ALBERTA SCIENCE 10 · UNIT 1 · 25 QUESTIONS

Chemistry — 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 **A WHMIS pictogram showing a flame over a circle indicates that a material is**

- A flammable
- B oxidizing
- C corrosive
- D explosive

Understand It with Pulse | Flag a mistake

2 **Which of the following is an element?**

- A H_2O
- B CO_2
- C O_2
- D NaCl

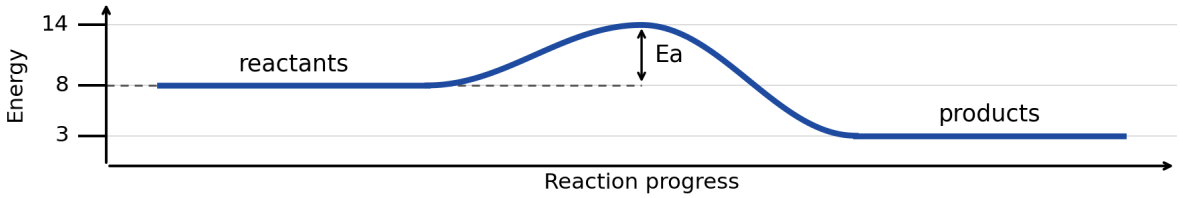
Understand It with Pulse | Flag a mistake

3 **The atomic model that places electrons in specific energy levels, or shells, around the nucleus was proposed by**

- **A** Dalton
- **B** Thomson
- **C** Rutherford
- **D** Bohr

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

4 **The energy diagram shows the energy changes during a chemical reaction. The reaction is**



- **A** exothermic
- **B** endothermic
- **C** a neutralization reaction
- **D** a decomposition reaction

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

5 **The chemical family made up of very reactive nonmetals that form 1- ions is the**

A alkali metals

B halogens

C noble gases

D alkaline earth metals

Understand It with Pulse | Flag a mistake

6 **An atom of sulfur has an atomic number of 16. The number of valence electrons in a sulfur atom is**

A 2

B 16

C 6

D 8

Understand It with Pulse | Flag a mistake

7 **The total number of atoms in one formula unit of aluminum oxide, Al_2O_3, is _____. Record your answer as a whole number.**

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **Which of the following is a property of ionic compounds?**

A They conduct electricity when molten or dissolved in water

B They conduct electricity in the solid state

C They have low melting points

D They are made up of two nonmetals

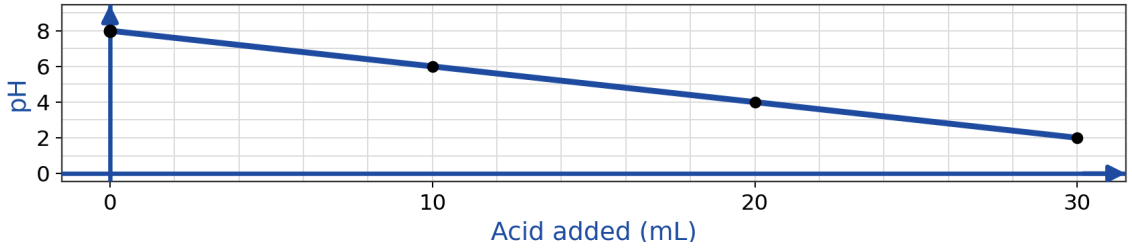
Understand It with Pulse | Flag a mistake

9 **The correct name of the compound Na_2S is**

- **A** disodium sulfide
- **B** sodium sulfide
- **C** sodium sulfur
- **D** sodium(I) sulfide

Understand It with Pulse | Flag a mistake

10 **The graph shows the pH of a solution as acid is added. The pH after 20 mL of acid has been added is**



- **A** 2
- **B** 4
- **C** 6
- **D** 8

Understand It with Pulse | Flag a mistake

11 When the equation $CH_4 + O_2 \rightarrow CO_2 + H_2O$ is balanced, the coefficient in front of O_2 is

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

Understand It with Pulse | Flag a mistake

12 Hydrogen gas reacts with oxygen gas to form water according to the equation $2H_2 + O_2 \rightarrow 2H_2O$. If 8 g of H_2 reacts completely with 64 g of O_2, the mass of water produced, in grams, is _____. Record your answer as a whole number.

