Name: _____ **Date:** _____

Neon Horizons and Precise Measures: A 12th Grade Senior Science Quiz

Evaluate foundational SI standards and calibration protocols through high-level recall of luminosity, thermodynamic scales, and architectural-grade measurement errors.

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1. In the International System of Units (SI), which base unit is defined by the fixed numerical value of the luminous efficacy of monochromatic radiation?

A. Lumen
B. Watt
C. Lux
D. Candela

2. The Kelvin scale is an absolute scale, meaning it does not use 'degrees' in its notation.

A. True
B. False

3. When a researcher repeatedly obtains the same value during an experiment, but that value is far from the theoretical target, the data is described as _____.

A. Accurate but not precise
B. Precise but not accurate
C. Neither accurate nor precise
D. Statistically insignificant

4. Which of the following units is derived by combining the SI base units for mass, length, and time to measure force?

A. Joule
B. Pascal
C. Newton
D. Watt

5. To convert the flow of electric charge into standard units, one would measure the _____.

A. Volt
B. Ohm
C. Ampere
D. Coulomb

6. The mole is the SI unit used to measure the total mass of a chemical substance.

A. True
B. False

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7. In advanced laboratory settings, 'Tare' or 'Zeroing' a digital balance is a primary step to eliminate which type of error?

A. Random error
B. Systematic error
C. Human parallax
D. Rounding error

8. The SI prefix used to signify a factor of 10 to the power of negative 9 (10^{-9}) is _____.

A. Micro
B. Pico
C. Nano
D. Femto

9. A measurement of 0.0050 meters contains four significant figures.

A. True
B. False

10. Which instrument is specifically designed to measure the amount of light falling on a surface in order to determine Luminous Intensity?

A. Spectrometer
B. Photometer
C. Galvanometer
D. Barometer