ENGLAND GCSE COMBINED SCIENCE EDEXCEL HIGHER · UNIT 15 · 10 QUESTIONS

Rates of Reaction and Energy Changes — 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 neutralisation

B an energy transfer

C a reversible reaction

D a chemical change

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2

A sandwich contains bread and cheese. Where does digestion begin?

A in the large intestine

B in the small intestine

C in the mouth

D in the stomach

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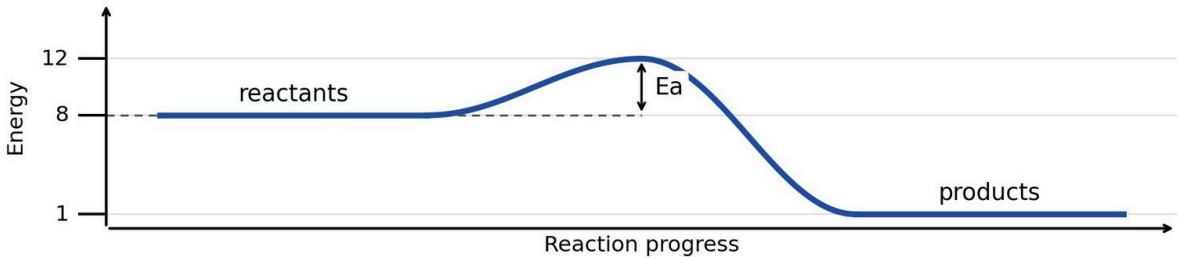
3 **The diagram shows the energy profile for a reaction. The reactants are at energy 8 and the products are at 1. Is the reaction exothermic or endothermic?**



A exothermic, energy is given out

B exothermic, energy is taken in

C endothermic, energy is taken in

D endothermic, energy is given out

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4 **A student heats 100 g of water. Its temperature rises by 5 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 2.1 kJ
- B 4.2 kJ
- C 21 kJ
- D 0.21 kJ

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5 **Why does a hand warmer feel hot?**

- A energy is taken in from the surroundings
- B energy is stored in the chemicals
- C it transfers energy out
- D energy is destroyed by the reaction

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6 **In the combustion of methane, the energy needed to break the bonds is 800 kJ and the energy released when new bonds form is 1000 kJ. What is the overall energy change?**

- A 1000 kJ
- B -800 kJ
- C -200 kJ
- D 200 kJ

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7 **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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8 **A solution has a concentration of 2 mol per cubic decimetre. How many moles are in 2 cubic decimetres of the solution?**

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

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9 **What does a steep graph of gas volume against time show?**

- A a slow rate of reaction
- B a reaction with no gas made
- C a reaction that has finished
- D a fast rate of reaction

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10 **A kite rises higher. What happens to the wind speed usually?**

A it stays the same

B it increases

C it decreases

D it becomes zero

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ANSWER KEY

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

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