 244 g

B 117 g

C 468 g

D 234 g

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15 **A reaction makes 25 g of useful product from 100 g of reactants in total. What is the atom economy?**

- A 12%
- B 75%
- C 50%
- D 25%

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16 **A solution has 10 g of salt in 2 cubic decimetres of water. What is its concentration?**

- A 20 g/dm³
- B 12 g/dm³
- C 5 g/dm³
- D 2 g/dm³

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17 **How many moles are there in 8 g of a substance with a relative formula mass of 40?**

A 0.4

B 0.6

C 0.1

D 0.2

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18 **What is the relative formula mass of methane, CH_4?**

A 14

B 20

C 16

D 12

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19 **A reaction should make 50 g of product but makes 40 g. What is the percentage yield?**

- A 125%
- B 90%
- C 10%
- D 80%

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20 **What is the mass of 3 moles of a substance with a relative formula mass of 16?**

- A 48 g
- B 96 g
- C 24 g
- D 58 g

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21 The maximum possible mass of product is 40 g. A student makes 36 g. What is the percentage yield?

- A 90%
- B 80%
- C 180%
- D 100%

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22 What is the relative formula mass of ammonia, NH_3?

- A 17
- B 13
- C 34
- D 25

Understand It with Pulse | Flag a mistake

23 **A reaction makes 60 g of useful product from 120 g of reactants in total. What is the atom economy?**

- A 150%
- B 25%
- C 50%
- D 100%

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24 **How many moles are there in 24 g of a substance with a relative formula mass of 40?**

- A 0.6
- B 1.2
- C 1.8
- D 0.3

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25 **What is the relative formula mass of water, H_2O?**

A 16

B 18

C 20

D 10

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ANSWER KEY

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

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