ALBERTA SCIENCE 20 · UNIT A · 10 QUESTIONS

Chemical 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 to let Brett know so he can fix it.

1 **When a concentrated solution is diluted by adding water, the quantity that stays the same is the**

- A mass of solute
- B concentration of the solution
- C volume of the solution
- D density of the solution

Understand It with Pulse | Flag a mistake

2 **A fuel releases 38 kJ of energy per gram. The energy released, in kJ, when 25 g of this fuel is burned is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **Ships protect their steel hulls from rusting by attaching blocks of magnesium to the hull. The magnesium works because it**

- A acts as a waterproof paint
- B corrodes more easily than the steel, protecting it
- C repels water from the hull
- D insulates the steel from the water

Understand It with Pulse | Flag a mistake

4 **Most plastics are manufactured from chemicals obtained from**

- A wood
- B petroleum
- C sand
- D limestone

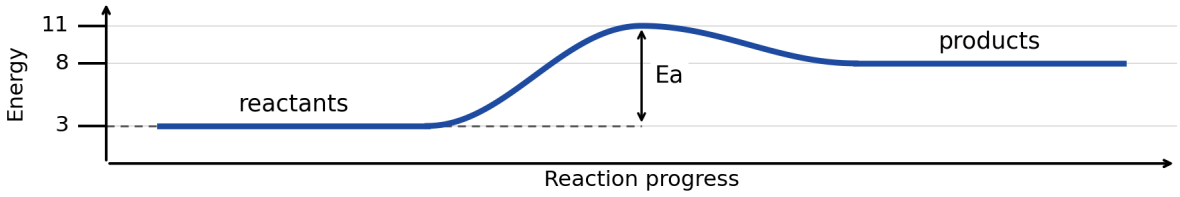
Understand It with Pulse | Flag a mistake

5 **The gas produced by the complete combustion of a fossil fuel that is most responsible for the enhanced greenhouse effect is**

- **A** oxygen
- **B** nitrogen
- **C** water vapour
- **D** carbon dioxide

Understand It with Pulse | **Flag a mistake**

6 **The energy diagram shows the energy changes during a reaction. This reaction is**



- **A** exothermic
- **B** endothermic
- **C** a combustion reaction
- **D** a precipitation reaction

Understand It with Pulse | **Flag a mistake**

7 **When water is decomposed by electrolysis, the two gases produced are**

- **A** hydrogen and oxygen
- **B** carbon dioxide and oxygen
- **C** hydrogen and carbon dioxide
- **D** nitrogen and oxygen

Understand It with Pulse | Flag a mistake

8 **Which of the following reactions is a neutralization reaction?**

- **A** $2H_2 + O_2 \rightarrow 2H_2O$
- **B** $HCl + NaOH \rightarrow NaCl + H_2O$
- **C** $Zn + 2HCl \rightarrow ZnCl_2 + H_2$
- **D** $CH_4 + 2O_2 \rightarrow CO_2 + 2H_2O$

Understand It with Pulse | Flag a mistake

9 **The number of electrons lost when one calcium atom forms a Ca^{2+} ion is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **A chemical cold pack becomes cold when the chemicals inside mix because the reaction that occurs is**

A. exothermic, releasing heat

B. a physical change only

C. a neutralization reaction

D. endothermic, absorbing heat from its surroundings

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. A
2. 950
3. B
4. B
5. D
6. B
7. A
8. B
9. 2
10. D

© 2026 Brett Robbins. All Rights Reserved.