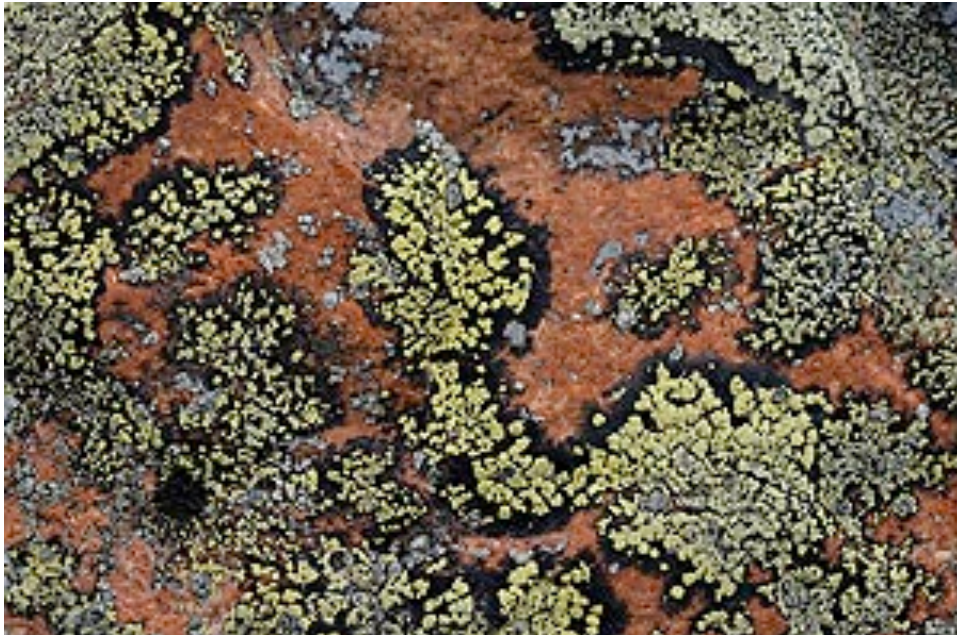


Life and Environmental Sciences
How Living Things Interact With Their Environment

Additional FCAT Practice Questions

Directions: Select the best answer for each of the following questions

1. Lichen are organisms that can grow on bare rock.



Lichen are a fungus with algae growing inside; the algae are able to perform photosynthesis, which makes food for the fungus. When food is scarce in winter, elk will eat lichen. Which of the following is the abiotic component of the ecosystem?

- A. Fungus
- B. Rock
- C. Algae
- D. Elk

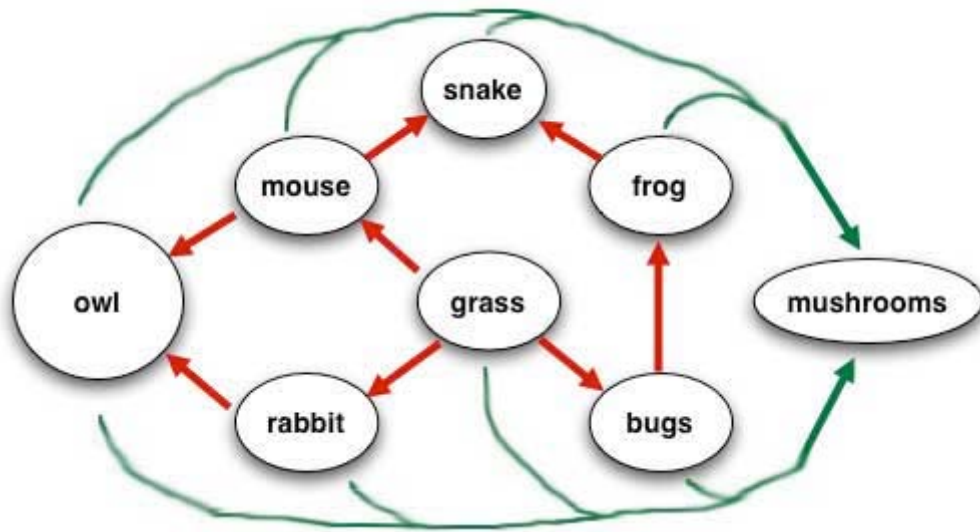
2. In some parts of North America pregnant women are advised not to eat fish caught from certain lakes that are known to have higher than accepted mercury levels in the soil at the bottom of the lake. The fish that are caught do not eat the soil or plants of the lake. What is the most likely explanation for how the mercury gets into the fish?
- A. Plants absorb mercury, insects eat plants, and fish eat the insects.
 - B. The fish absorb the mercury through their skin.
 - C. Fish ingest mercury when they drink the water.
 - D. Mercury moves directly into the fish when they touch the bottom of the lake.
3. Nitrogen is needed by all living organisms, but the nitrogen in the air is not useable by most organisms. In the nitrogen cycle, what organisms are responsible for converting nitrogen into a form that can be used by most other organisms?
- A. Trees
 - B. Fungus
 - C. Worms
 - D. Bacteria
4. Red tide is a large growth of algae that sometimes occurs in the ocean. Unfortunately, the red tide algae contain a poison that can cause large kills of fish.



Most of the large fish that are killed in a red tide do not eat algae. What is the most reasonable explanation for the fish kill in a red tide?

- A. Poison in the water is absorbed directly by the fish.
- B. The algae grow directly on the fish.
- C. Smaller algae-eating organisms accumulate poison and are eaten by fish.
- D. The fish starve due to shortage of food.

5. The following diagram represents a meadow food web.



- Which organisms in the food web represent primary consumers?
- A. Bugs, frog
 - B. Mushrooms
 - C. Mouse, bugs, rabbit
 - D. Owl, snake
6. Earth provides many different resources that humans use for energy. Which of the following resources is non-renewable?
- A. Geothermal
 - B. Wind
 - C. Solar
 - D. Coal

7. In northern climates, squirrels will change their behaviour as the days get shorter and winter approaches. They will spend a lot of time eating, gaining fat in preparation for hibernation.



What changing abiotic factor is most likely causing the squirrel's change in behaviour?

- A. Amount of sunlight
 - B. Amount of available food
 - C. Amount of available water
 - D. Presence of predators
8. While studying the distribution of desert plants, Cynthia made a map of the plants that she found. She discovered that the desert plants were evenly spaced, with very few plants growing in between.



What is the most likely reason for the even spacing of the desert plants?

- A. The established desert plants use most of the available water, leaving little for other plants.
- B. Desert plants compete for sunlight.
- C. The desert soil does not have enough nutrients.
- D. Animals eat the smaller desert plants.

9. Studies have shown that grizzly bears require large amounts of habitat to survive. A single male grizzly bear needs approximately 750 square miles of habitat. What is the likely result of the expansion of human housing and settlements into grizzly bear habitat?
- A. The grizzly population will go up.
 - B. The grizzly population will go down.
 - C. The grizzly population will stay the same.
 - D. The grizzly population will re-locate into different habitats.

B

10. Coal-fired electricity stations require water for cooling. Many of them are built near lakes in as a source of cooling water. Heated water is returned to the lake, often raising the temperature of the local temperature of the lake water by a few degrees. What is the most likely effect of the warming of the lake water?
- A. The level of the lake water will change.
 - B. All of the lake organisms will decrease in numbers.
 - C. All of the lake organisms will increase in numbers.
 - D. Some lake organisms will increase in numbers while others will decrease in numbers.

Answers

1. B
2. A
3. D
4. C
5. C
6. D
7. A
8. A
9. B
10. D