Test: Systems Thinking

Part A: Matching

Match the term with its correct definition. Write the letter on the line.

Term	Definition
1. _____ System	A. Information or matter that enters a system
2. _____ Input	B. A group of connected parts working together
3. _____ Output	C. Information or matter that leaves a system
4. _____ Feedback	D. A change in one part affects other parts
5. _____ Interdependence	E. Information from a system used to make changes

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Part B: Multiple Choice: Choose the best answer for each question.

6. What is a system?
   a. A single object with no purpose
   b. A collection of parts that work together
   c. A type of machine only
   d. A scientific theory
7. Which of the following is an example of a system?
   a. A bicycle wheel
   b. A school
   c. A single pencil
   d. A rock
8. In systems thinking, an input is:
   a. Something that leaves a system
   b. A problem in the system
   c. Something that enters a system
   d. The final result
9. Which is an example of an output in a plant system?
   a. Sunlight
   b. Water
   c. Oxygen released by the plant
   d. Soil
10. What does feedback do in a system?
    a. Stops the system from working
    b. Provides information that can affect the system
    c. Removes all inputs
    d. Creates a new system

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11. Why is systems thinking useful?
    a. It ignores relationships between parts.
    b. It focuses on only one part of a problem.
    c. It helps us understand how parts work together.
    d. It eliminates the need for observations.

12. Which statement best describes interdependence?
    a. Parts of a system work separately.
    b. One part of a system affects other parts.
    c. Systems never change.
    d. Inputs and outputs are the same.

13. A car is a system because:
    a. It contains only one part.
    b. Its parts work together to make it move.
    c. It has no inputs or outputs.
    d. It does not require energy.

14. Which of the following is an input for a car?
    a. Exhaust gases
    b. Movement of the car
    c. Fuel
    d. Heat from the engine

15. A food web is considered a system because:
    a. Organisms do not affect one another.
    b. It has no inputs or outputs.
    c. Organisms interact and depend on each other.
    d. It only contains plants.

Part C: True or False

Write T for True or F for False.

16. _____ Systems can be found in nature and in human-made objects.

17. _____ A system is made up of only one part.

18. _____ Outputs leave a system.

19. _____ Feedback can help a system adjust or improve.

20. _____ Changes in one part of a system can affect other parts.

21. _____ The human body is an example of a system.

22. _____ Inputs and outputs are not important in systems thinking.

23. _____ Systems thinking helps scientists understand complex problems.

24. _____ Ecosystems are examples of systems.

25. _____ Systems never change over time.

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