ENGLAND GCSE CHEMISTRY AQA FOUNDATION · 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 passenger train brakes. What force slows it down?**

- A friction
- B thrust
- C gravity, pulling it down
- D lift

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2 **A cup of coffee is hot. How is energy transferred to the air?**

- A by conduction and convection
- B by evaporation only, from the top
- C by condensation on the cold cup
- D by radiation only, from the surface

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

- A the hour
- B the day
- C the minute
- D the second

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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 above normal
- B exactly normal
- C below normal
- D impossible to tell

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

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

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6 **A kite is held by a string. What force does the string exert?**

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

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7 **What is the minimum energy particles need to react called?**

- A kinetic energy of the particles
- B bond energy in the molecules
- C activation energy
- D thermal energy in the mixture

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8 **What is the pressure used in the Haber process?**

- A 1000 atmospheres
- B 1 atmosphere
- C 200 atmospheres
- D 10 atmospheres

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

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

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10 **A reaction should make 200 g of product but only makes 180 g. What is the percentage yield?**

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

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

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

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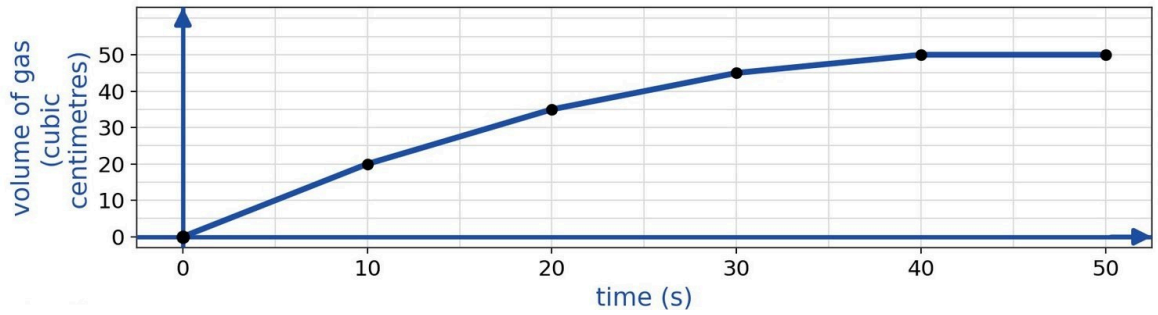
12 **The graph shows the volume of gas made in a reaction. After how many seconds does the reaction finish?**



A 50

B 20

C 40

D 30

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

- A 2 cm^3/s
- B 4 cm^3/s
- C 400 cm^3/s
- D 8 cm^3/s

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

- A 36 dm^3
- B 48 dm^3
- C 60 dm^3
- D 96 dm^3

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15 **A solution has a concentration of 1 mol per cubic decimetre. How many moles are in 2 cubic decimetres of the solution?**

- A 4 mol
- B 1 mol
- C 2 mol
- D 3 mol

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

- A 1.5 cm^3/s
- B 1 cm^3/s
- C 2 cm^3/s
- D 0.5 cm^3/s

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17 **Why does a larger surface area increase the rate?**

A the activation energy falls

B more particles are exposed

C particles move faster

D the temperature rises

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18 **Why is iron used as the catalyst in the Haber process?**

A it increases the yield

B it cools the reaction down

C it is used up in the reaction

D it speeds up the reaction

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

A by measuring the temperature

B by weighing the gas syringe

C by counting the bubbles

D by timing the gas collected

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

A 40%

B 60%

C 100%

D 50%

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21 **What is a reversible reaction?**

- **A** a reaction that needs a catalyst
- **B** a reaction that can go both ways
- **C** a reaction that makes two products
- **D** a reaction that never finishes

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22 **In an experiment, 20 cubic centimetres of gas are made in 20 seconds. What is the rate of the reaction?**

- **A** 2 cm^3/s
- **B** 400 cm^3/s
- **C** 1 cm^3/s
- **D** 0.5 cm^3/s

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23 **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** 6 mol
- **C** 4 mol
- **D** 2 mol

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

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

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25

What must particles have to react when they collide?

A enough energy

B a catalyst with them

C the right colour

D the same mass

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ANSWER KEY

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

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