ENGLAND GCSE CHEMISTRY AQA HIGHER · UNIT 6 · 25 QUESTIONS

The Rate and Extent of Chemical Change — 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 kite is held by a string. What force does the string exert?**

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

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2 **A thermometer measures temperature in degrees Celsius. What is the freezing point of water on this scale?**

- A 0
- B 10
- C 100
- D 32

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3 **A yellow school bus is full of children. What is its mass like?**

- A smaller than when empty
- B zero
- C larger than when empty
- D the same as when empty

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4 **A wristwatch measures time. What is the unit of time?**

A the day

B the hour

C the minute

D the second

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5 **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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6 **A passenger train travels at a steady speed. What is its acceleration?**

- A 0 m/s²
- B 9.8 m/s²
- C 10 m/s²
- D 1 m/s²

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7 **What catalyst is used in the Haber process?**

- A platinum
- B nickel
- C iron
- D copper

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8 **In a second experiment, 90 cm cubed of gas are made in 30 seconds. What is the rate of the reaction?**

- A 2.5 cm^3/s
- B 3.5 cm^3/s
- C 3 cm^3/s
- D 4.5 cm^3/s

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9 **A reaction produces 60 cm cubed of gas in 20 seconds. What is the mean rate of reaction?**

- A 3 cm^3/s
- B 3.5 cm^3/s
- C 6 cm^3/s
- D 2.5 cm^3/s

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10 **What is collision theory?**

A particles must collide to react

B particles must dissolve to react

C particles must be stirred to react

D particles must be heated to react

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11 **A reaction makes 2 moles of gas. What volume does the gas occupy at room temperature and pressure?**

A 36 dm^3

B 60 dm^3

C 96 dm^3

D 48 dm^3

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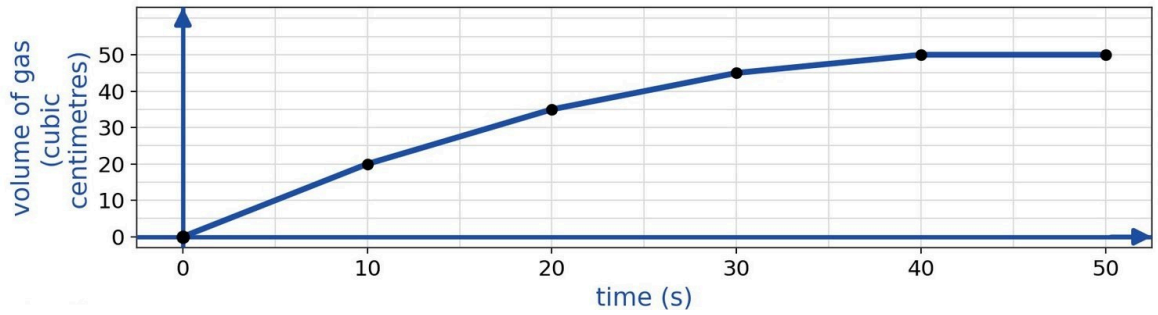
12 **The graph shows the volume of gas made in a reaction. After how many seconds does the reaction finish?**



A 30

B 50

C 20

D 40

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13 **In an experiment, 40 cubic centimetres of gas are made in 30 seconds. What is the rate of the reaction?**

- A 2.6667 cm^3/s
- B 0.6667 cm^3/s
- C 1200 cm^3/s
- D 1.3333 cm^3/s

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14 **In the disappearing cross experiment, what is timed?**

- A how long the cross takes to vanish
- B how long the cross takes to appear
- C how long the acid takes to boil
- D how long the mixture takes to cool down

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15 **A reaction should make 200 g of product but only makes 100 g. What is the percentage yield?**

- A 100%
- B 40%
- C 60%
- D 50%

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16 **A solution has a concentration of 1 mol per cubic decimetre. How many moles are in 3 cubic decimetres of the solution?**

- A 3 mol
- B 2 mol
- C 6 mol
- D 4 mol

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17 **Why does a catalyst not change the yield of a reaction?**

- A it is used up in the reaction
- B it slows the forward reaction down a lot
- C it changes the equilibrium position
- D it speeds up both directions equally

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18 **What is the temperature used in the Haber process?**

- A 800 degrees Celsius
- B 450 degrees Celsius
- C 200 degrees Celsius
- D 100 degrees Celsius

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19 **In a second experiment, 90 cm cubed of gas are made in 15 seconds. What is the rate of the reaction?**

- A 7.5 cm^3/s
- B 5.5 cm^3/s
- C 6 cm^3/s
- D 6.5 cm^3/s

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20 **A reaction produces 60 cm cubed of gas in 10 seconds. What is the mean rate of reaction?**

- A 6 cm^3/s
- B 12 cm^3/s
- C 5.5 cm^3/s
- D 6.5 cm^3/s

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21 **In an experiment, 40 cubic centimetres of gas are made in 10 seconds. What is the rate of the reaction?**

A 4 cm^3/s

B 400 cm^3/s

C 2 cm^3/s

D 8 cm^3/s

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22 **How can the rate of a reaction be measured using a gas syringe?**

A by weighing the gas syringe

B by measuring the temperature

C by timing the gas collected

D by counting the bubbles

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23 **A reaction should make 100 g of product but only makes 50 g. What is the percentage yield?**

- A 40%
- B 60%
- C 100%
- D 50%

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24 **A solution has a concentration of 2 mol per cubic decimetre. How many moles are in 2 cubic decimetres of the solution?**

- A 4 mol
- B 5 mol
- C 8 mol
- D 3 mol

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25

What does Le Chatelier's principle say?

A a system stops when conditions change

B a system speeds up when heated

C a system moves to oppose a change

D a system always moves to the right

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Flag a mistake

ANSWER KEY

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

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