# Bio12-Q1W1-H.W

**Modified True/False**
*Indicate whether the statement is true or false. If false, change the identified word or phrase to make the statement true.*

____ 1. The liter is a metric unit of volume. _____

____ 2. Whether applications of science to everyday life are considered good, bad, right, or wrong comes under the category of technology. _____

____ 3. Biologists generally form hypotheses using deductive reasoning. _____

____ 4. Optimal factors restrict the numbers of organisms that can exist. _____

____ 5. Age, physical condition, and stage in its life cycle may all influence an organism's limits of tolerance. _____

____ 6. A large group of ecosystems characterized by the same type of climax community is called a taiga. _____

____ 7. The colonization of new sites by communities of organisms is secondary succession. _____

____ 8. A pioneer community is a stable, mature community that undergoes little or no succession. _____

____ 9. The region of the ocean shallow enough for sunlight to penetrate is the photic zone. _____

____ 10. The tundra is an arid region characterized by little or no plant life. _____

**Multiple Choice**
*Identify the choice that best completes the statement or answers the question.*

____ 11. The theme that reflects the idea that there has been a gradual change in the characteristics of species over time is _____.
a. energy
b. unity within diversity
c. reproduction
d. evolution

____ 12. Living things change during their lives through _____.
a. reproduction
b. growth and development
c. making responses
d. adaptation and organization

____ 13. Which of the following are likely topics for a course in biology?
a. Why does the Texas horned lizard squirt blood out of its eyes?
b. How is a banded pipefish able to hide in its environment of seaweeds?
c. What chemicals cause plant stems to lengthen or flowers to bloom?
d. All of these.

____ 14. Questions about living things that can be answered by biologists are _____.
a. what
b. why
c. how
d. all of these

____ 15. A structured procedure for collecting information to test a hypothesis is a(n) _____.
a. principle
b. theory
c. control
d. experiment

____ 16. The application of science to the needs and problems of society is _____.
a. quantitative research
b. technology
c. descriptive research
d. pure science

____ 17. A scientific explanation of known facts arrived at through repeated testing over time is a(n) _____.

a. theory
b. observation
c. natural law
d. experiment

____ 18. The steps commonly used by scientists in gathering information to test hypotheses and solve problems are called _____.
a. descriptive research
b. pure science
c. scientific methods
d. applied science

____ 19. Why is the hypothesis that black cats cause bad luck not science?
a. The results of studying the hypothesis are not repeatable.
b. The results of studying the hypothesis are open to judgment.
c. The hypothesis cannot be tested by controlled experiments.
d. All of these.

____ 20. Quantitative research is often reported as _____ to aid understanding.
a. graphs or charts
b. descriptions of behavior
c. long lists of numbers
d. all of these

____ 21. Students of a biology class ran an experiment on a type of flowering plant. Their goal was to find the optimal time in the plant's life for flowering. What time period will provide the most flowering plants? Use Table 1-1 to determine your answer.

**Table 1-1**

| Day | Number of Plants Flowering |
|---|---|
| 2 | 6 |
| 4 | 12 |
| 6 | 18 |
| 8 | 22 |
| 10 | 8 |

a. 5-6 days
b. 6-7 days
c. 7-8 days
d. 8-9 days

____ 22. Which of the following results from quantitative analysis of Figure 1-6?

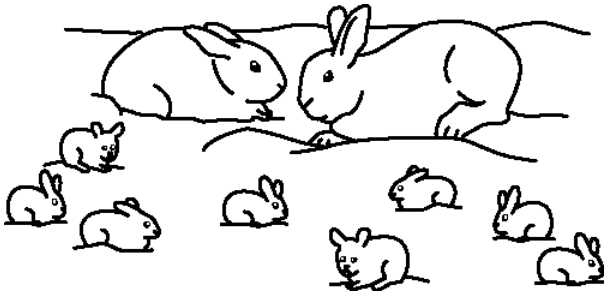
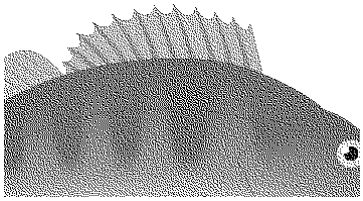


