ENGLAND GCSE CHEMISTRY EDEXCEL HIGHER · UNIT 7 · 25 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 kite rises higher. What happens to the wind speed usually?**

- A it decreases
- B it becomes zero
- C it stays the same
- D it increases

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2 **A cheese pizza is cooked in an oven. How is energy transferred in the oven?**

A by radiation and convection

B by evaporation from the cheese

C by condensation on the oven walls

D by conduction only, through the tray

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3 **A wristwatch ticks every second. How many ticks in a minute?**

A 100

B 60

C 30

D 12

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4 **A cup of coffee is left for an hour. What happens to its temperature?**

- A it falls to room temperature
- B it rises above room temperature
- C it stays the same all day
- D it falls to zero degrees

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5 **A chocolate cake is made from flour, sugar and eggs. Which ingredient provides protein?**

- A flour
- B sugar
- C eggs
- D water

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

- A it expands
- B it contracts
- C it evaporates
- D it freezes

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7 **In a reaction, the energy needed to break bonds is 1000 kJ and the energy released making bonds is 1400 kJ. What is the overall energy change?**

- A 400 kJ
- B 1400 kJ
- C -1000 kJ
- D -400 kJ

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

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

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9 **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 21 kJ
- C 0.21 kJ
- D 4.2 kJ

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10 **A passenger train carries people around the country. Which part of the blood is like the train, carrying oxygen around the body?**

- A white blood cells
- B platelets
- C plasma
- D red blood cells

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

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

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12 **A yellow school bus stops at a station. What happens to its speed?**

A it stays the same

B it becomes negative

C it increases

D it becomes zero

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13 **In the combustion of methane, the energy needed to break the bonds is 800 kJ and the energy released when new bonds form is 1200 kJ. What is the overall energy change?**

A -800 kJ

B 1200 kJ

C 400 kJ

D -400 kJ

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14 **Why are rates measured at the start of a reaction?**

A the reaction has finished by then

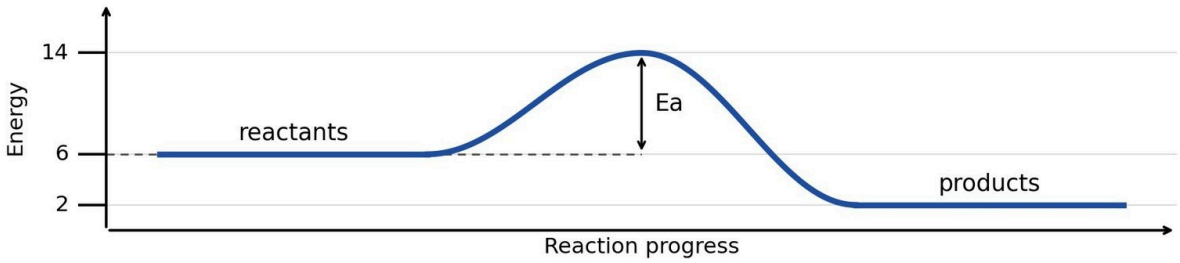
B the products slow the reaction down

C the rate is fastest then

D the temperature is highest then

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15 **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 2. What is the activation energy?**



A 4

B 12

C 20

D 8

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

A burning

B evaporating

C freezing

D melting

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

A 4 cm^3/s

B 2 cm^3/s

C 400 cm^3/s

D 8 cm^3/s

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18 **What happens to the temperature during an endothermic reaction?**

A it falls

B it stays the same

C it rises then falls

D it rises

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

A amylase

B protease

C pepsin

D lipase

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20 **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 3.5 cm^3/s

C 3 cm^3/s

D 2.5 cm^3/s

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21 **In a reaction, the energy needed to break bonds is 1000 kJ and the energy released making bonds is 600 kJ. Is the reaction exothermic or endothermic?**

A exothermic, more energy is given out

B exothermic, more energy is taken in

C endothermic, more energy is given out

D endothermic, more energy is taken in

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22 **What does the peak of a reaction profile show?**

A the energy given out

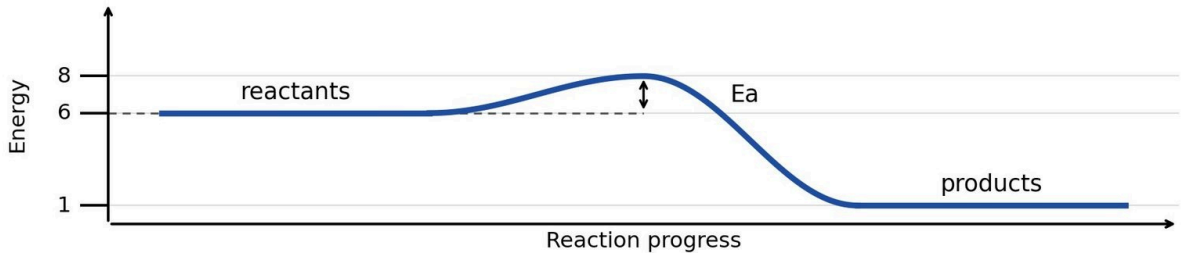
B the energy of the products

C the overall energy change

D the activation energy

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23 **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

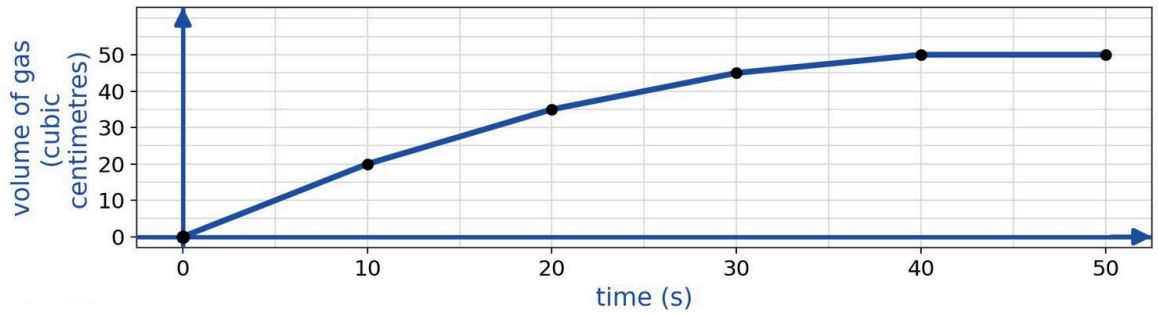
B exothermic, energy is taken in

C endothermic, energy is taken in

D exothermic, energy is given out

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



A 40

B 50

C 20

D 30

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25

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 96 dm^3

D 60 dm^3

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ANSWER KEY

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

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