Name: _____ **Date:** _____

The Buffet of Resource Scarcity: A College Quiz on Global Appetite

Examine the intersections of Life Cycle Assessment, the Jevons Paradox, and Industrial Ecology across 10 analytical questions.

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1. When assessing the sustainability of an industrial process, which metric specifically measures the total amount of land and water required to support its consumption and waste assimilation?

A. Carbon Intensity Index
B. Ecological Footprint
C. Eutrophication Potential
D. Thermodynamic Efficiency

2. The _____ Paradox occurs when technological progress increases the efficiency with which a resource is used, but the falling cost of use actually increases total consumption of that resource.

A. Solow
B. Malthusian
C. Jevons
D. Kuznets

3. In the context of Industrial Ecology, 'closed-loop' manufacturing cycles are designed to eliminate the concept of waste by utilizing the outputs of one system as inputs for another.

A. True
B. False

4. Which framework is used to evaluate the environmental impacts of a product from raw material extraction through disposal (cradle-to-grave)?

A. Triple Bottom Line Reporting
B. Life Cycle Assessment (LCA)
C. Product Placement Matrix
D. Environmental Impact Statement (EIS)

5. The theoretical maximum population size of a species that an environment can sustain indefinitely without degrading the resource base is known as the _____.

A. Linear Growth Rate
B. Carrying Capacity
C. Biotic Potential
D. Overshoot Threshold

6. Strong sustainability posits that natural capital and manufactured capital are perfect substitutes for one another in the global economy.

A. True

B. False

7. The concept of 'Intra-generational equity' in sustainability primarily addresses which of the following issues?

A. The rights of humans vs. non-human species
B. Resource distribution between current and future populations
C. Wealth and resource disparities among people living today
D. The preservation of historical cultural artifacts

8. In the IPAT equation (I = P x A x T), used to describe human impact on the environment, the 'A' stands for _____.

A. Altitude
B. Affluence
C. Accountability
D. Adaptability

9. Which economic theory suggests that environmental quality initially declines with economic growth, but improves once a certain income threshold is reached?

A. Environmental Kuznets Curve
B. Keynesian Multiplier
C. Pareto Efficiency
D. Game Theory Equilibrium

10. The 'Precautionary Principle' suggests that if an action has a suspected risk of causing harm to the public or the environment, the burden of proof that it is NOT harmful falls on those taking the action.

A. True
B. False