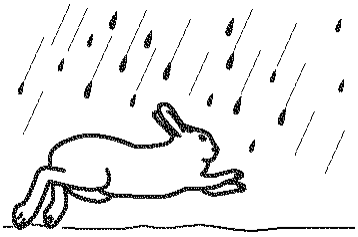
**Figure 1-6**

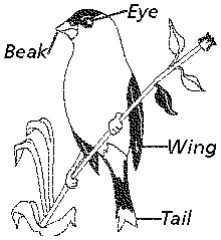
a. the babies are cold
b. there are 7 babies
c. there isn't enough food
d. these are the first babies this rabbit has had

____ 23. Which of the examples shows a response to a stimulus?

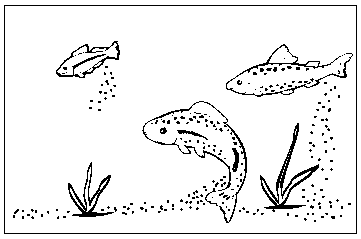
a. 

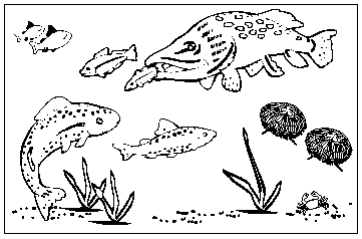
c. 

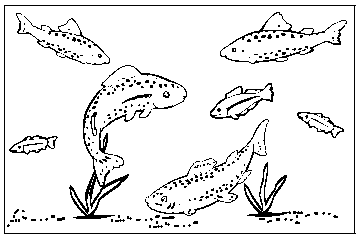
b. 

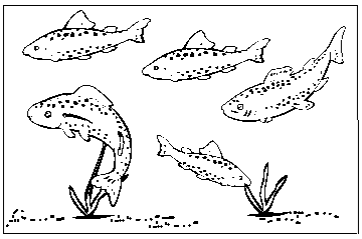
d. 


____ 24. Which of the pictures in Figure 1-10 shows the most diversity?

a. 

c. 

b. 

d. 

____ 25. Nitrogen is released to the abiotic parts of the biosphere from the processes of death and _____.
a. decay by bacteria
b. infiltration of groundwater
c. runoff
d. lightning in storm clouds

____ 26. Carbon dioxide in the atmosphere enters the biotic parts of the biosphere through _____.
a. burning of forests
b. photosynthesis
c. combustion of fossil fuels
d. all of these

____ 27. Some birds are known as honey guides because they may be followed by humans to wild beehives. When the humans take honey from the hives, the birds are able to feast on the honey and bees, too. This type of relationship can <u>best</u> be described as _____.
a. parasitism
b. commensalism
c. mutualism
d. symbiosis

____ 28. Cougars are predators that often eat weakened or diseased animals. This is a description of the _____ of cougars.
a. habitat
b. community
c. niche
d. none of these

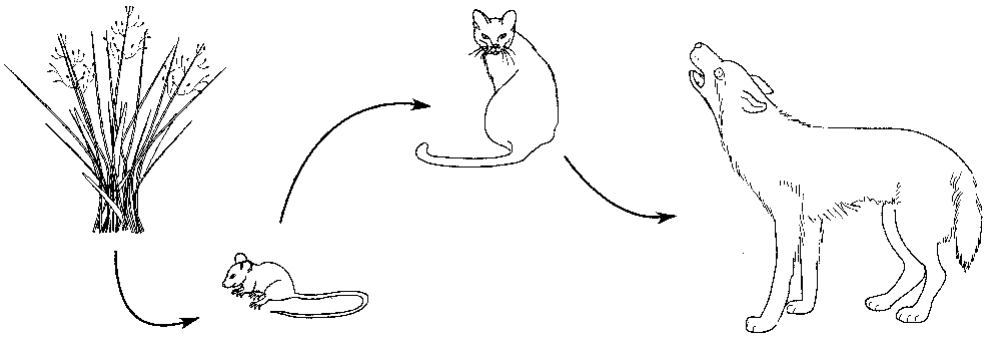


**Figure 2-1**

____ 29. Referring to Figure 2-1, suppose 10 000 units of energy are available at the level of the grasses. What is the total number of energy units lost by the time energy reaches the coyote?

