ALASKA CHEMISTRY · UNIT 3 · 25 QUESTIONS

Stoichiometry and Solutions — 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 **One mole is an amount containing**

- A one gram of a substance
- B the Avogadro number of particles
- C one liter of a substance
- D one atom of a substance

Understand It with Pulse | Flag a mistake

2 **The number of moles in 54 g of water is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **The mass, in grams, of 0.5 mol of carbon dioxide is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **Molarity is defined as moles of solute per**

A gram of solution

B liter of solvent

C liter of solution

D mole of solvent

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5 **The molarity, in moles per liter, of a solution containing 0.25 mol of solute in 0.5 L is ____**



ANSWER _____

Understand It with Pulse | Flag a mistake

6 **The number of moles in 80 g of sodium hydroxide is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **In a chemical reaction, the reactant that runs out first is the**

A excess reactant

B catalyst

C product

D limiting reactant

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8 **In the reaction $2H_2 + O_2 \rightarrow 2H_2O$,**
the moles of water formed from 6 mol of hydrogen with excess oxygen is ____

ANSWER _____

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9 **Percent yield is calculated as**

A theoretical yield ÷ actual yield, × 100

B actual yield ÷ theoretical yield, × 100

C actual yield + theoretical yield

D theoretical yield - actual yield

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10 **The percent by mass of carbon in carbon dioxide, to one decimal place, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

11 **A 200 mL sample of 3.0 M solution is diluted to 600 mL. The new molarity, in moles per liter, is ____**

ANSWER _____

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12 **An empirical formula gives the**

A exact number of atoms in a molecule

B mass of one mole

C simplest whole number ratio of atoms

D shape of a molecule

Understand It with Pulse | Flag a mistake

13 **The number of moles in 180 g of glucose, $C_6H_{12}O_6$, is ____**



ANSWER _____

Understand It with Pulse | Flag a mistake

14 **At standard temperature and pressure, the volume, in liters, of 2 mol of hydrogen gas is ____**

ANSWER _____

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15 **A saturated solution at a given temperature**

A contains no solute

B can dissolve unlimited solute

C contains only solvent

D cannot dissolve more solute at that temperature

Understand It with Pulse | Flag a mistake

16 **The mass, in grams, of 4 mol of water is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **The molarity, in moles per liter, of a solution containing 3 mol of solute in 1.5 L is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **In salt water, the salt is the**



A solute

B solvent

C solution

D precipitate

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19 **In the reaction $N_2 + 3H_2 \rightarrow 2NH_3$, the moles of ammonia formed from 9 mol of hydrogen with excess nitrogen is ____**

ANSWER _____

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20 **The percent yield, as a whole number, when the actual yield is 40 g and the theoretical yield is 50 g, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **When water is added to a solution, the molarity**

A decreases

B increases

C stays the same

D falls to zero

Understand It with Pulse | Flag a mistake

22 **Using whole number atomic masses (Mg = 24, S = 32, O = 16), the molar mass of magnesium sulfate, in grams per mole, is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **The number of moles in 88 g of carbon dioxide is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **Which solution conducts electricity**

A sugar dissolved in water

B oil and water

C salt dissolved in water

D pure water

Understand It with Pulse | Flag a mistake

25 **In the reaction $2H_2 + O_2 \rightarrow 2H_2O$, with 6 mol of hydrogen and 2 mol of oxygen, the moles of water formed is ____**

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. B
2. 3
3. 22
4. C
5. 0.5
6. 2
7. D
8. 6
9. B
10. 27.3
11. 1
12. C
13. 1
14. 44.8
15. D
16. 72
17. 2
18. A
19. 6
20. 80
21. A
22. 120
23. 2
24. C
25. 4

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