ENGLAND GCSE COMBINED SCIENCE EDEXCEL FOUNDATION · 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 thermometer shows a patient's temperature is 39 degrees Celsius. Is this above or below normal body temperature?**

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

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2 **A sandwich is eaten. Which enzyme digests the starch in the bread?**

- A amylase
- B pepsin
- C lipase
- D protease

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

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

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

A 4.5 $cm^3/s$

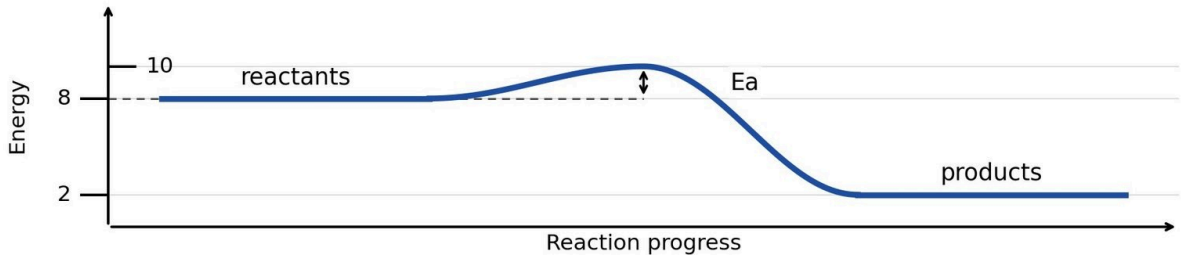
B 3 $cm^3/s$

C 3.5 $cm^3/s$

D 2.5 $cm^3/s$

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**5** **The diagram shows the energy profile for a reaction. The reactants are at energy 8 and the products are at 2. Is the reaction exothermic or endothermic?**




A exothermic, energy is taken in

B endothermic, energy is given out

C exothermic, energy is given out

D endothermic, energy is taken in

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

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

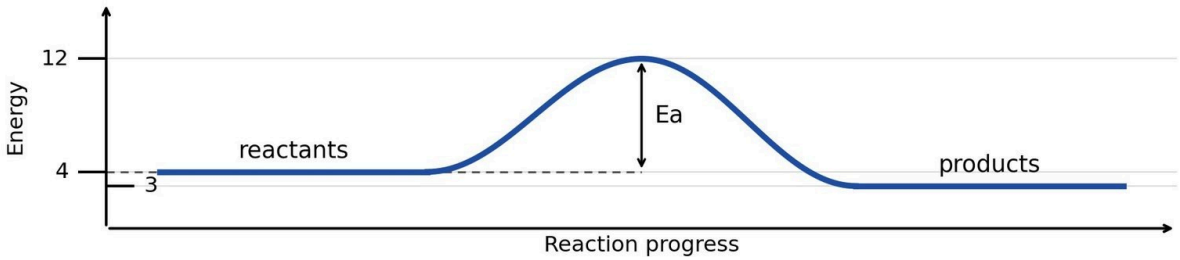
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7 **In the combustion of methane, the energy needed to break the bonds is 800 kJ and the energy released when new bonds form is 1000 kJ. What is the overall energy change?**

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

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**8** **The diagram shows the energy profile for a reaction. The reactants are at energy 4, the peak is at 12 and the products are at 3. What is the activation energy?**




A 9

B 16

C 1

D 8

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9 **A student heats 100 g of water. Its temperature rises by 10 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 8.4 kJ
- B 42 kJ
- C 0.42 kJ
- D 4.2 kJ

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10 **What must particles have to react when they collide?**

- A a catalyst with them
- B enough energy
- C the right colour
- D the same mass

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## ANSWER KEY

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

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