a. 90 units
b. 990 units
c. 9900 units
d. 9990 units

____ 30. Referring to Figure 2-1, as matter and energy move from grasses to coyotes, the amount of available energy _____.

a. increases
b. decreases
c. decreases then increases
d. increases or decreases but population size remains the same

____ 31. Referring to Figure 2-1, the relationship between cats and mice could best be described as _____.

a. predator-prey
b. scavenger-carrion
c. parasite-host
d. consumer-producer

____ 32. Referring to Figure 2-1, energy flows from _____.

a. coyotes to grasses
b. cats to mice
c. mice to cats
d. coyotes to cats

____ 33. Where is the biosphere in Figure 2-4?

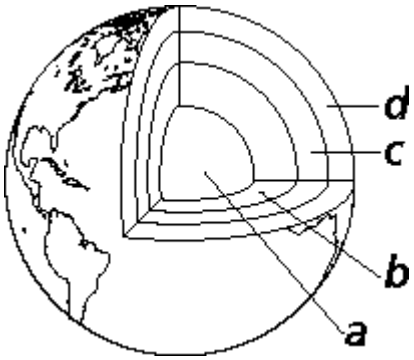



**Figure 2-4**

a. core
b. mantle
c. upper mantle
d. earth's crust

____ 34. Identify the abiotic factor labeled in the ecosystem shown in Figure 2-5.

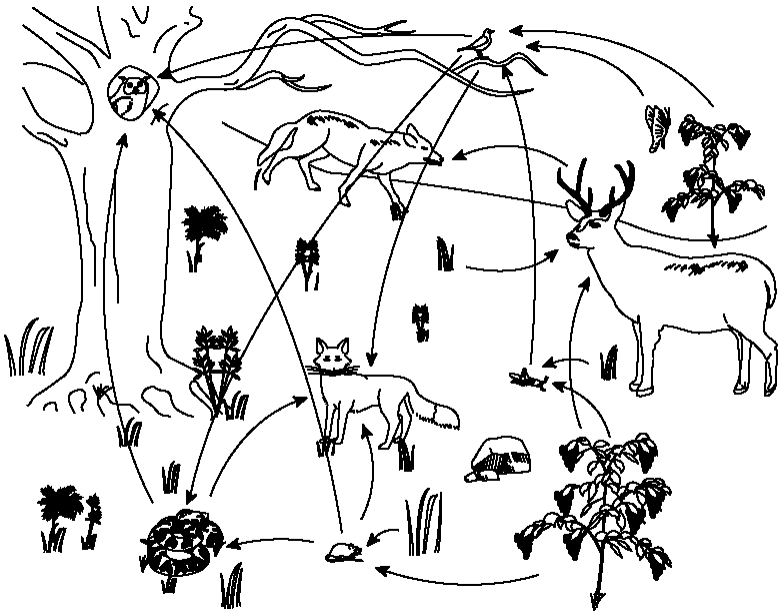


**Figure 2-5**

a. mouse
b. butterfly
c. rock
d. tree

____ 35. What type of ecosystem is shown in Figure 2-11?

**Figure 2-11**

a. terrestrial
b. population
c. acquatic
d. abiotic

____ 36. The organism shown in Figure 2-12 is involved in which type of symbiosis?

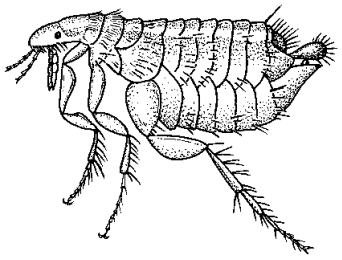


**Figure 2-12**

a. mutualism
b. commensalism
c. parasitism
d. predatorism

____ 37. The stable ecosystem that develops due to succession _____.
a. is called a niche
b. is always a forest
c. is called a climax community
d. never changes

