ENGLAND GCSE COMBINED SCIENCE AQA TRILOGY FOUNDATION · UNIT 12 · 25 QUESTIONS

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 sandwich provides energy. Which process releases energy from food in cells?**

A photosynthesis

B fermentation

C respiration

D digestion

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2 **A thermometer is placed in hot water. What happens to the liquid inside the thermometer?**

A it evaporates

B it contracts

C it expands

D it freezes

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3 **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 radiation only, from the surface

D by condensation on the cold cup

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4 **A chocolate cake is baked. Is baking a chemical change?**

- A yes
- B sometimes
- C never
- D no

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5 **A cheese pizza contains cheese made from milk. What is milk rich in?**

- A fibre
- B calcium
- C iron
- D vitamin C

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6 **An ice cream cone melts in the Sun. What is happening to the particles in the ice cream?**

A they get smaller

B they lose energy and slow down a lot

C they gain energy and move more

D they stop moving

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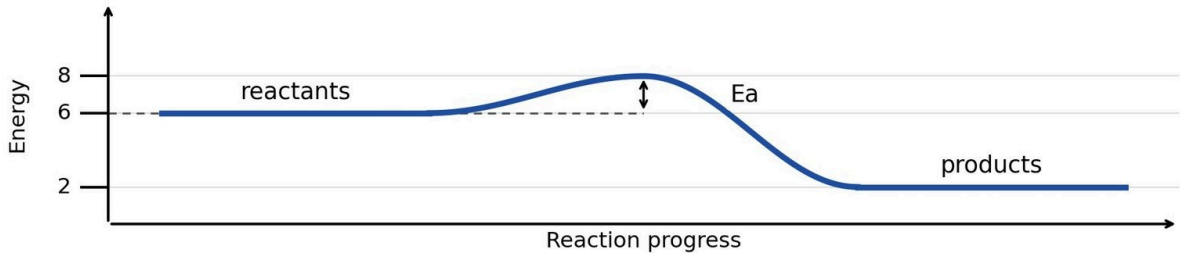
7 **The diagram shows the energy profile for a reaction. The reactants are at energy 6 and the products are at 2. Is the reaction exothermic or endothermic?**



- **A** exothermic, energy is given out
- **B** exothermic, energy is taken in
- **C** endothermic, energy is taken in
- **D** endothermic, energy is given out

Understand It with Pulse | Flag a mistake

8 **Which of these is exothermic?**

A burning a fuel

B photosynthesis

C dissolving ammonium nitrate

D melting ice

Understand It with Pulse | Flag a mistake

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

A it transfers energy out

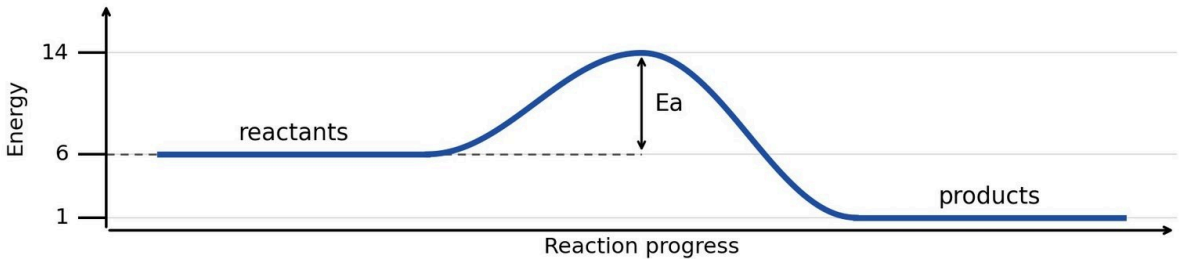
B energy is taken in from the surroundings

C energy is destroyed by the reaction

D energy is stored in the chemicals

Understand It with Pulse | Flag a mistake

10 **The diagram shows the energy profile for a reaction. The reactants are at energy 6, the peak is at 14 and the products are at 1. What is the activation energy?**