ANSWER _____

Understand It with Pulse | Flag a mistake

13 **The reaction $Zn + 2HCl \rightarrow ZnCl_2 + H_2$ is classified as a**

A formation reaction

B decomposition reaction

C double replacement reaction

D single replacement reaction

Understand It with Pulse | Flag a mistake

14 **The correct name of the compound CuO is**

A copper(II) oxide

B copper(I) oxide

C dicopper oxide

D copper oxide

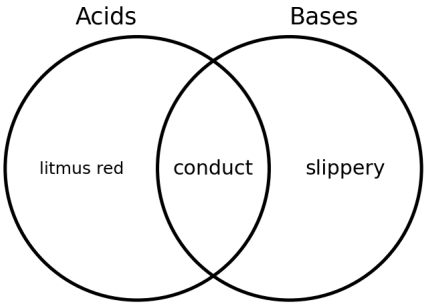
Understand It with Pulse | Flag a mistake

15 **The total number of atoms in one formula unit of $Ca_3(PO_4)_2$ is _____. Record your answer as a whole number.**

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **The Venn diagram compares acids and bases. The property shared by both acids and bases is that they**



A turn blue litmus paper red

B conduct electricity when dissolved in water

C feel slippery to the touch

D turn red litmus paper blue

Understand It with Pulse | Flag a mistake

17 **The correct formula for magnesium hydroxide is**

- **A** $MgOH$
- **B** $Mg(OH)_2$
- **C** Mg_2OH
- **D** $MgOH_2$

Understand It with Pulse | Flag a mistake

18 **When the equation $N_2 + H_2 \rightarrow NH_3$ is balanced using the smallest whole number coefficients, the sum of all the coefficients is _____. Record your answer as a whole number.**

ANSWER _____

Understand It with Pulse | Flag a mistake

19 **Hydrochloric acid reacts with sodium hydroxide in a neutralization reaction. The products of this reaction are**

A sodium hydroxide and chlorine

B hydrogen gas and sodium chloride

C sodium chloride and water

D sodium oxide and water

Understand It with Pulse | Flag a mistake

20 **Which of the following elements is a metalloid?**

A sodium

B silicon

C chlorine

D iron

Understand It with Pulse | Flag a mistake

21 **The reaction $2H_2O_2 \rightarrow 2H_2O + O_2$ is classified as a**

A decomposition reaction

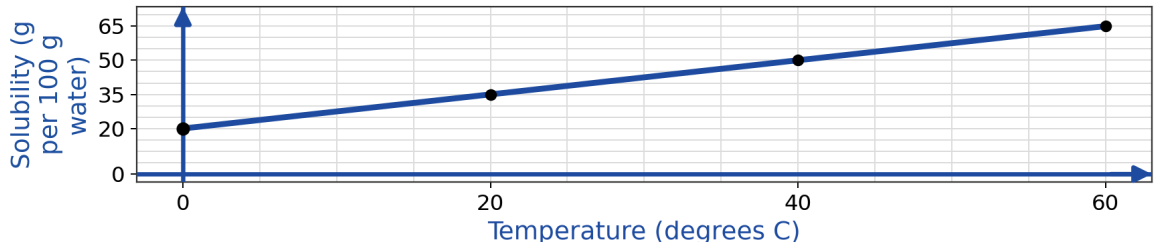
B formation reaction

C combustion reaction

D single replacement reaction

Understand It with Pulse | Flag a mistake

22 **The graph shows how the solubility of a salt in water changes with temperature. The solubility at 40 degrees Celsius, in grams per 100 g of water, is**



A 20

B 35

C 50

D 65

Understand It with Pulse | Flag a mistake

23 **When a calcium atom forms an ion, it**

- **A** gains 2 electrons and forms a 2- ion
- **B** loses 1 electron and forms a 1+ ion
- **C** gains 1 electron and forms a 1- ion
- **D** loses 2 electrons and forms a 2+ ion

Understand It with Pulse | Flag a mistake

24 **Which of the following reactions is a combustion reaction?**

- **A** $CH_4 + 2O_2 \rightarrow CO_2 + 2H_2O$
- **B** $2H_2O \rightarrow 2H_2 + O_2$
- **C** $NaOH + HCl \rightarrow NaCl + H_2O$
- **D** $CaCO_3 \rightarrow CaO + CO_2$

Understand It with Pulse | Flag a mistake

25 **Solutions of silver nitrate and sodium chloride are mixed together and a white solid forms. The precipitate produced in this double replacement reaction is**

A $NaNO_3$

B $AgNO_3$

C NaCl

D AgCl

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. B
2. C
3. D
4. A
5. B
6. C
7. 5
8. A
9. B
10. B
11. C
12. 72
13. D
14. A
15. 13
16. B
17. B
18. 6
19. C
20. B
21. A
22. C
23. D
24. A
25. D

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