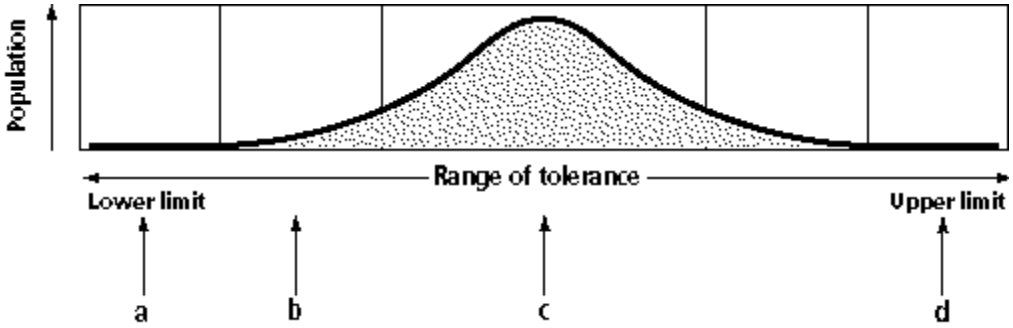



**Figure 3-3**

____ 38. In Figure 3-3, where will you be most likely to find the greatest diversity?
a. A
b. B
c. C
d. D

____ 39. In Figure 3-3, which section would have a lack of organisms due to an overabundance of resources?
a. A
b. B
c. C
d. D

____ 40. What type of succession is most likely to happen in Figure 3-4?

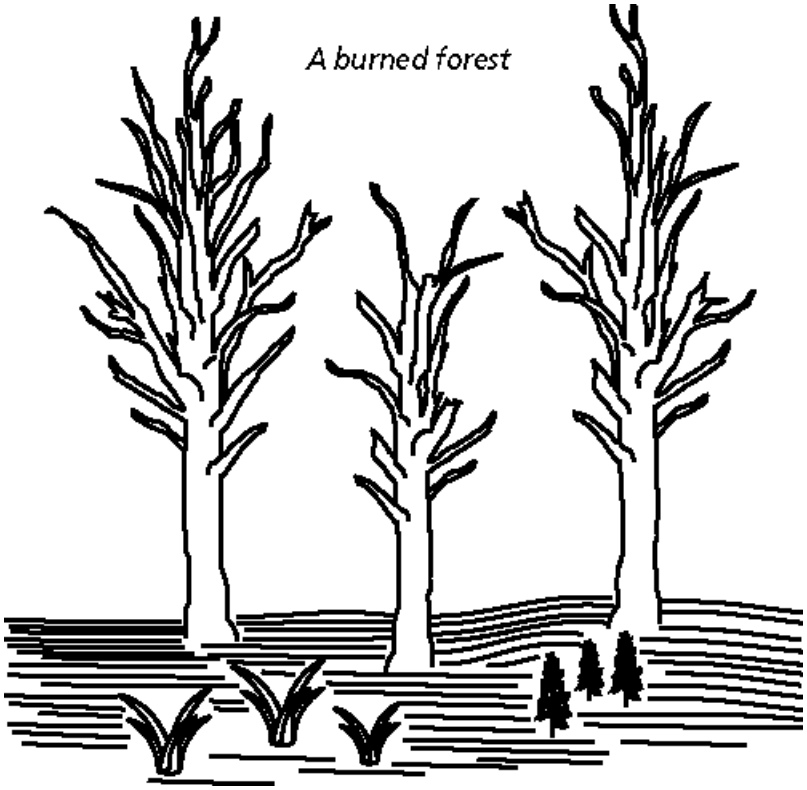



**Figure 3-4**

a. primary
b. secondary
c. teriary
d. climax

**Matching**

*Match each item with the correct statement below.*

a. development
b. adaptation
c. homeostasis
d. evolution
e. reproduction
f. environment

____ 41. The gradual change in the characteristics of a species over time
____ 42. The living and nonliving factors in an organism's surroundings
____ 43. Any structure, behavior, or internal process that enables an organism to better survive in an environment
____ 44. An organism's tendency to maintain a stable internal environment
____ 45. The series of changes that an organism undergoes during its lifetime
____ 46. The process whereby an organism produces more of its own kind

*Match the letter of the safety symbol to its description.*

a. 
b. 
c. 
d. 

____ 47. Substance is flammable or combustible; using an open flame could cause a fire or an explosion.
____ 48. Chemicals or reactions between chemicals could produce dangerous fumes.
____ 49. Substance is poisonous.
____ 50. Handling of hot objects could cause burns