A 20

B 13

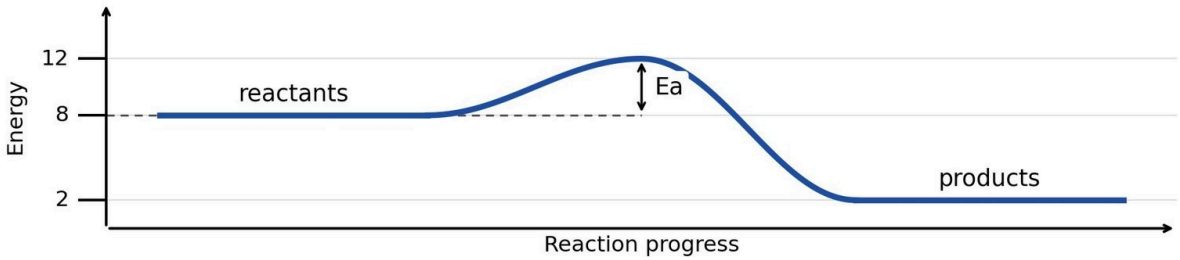
C 8

D 5

Understand It with Pulse

Flag a mistake

11 **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 given out

B endothermic, energy is given out

C endothermic, energy is taken in

D exothermic, energy is taken in

Understand It with Pulse | Flag a mistake

12 **What is an endothermic reaction?**

A a reaction that takes in heat

B a reaction that gives out heat

C a reaction that makes light

D a reaction that stops

Understand It with Pulse | Flag a mistake

13 **What type of reaction is in a hand warmer?**

A electrolysis

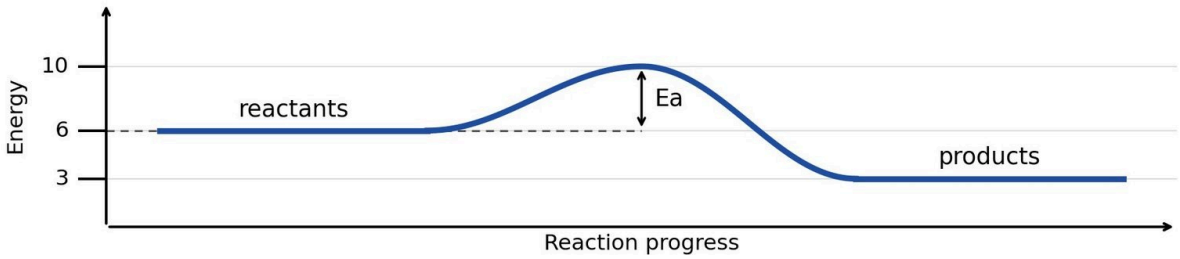
B endothermic

C neutralisation

D exothermic

Understand It with Pulse | Flag a mistake

14 **The diagram shows the energy profile for a reaction. The reactants are at energy 6, the peak is at 10 and the products are at 3. What is the activation energy?**



A 4

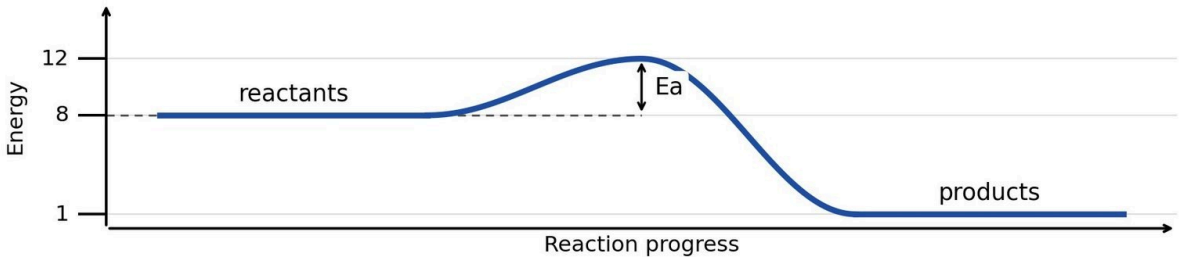
B 16

C 3

D 7

Understand It with Pulse | Flag a mistake

15 **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 endothermic, energy is taken in

