

Biology Chapter 5 Test: Biodiversity and Conservation**True/False**

Indicate whether the statement is true or false.

- ____ 1. In many cases, if a renewable resource is not conserved properly it will become a nonrenewable resource.
- ____ 2. Because the water cycle recycles fresh water at a relatively slow pace, water is considered a nonrenewable resource.
- ____ 3. The process of bioremediation is the best way to conserve an ecosystem's biodiversity.
- ____ 4. A species with a low level of genetic diversity has a higher chance of becoming extinct than a species with a high level of genetic diversity.
- ____ 5. The best way to restore a damaged ecosystem is to introduce predators to control the population of endemic species.
- ____ 6. The sustainable use of natural resources is one way to conserve an area's biodiversity.
- ____ 7. An ecosystem's biodiversity has a direct effect on the area's economy.
- ____ 8. The decline of a single species in an ecosystem rarely affects the other species living in that ecosystem.

Multiple Choice

Identify the choice that best completes the statement or answers the question.

Table 5-1 shows the population sizes for 6 different species in four different areas.

Area	Species U	Species V	Species W	Species X	Species Y	Species Z
A	3	7	2	2	2	4
B	0	6	8	0	6	6
C	0	0	2	0	0	2
D	4	3	11	1	6	0

Table 5-1

- ____ 9. If the four areas in Table 5-1 were the only places in the world to find these organisms, which species most likely faces the greatest chance of extinction?
- a. Species U
b. Species X
c. Species Y
d. Species Z
- ____ 10. Which area in Table 5-1 has the greatest biodiversity?
- a. Area A
b. Area B
c. Area C
d. Area D

11. Island A has an area of 30 square kilometers. Island B has an area of 400 square kilometers. The islands are near each other. Which of the following statements is most likely to be true?

- a. Island A has greater biodiversity and a higher percentage of edge effect than Island B.
- b. Island A has less biodiversity and a higher percentage of edge effect than Island B.
- c. Island A has greater biodiversity and a lower percentage of edge effect than Island B.
- d. Island A has less biodiversity and a lower percentage of edge effect than Island B.

12. If the communities in Figure 5-1 were put in order of least to most biological diversity, they would be _____.

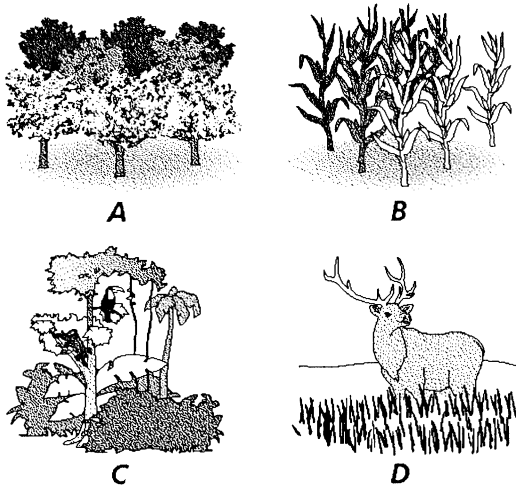


Figure 5-1

- a. ABCD
- b. CADB
- c. DBCA
- d. BDAC

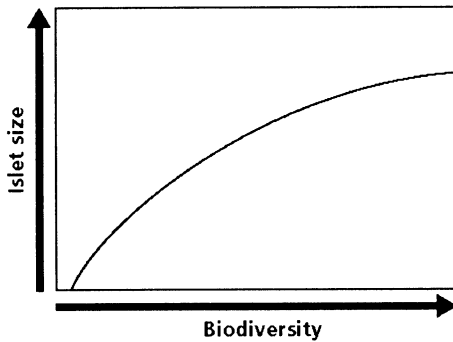


Figure 5-2

13. What does the graph in Figure 5-2 tell you?

- a. the farther from land, the more biodiversity
- b. the larger the islet, the more biodiversity
- c. islet size and biodiversity are not related
- d. biodiversity decreases with islet size

14. Using the information from the graph in Figure 5-2, predict what would happen to biodiversity if the ocean level increased.
- it would increase
 - it would remain the same
 - it would decrease
 - it would disappear

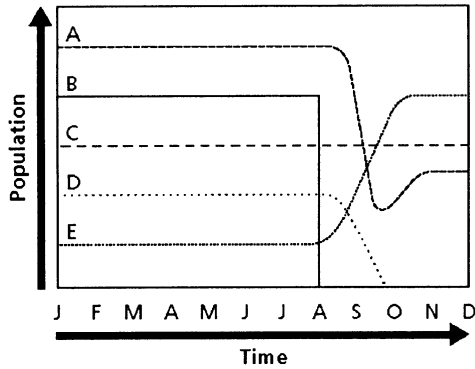


Figure 5-3

15. What effect did the loss of species B have on species A and D in Figure 5-3?
- it caused the populations of A and D to decrease
 - it caused the populations of A and D to increase
 - it caused the populations of A and D to become extinct
 - it had no effect on the populations of A and D
16. Examine the graph in Figure 5-3. Which species were *not* affected by the loss of species B?
- species A, C, and E
 - species C and E
 - species C only
 - species E only
17. Which of the following resources can be considered renewable?
- natural gas
 - quartz
 - uranium
 - wood
18. The cheetah population was around 100,000 in 1900. Today, fewer than 12,000 cheetahs remain. What type of natural resource are cheetahs considered to be?
- nonrenewable
 - renewable
 - reusable
 - sustainable

