

1. Algal blooms that pollute streams, rivers, and lakes are caused by the presence of

- A. lead.
 - B. oxygen.
 - C. mercury.
 - D. phosphates.
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2. Plants with spines and waxy leaves are well-suited for life in which environment?

- A. temperate forest
 - B. grassland
 - C. tropical forest
 - D. desert
-

3. Which is a reason some birds fly south in the fall or early winter?

- A. to breed
 - B. to develop spring colors
 - C. to find food
 - D. to hibernate
-

4. Species adapt to changes in their environment through which process?

- A. extinction
 - B. mating
 - C. migration
 - D. evolution
-

5. Which is **least** important for most kinds of bacteria to grow?

- A. warmth
 - B. light
 - C. food
 - D. water
-

6. Juan conducted an experiment on the growth of two identical potted geraniums. He placed one plant on the windowsill and one in the closet and watered both of them. Which variable was Juan most likely testing?

- A. light
 - B. pot size
 - C. soil
 - D. water
-

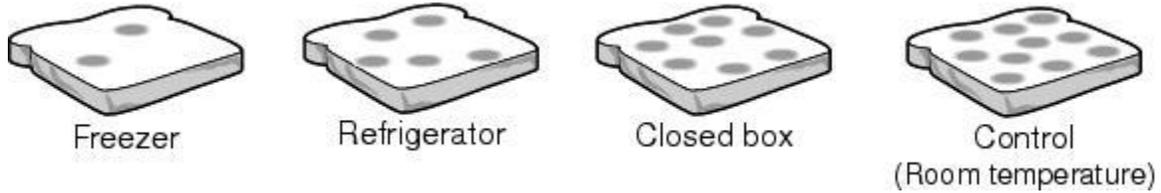
7. The number of spotted owls in the Pacific Northwest has decreased dramatically over the last twenty years. Which of these changes **MOST LIKELY** caused this decrease in the population size of the species?

- A. Rainfall has greatly increased in this area.
 - B. A new ranger station was built in this area.
 - C. A communications tower was put up in this area.
 - D. Old-growth forests have been cut down in this area.
-

8. During a drought in a grassland, the amount of grass that grows is limited. Which of these organisms would **MOST** immediately be affected?

- A. mice
 - B. owls
 - C. snakes
 - D. toads
-

9. Adam's class performed an experiment about mold growth on bread.



Which conclusion can they make from observing the mold?

- A. Temperature has no effect on mold growth.
- B. Colder temperatures decrease mold growth.
- C. Warmer temperatures decrease mold growth.
- D. Colder temperatures increase mold growth.

10.

Western swallowtail butterflies come in two colors, black or yellow. Because swallowtails are eaten by a number of bird species, they usually try to escape by camouflaging themselves against objects in their environment.

What would happen to a local butterfly population if farmers began planting large fields of yellow sunflowers?

- A. Both black and yellow butterflies would become more common.
- B. Both black and yellow butterflies would become less common.
- C. Black butterflies would become less common, while yellow butterflies became more common.
- D. Yellow butterflies would become less common, while black butterflies became more common.

11.

Which of these factors is likely to affect the survival of an entire SPECIES of tree frog?

- A. an overpopulation of predatory birds
 - B. an abundance of a poisonous grass
 - C. spraying of pesticides
 - D. habitat destruction
-

12.



The food chain above, from bottom to top, shows that freshwater crustaceans are eaten by shad, which are eaten by perch, which are then eaten by pike. Finally, ospreys eat the pike. What would be the predicted outcome, short-term or long-term, if a seafood restaurant caught most of the perch in the lake?

- A. There would be a permanent decrease in shad.
 - B. Most of the pike in the lake would starve and die.
 - C. There would be a dramatic increase in freshwater crustaceans.
 - D. The perch would migrate to another lake due to the pike shortage.
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13.

In many areas on Earth large predatory animals such as wolves, panthers, and eagles, are becoming endangered. One explanation for the decrease in large animal populations is

- A. drought.
 - B. over hunting.
 - C. global warming.
 - D. habitat destruction.
-

14. Northern garter snakes exhibit a unique behavior in which they gather in deep dens by the hundreds or thousands. They then coil together in a huge ball. This behavior could help to —

- A. reduce heat loss
- B. increase camouflage
- C. locate food sources
- D. increase oxygen consumption

Comparison of Disinfectants

Disinfectant	Bacterial Colony Size (mm)	
	Trial 1	Trial 2
None	6.0	5.5
1	3.0	2.0
2	2.5	1.5
3	4.0	4.0
4	1.5	1.5

15.

Four disinfectants were tested in two trials, each for their effectiveness in controlling bacterial growth. The table shows the bacterial growth in each trial after four days. Which of the following conclusions is *best* supported by the results of this study?

- A. Disinfectants kill most bacteria on contact.
- B. Strong concentrations of disinfectants can be harmful.
- C. Some disinfectants are more effective than others.
- D. Disinfectants cannot be used to control bacterial infections.

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16. The primary cause of an infectious disease is

- A. lack of vitamins and minerals.
 - B. damage to a body tissue or organ.
 - C. other organisms that enter the body.
 - D. harmful chemicals or radiation.
-

17. Which explains why the light-colored Himalayan rabbit can survive in the snowy mountains while dark-colored rabbits cannot?

- A. The light-colored Himalayan rabbit has no predators in the mountains.
 - B. Dark-colored rabbits taste better than light-colored rabbits to the wolves that eat them.
 - C. Light-colored rabbits absorb more heat and stay warmer in the winter than the dark-colored rabbits.
 - D. Predators can readily locate dark-colored rabbits in the snow but not light-colored rabbits.
-

18. After walking through a field, you find a tick attached to your leg. What is the tick's relationship to you?

- A. predator
 - B. decomposer
 - C. producer
 - D. prey
-

19. Many people are infected by a tropical disease that is carried by a certain type of insect. What should biologists attacking the problem do first?

- A. destroy all of those insects
 - B. predict what may happen if all of those insects were destroyed
 - C. not worry, because there are no tropical diseases in this country
 - D. leave all of the insects alone
-

20. Bacteria can cause you to have

- A. an infection.
- B. sunburn.
- C. a headache.
- D. a bruise.

Answer Key

1. D) phosphates.
 2. D) desert
 3. C) to find food
 4. D) evolution
 5. B) light
 6. A) light
 7. D) Old-growth forests have been cut down in this area.
 8. A) mice
 9. B) Colder temperatures decrease mold growth.

 10. C) Black butterflies would become less common, while yellow butterflies became more common.
 11. D) habitat destruction
 12. B) Most of the pike in the lake would starve and die.
 13. D) habitat destruction.
 14. A) reduce heat loss

 15. C) Some disinfectants are more effective than others.

 16. C) other organisms that enter the body.
 17. D) Predators can readily locate dark-colored rabbits in the snow but not light-colored rabbits.
 18. A) predator
 19. B) predict what may happen if all of those insects were destroyed
 20. A) an infection.
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