B exothermic, energy is given out

C endothermic, energy is given out

D exothermic, energy is taken in

Understand It with Pulse | Flag a mistake

16 **Which of these is an exothermic reaction?**

A evaporating

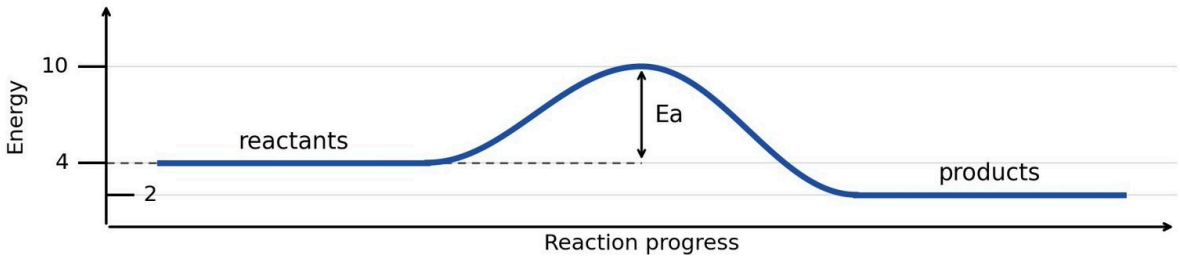
B burning

C freezing

D melting

Understand It with Pulse | Flag a mistake

17 **The diagram shows the energy profile for a reaction. The reactants are at energy 4, the peak is at 10 and the products are at 2. What is the activation energy?**



A 2

B 8

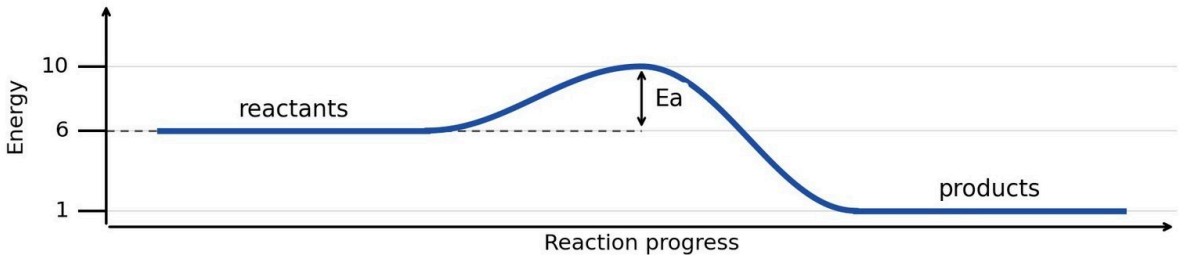
C 14

D 6

Understand It with Pulse

Flag a mistake

18 **The diagram shows the energy profile for a reaction. The reactants are at energy 6 and the products are at 1. Is the reaction exothermic or endothermic?**



A endothermic, energy is given out

B endothermic, energy is taken in

C exothermic, energy is taken in

D exothermic, energy is given out

Understand It with Pulse | Flag a mistake

19 **Which of these is endothermic?**

A burning a fuel

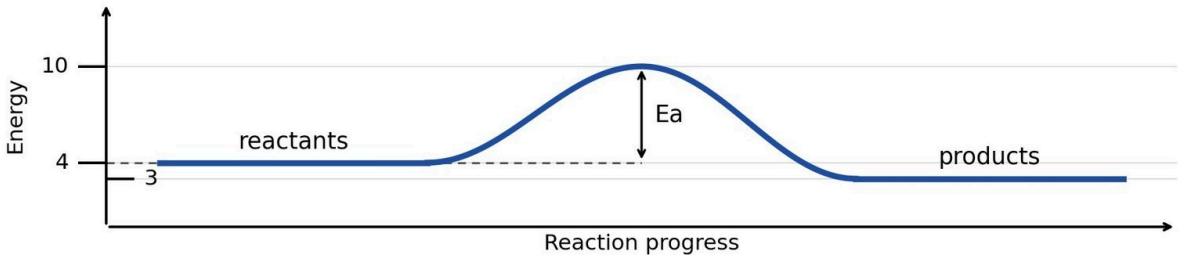
B neutralisation

C respiration

D photosynthesis

Understand It with Pulse | Flag a mistake

20 **The diagram shows the energy profile for a reaction. The reactants are at energy 4, the peak is at 10 and the products are at 3. What is the activation energy?**