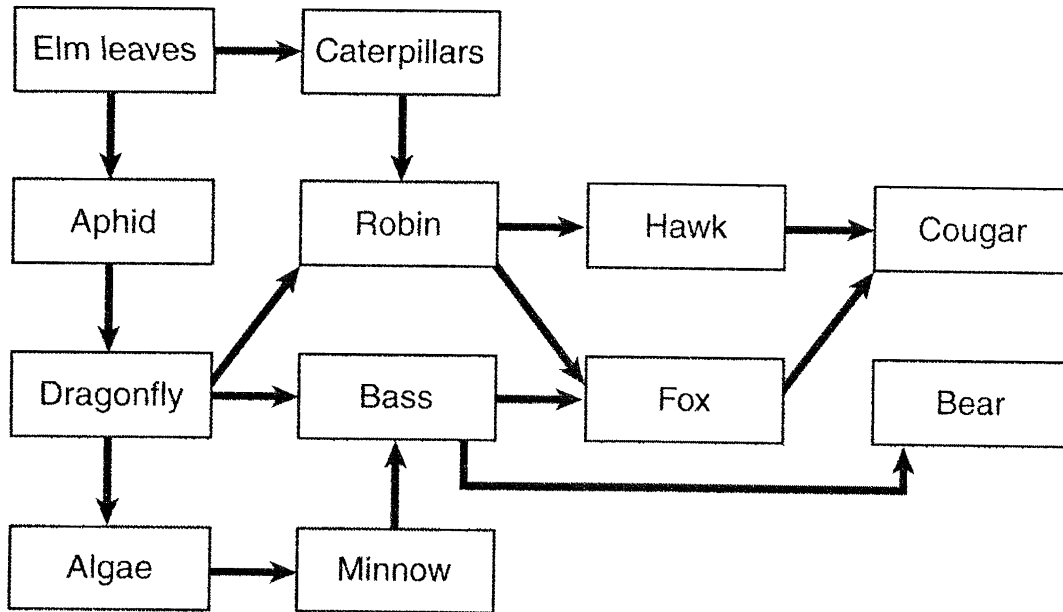


Figure 5-4

- ___ 19. Examine the food web shown in Figure 5-4. What would most likely happen to the organisms in this food web if the robin began to disappear?
- The hawk would be forced to start eating the dragonfly.
 - Most of the organisms in the ecosystem would starve and die.
 - The terrestrial organisms would starve, but the aquatic organisms would survive.
 - There would be an overpopulation of caterpillars, which would kill many elm trees.
- ___ 20. Examine the food web shown in Figure 5-4. What would most likely happen to the organisms in this ecosystem if the algae began to disappear?
- The bass population would increase.
 - All of the aquatic organisms would become overpopulated.
 - The dragonfly population would likewise begin to disappear.
 - The fox would begin to starve and be forced to emigrate to another area.
- ___ 21. Which of the following practices can help conserve an area's biodiversity?
- biological magnification
 - habitat fragmentation
 - species introduction
 - sustainable usage
- ___ 22. The extinction rate of terrestrial and freshwater species is currently higher than the extinction rate of marine species. What is the most likely reason for this?
- Human activities have a greater impact on terrestrial and freshwater ecosystems.
 - There are no economic incentives for humans to use ocean resources.
 - Marine organisms have had a longer time to adapt to their environment.
 - The oceans have a greater area than land and freshwater ecosystems combined.
- ___ 23. A biologist is searching for a new plant-based antibiotic. In which of the following types of ecosystems would the biologist have the best chance of finding new kinds of plants to use in her research?
- highland desert
 - polar tundra
 - temperate deciduous forest
 - tropical rain forest

Name: _____

ID: A

- _____ 24. If a disturbance were to occur in an ecosystem, which of the following ecosystems would be most vulnerable to extinctions?
- a. continental ecosystems
 - b. island ecosystems
 - c. marine ecosystems
 - d. tropical ecosystems
- _____ 25. Why is sandstone classified as a nonrenewable resource?
- a. Sandstone takes many thousands of years to form.
 - b. Sandstone is not composed of natural rock materials.
 - c. Sandstone is not a very useful resource to humans.
 - d. Sandstone is no longer being formed on Earth.