Quiz #2 - LEED Green Associate
LCCG Section 2: Sustainable Thinking

1. Which of these types of systems is more sustainable?
   A. Open System
   B. Closed System
   C. Positive System
   D. Negative System

2. What are the three major concepts integral to green building and sustainability? [Choose three]
   A. Systems thinking
   B. Leverage Points
   C. Life-cycle Approach
   D. Integrative processes

3. What type of feedback loop enables a system to self-correct and stay within a particular range of function or performance and helps to keep the system stable?
   A. Open Feedback Loop
   B. Closed Feedback Loop
   C. Positive Feedback Loop
   D. Negative Feedback Loop

4. Which of these is an example of a positive feedback loop? [Choose two]
   A. Population Growth
   B. Hunting License
   C. Energy meter
   D. Thermostat
   E. Climate Change

5. What is the definition of heat island effect?
   A. The resistance of hardscapes, such as light, reflective pavement and buildings to sunlight.
   B. The reflection of heat by hardscapes, such as dark, reflective pavement and buildings, and its absorption to surrounding areas.
   C. The absorption of heat by hardscapes, such as dark, nonreflective pavement and buildings, and its radiation to surrounding areas.
   D. The emission of heat from sidewalks, patios, park lots, and roofs at night.

6. Which of these best describes a positive feedback loop?
   A. A system in which materials are constantly brought in from the outside, used in the system, and then released outside the system in a form of waste.
   B. A signal for a system to stop changing when a response is no longer needed.
   C. Self-reinforcing loops in which a stimulus causes an effect and the loop produces more of that effect.
   D. A system that exchanges minimal materials and elements with its surroundings; systems are linked with one another to make the best use of byproducts.

7. Which of these is an example of a leverage point? [Choose three]
   A. Rules
   B. Corporation
   C. Self-Organization
   D. Goals

8. In a green building project, which of these should the project team consider as the most important to the design decision when selecting materials to meet the project's sustainability goals?
   A. First Cost
   B. Lowest Price
   C. Embodied Energy
   D. Availability

9. What is the definition of Life Cycle Assessment (LCA)?
   A. Looking at all stages of a project, product or service, adding the dimension of longevity to whole systems thinking.
   B. An analysis of the environmental aspects and potential impacts associated with a product, process, or service.
   C. A process of costing that looks at both purchase and operating costs as well as relative savings over the life of the building or product.
   D. A formal review process of the design of a project based on its intended function in order to identify potential alternatives that reduce costs and improve performance.

10. A project installed Photovoltaic (PV) panels on a building's roof to offset the buildings electricity use. The initial coast for the PV panels and installation was $20,000. The design engineer estimated an annual energy cost savings for the project of $2500 and an annual savings for electricity of $1500. The project received a lump sum $5000 tax rebate for installing the PV system. How many years will it take for the system to achieve a simple payback for the project?
   A. 6 years
   B. 8 years
   C. 10 years
   D. 12 years

11. Designers working to achieve a project's green building goals should work using what type of building process?
   A. Integrated
   B. Cohabitation
   C. Isolation
   D. Co-Located

12. What are the phases that comprise an integrative process? [Choose three]
   A. Discovery
   B. Design and Construction
   C. Measurement and Verification
   D. Occupancy, operations, and performance feedback

13. What is a benefit of a landscape architect using native and adaptive plants for the projects landscape design? [Choose two]
   A. Reduces water consumption
   B. Reduces greenhouse gas emissions
   C. Provides habitat for local fauna
   D. Saves energy

14. Which of these design decisions has a major effect on reducing energy demand for a building?
   A. Window Selection
   B. Building Orientation
   C. Site Selection
   D. Climate

15. The integrative process requires more time and collaboration during which of these phases than conventional practices? [Choose two]
    A. Conceptual
    B. Design
    C. Construction
    D. Commissioning

16. Which of these are benefits of composting? [Choose two]
    A. Reduces waste hauling costs
    B. Provides habitat for local fauna
    C. Improves the quality of the soil
    D. Reduces GHG emissions related to trash hauling

17. Which of these best describes suburban growth that typically requires additional roads and resources, such as; energy, water, sewage systems, and materials to support that growth?
    A. Neighborhood Development
    B. Decay
    C. Urban Renewal
    D. Sprawl

18. If a project team is unfamiliar with a green building technology and the owner would like for them to implement it what should they do?
    A. Scrap the design and tell the owner it can't be done
    B. Use a traditional approach in place of the green strategy in order to save the owner money
    C. Hire a green building expert to help them with the design and implementation of the green strategy
    D. Call the LEED hotline and ask for help

19. Actions taken by a project team during which of these phases are essential to achieving a project's environmental goals cost-effectively?
    A. Discovery
    B. Design and Construction
    C. Measurement and Verification
    D. Occupancy, operations, and performance feedback

20. The Integrative process Design and Construction phase is also known conventionally as?
    A. Pre-schematic design
    B. Schematic Design
    C. Construction Document (CD)
    D. Design-Bid-Build