ALBERTA CHEMISTRY 20 · UNIT D · 5 QUESTIONS

Quantitative Relationships in 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 **A physics lab pulley clamped to the edge of a wooden lab table, a rope running over the pulley with a small cylindrical metal mass hanging from it, a wooden block resting on the table connected by the rope, bright daylight, sharp focus, no people, no text. Use the atomic masses Mg = 24.31, N = 14.01, O = 16.00 g/mol. The molar mass of $Mg(NO_3)_2$ is**



A 148.33 g/mol

B 86.32 g/mol

C 124.33 g/mol

D 196.35 g/mol

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2 **The number of moles in 88.0 g of CO_2 (molar mass 44.01 g/mol) is**

- A 0.500 mol
- B 2.00 mol
- C 1.00 mol
- D 4.00 mol

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3 **Use 6.02×10^{23} atoms/mol. The number of atoms in 0.750 mol of helium is**

- A 6.02×10^{23}
- B 8.03×10^{23}
- C 4.52×10^{23}
- D 2.26×10^{24}

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4 **Use the atomic masses H = 1.01, S = 32.07, O = 16.00 g/mol. The percent by mass of oxygen in H_2SO_4 is**

A 32.7%

B 49.0%

C 81.6%

D 65.2%

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5 **At STP the molar volume of a gas is 22.4 L/mol. A sample of $N_2(g)$ occupies 33.6 L at STP. The amount of $N_2(g)$, in moles, to the nearest tenth of a mole, is _____ mol**

ANSWER _____

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ANSWER KEY

1. A
2. B
3. C
4. D
5. 1.5

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