A 7

B 14

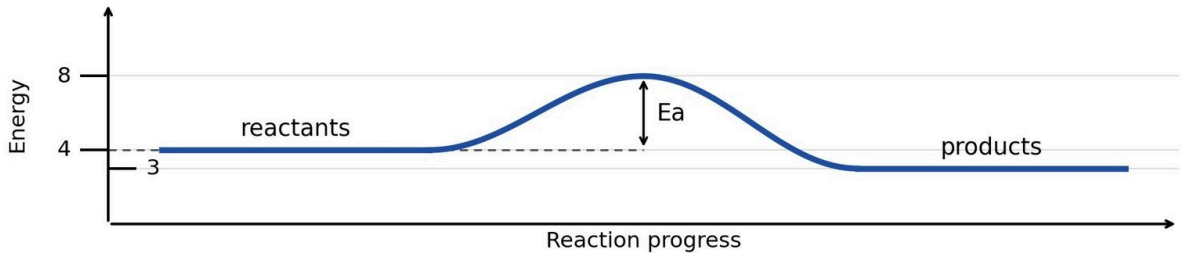
C 1

D 6

Understand It with Pulse | Flag a mistake

21

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



A 4

B 1

C 12

D 5

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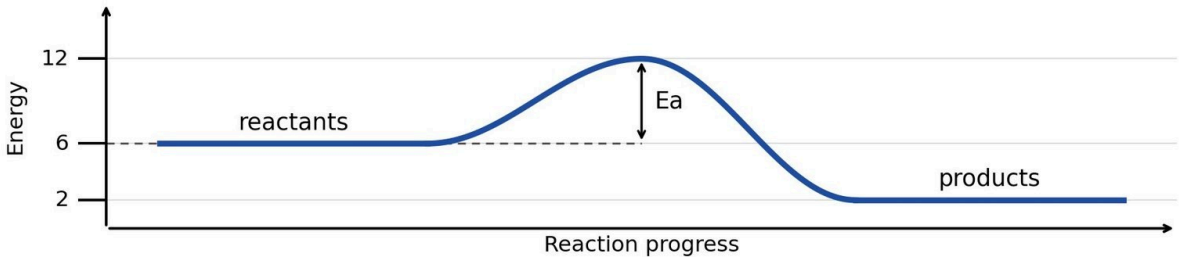
22 **The diagram shows the energy profile for a reaction. The reactants are at energy 6, the peak is at 12 and the products are at 2. What is the activation energy?**



A 4

B 10

C 18

D 6

Understand It with Pulse

Flag a mistake

23 **What is the temperature change in an exothermic reaction?**

- **A** it rises
- **B** it falls
- **C** it stays the same
- **D** it becomes zero

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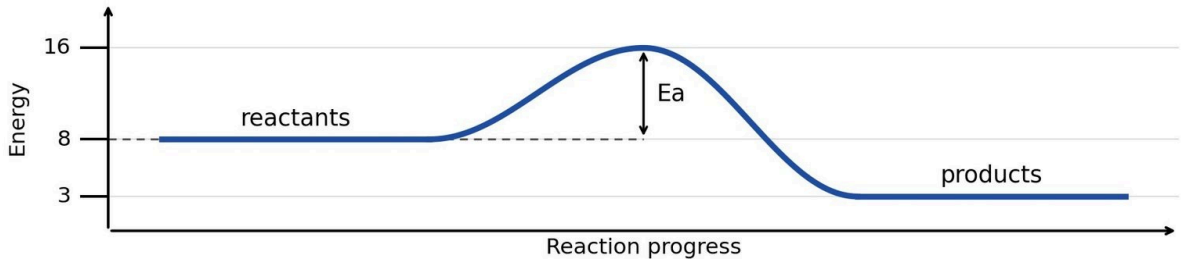
24

The diagram shows the energy profile for a reaction. The reactants are at energy 8, the peak is at 16 and the products are at 3. What is the activation energy?



A 24

B 5

C 8

D 13

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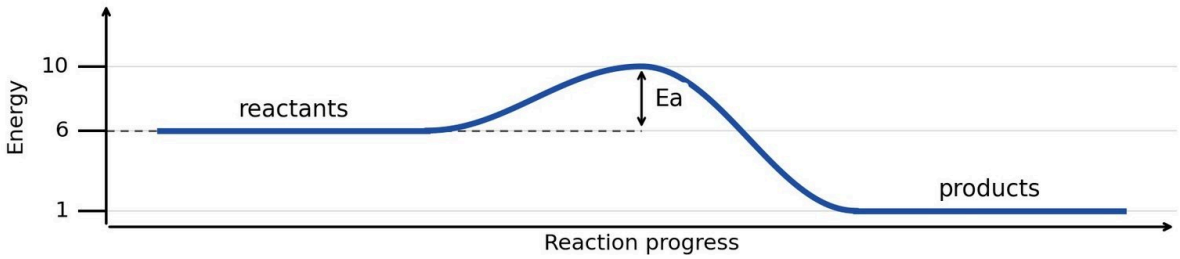
Flag a mistake

25

The diagram shows the energy profile for a reaction. The reactants are at energy 6, the peak is at 10 and the products are at 1. What is the activation energy?



A 16

B 5

C 4

D 9

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ANSWER KEY

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

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