ENGLAND GCSE COMBINED SCIENCE OCR GATEWAY FOUNDATION · UNIT 11 · 10 QUESTIONS

Monitoring and Controlling Chemical Reactions — 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 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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2 **A chocolate cake is baked. Is baking a chemical change?**

A no

B yes

C sometimes

D never

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3 **A student heats 100 g of water. Its temperature rises by 20 degrees Celsius. The specific heat capacity of water is 4.2 joules per gram per degree Celsius. How much energy is transferred to the water in kilojoules?**

A 0.84 kJ

B 84 kJ

C 16.8 kJ

D 8.4 kJ

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4 **In a second experiment, 50 cm cubed of gas are made in 15 seconds. What is the rate of the reaction?**

- A 3.3333 cm^3/s
- B 3.8333 cm^3/s
- C 2.8333 cm^3/s
- D 4.8333 cm^3/s

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5 **In an experiment, 60 cubic centimetres of gas are made in 20 seconds. What is the rate of the reaction?**

- A 1200 cm^3/s
- B 6 cm^3/s
- C 1.5 cm^3/s
- D 3 cm^3/s

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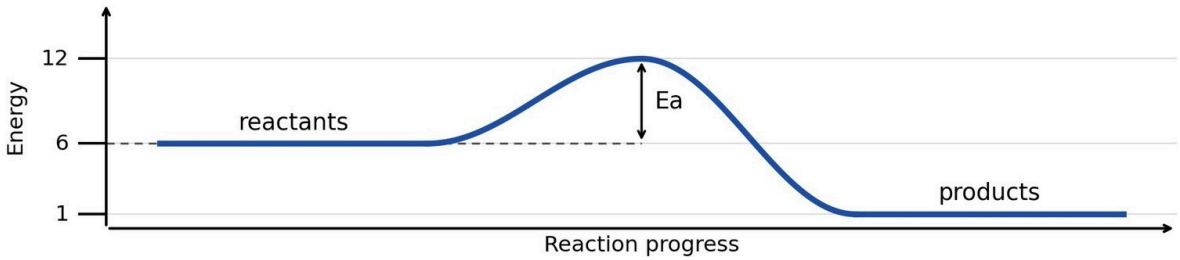
6

The diagram shows the energy profile for a reaction. The reactants are at energy 6, the peak is at 12 and the products are at 1. What is the activation energy?



A 6

B 18

C 5

D 11

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

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

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8 **A reaction should make 100 g of product but only makes 80 g. What is the percentage yield?**

- **A** 160%
- **B** 70%
- **C** 90%
- **D** 80%

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

A activation energy

B thermal energy in the mixture

C kinetic energy of the particles

D bond energy in the molecules

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10 **How does a catalyst change a reaction profile?**

A it lowers the products

B it raises the reactants

C it raises the peak

D it lowers the peak

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ANSWER KEY

1. B
2. B
3. D
4. A
5. D
6. A
7. A
8. D
9. A
10. D

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