

## **Operation: Resilient Planet Mission 1 Pre-Test**

Please answer all questions.

**1. Which combination of factors provided the right conditions for the zebra mussels to spread in Lake Michigan?**

- A. A rich source of algae and few predators
- B. A rich source of algae and few prey
- C. A rich source of carbon dioxide and deep sediment
- D. A rich source of hydrogen sulfide and deep sediment

**2. Defend the following statement: A lion gets its energy from the sun.**

**3. Which of the following may be the result of global climate change?**

- A. A sudden increase in volcanic activity
- B. A sudden decrease in volcanic activity
- C. A sudden increase in the rate of extinction
- D. A sudden decrease in the rate of extinction

**4. All of the African elephants in a nature reserve in South Africa make up a(n)**

- A. community
- B. biome
- C. ecosystem
- D. population

**5. What does biomass measure?**

- A. Amount of biotic material by weight
- B. Amount of available energy
- C. Number of different species
- D. Number of different individuals

**6. Which phrase best applies to an ecosystem that has high biodiversity?**

- A. Many different species
- B. High population
- C. Low stability
- D. Few limiting factors

**7. Explain how limiting factors affected the zebra mussel population in Lake Michigan.**

**8. Feeding on dead organisms and organic waste is a large part of which organisms' niche?**

- A. Omnivores
- B. Producers
- C. Herbivores
- D. Decomposers

**9. Soil humus is a natural sink of**

- A. carbon
- B. hydrogen
- C. water
- D. oxygen

**10. The effect of moisture level on the growth of a green plant is an example of**

- A. A biotic factor affecting a biotic factor
- B. A biotic factor affecting an abiotic factor
- C. An abiotic factor affecting a biotic factor
- D. An abiotic factor affecting an abiotic factor

**11. What do food chains show?**

- A. The total mass of living things in an ecosystem
- B. The total amount of matter and energy in an ecosystem
- C. The transfer of matter and energy from one organism to another
- D. A complex network of feeding relationships

**12. A human would be considered a primary consumer while eating which meal?**

- A. Steak
- B. Shark
- C. Salad
- D. Shrimp

**13. An apex predator is a**

- A. carnivore
- B. herbivore
- C. producer
- D. decomposer

**14. The cycling of books through a library system can be compared to the cycling of nutrients through an ecosystem. Using the same analogy, what is a natural sink comparable to?**

- A. A library with a lot of different books
- B. A person who checks out many books
- C. A library where there aren't many books
- D. A person who doesn't return books right away

**15. If the supply of nitrates in Lake Michigan decreased, the size of the algae population would**

- A. decrease
- B. increase
- C. go to zero
- D. remain the same