ENGLAND GCSE COMBINED SCIENCE OCR TWENTY FIRST CENTURY HIGHER · UNIT 12 · 10 QUESTIONS

Making Useful Chemicals — 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 chocolate cake rises in the oven. What makes it rise?**

- A the egg evaporates
- B the sugar freezes
- C a gas is made
- D the flour melts

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2 **Paintbrushes apply paint to a wall. What is the paint made of?**

- A a mixture of substances
- B pure water with nothing in it
- C a single element, nothing else
- D a single compound, nothing else

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3 **How many moles are there in 20 g of a substance with a relative formula mass of 20 ?**

- A 0.5
- B 3
- C 2
- D 1

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4 **A solution has a concentration of 1 mol per cubic decimetre. How many moles are in 2 cubic decimetres of the solution?**

- A 2 mol
- B 4 mol
- C 3 mol
- D 1 mol

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5 **Why does a higher concentration increase the rate?**

A particles get bigger

B particles move faster

C the activation energy falls a lot

D collisions happen more often

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6 **A reaction produces 40 cm cubed of gas in 10 seconds. What is the mean rate of reaction?**

A 3.5 cm^3/s

B 8 cm^3/s

C 4.5 cm^3/s

D 4 cm^3/s

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7 **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 4.2 kJ
- B 0.21 kJ
- C 21 kJ
- D 2.1 kJ

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8 **A school lunch tray holds a meal with bread, cheese and an apple. Which food group is the bread from?**

- A vitamins, for health
- B fats, for insulation
- C proteins, for growth
- D carbohydrates

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9 **A solution has a hydrogen ion concentration of 10^{-3}mol per cubic decimetre. What is its pH?**

- A 5
- B 4
- C 3
- D 2

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10 **A reaction makes 20 g of useful product from 40 g of reactants in total. What is the atom economy?**

- A 100%
- B 25%
- C 50%
- D 150%

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ANSWER KEY

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

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