Determine if the statement is TRUE or FALSE. If it is not true, rewrite the italicized part to make it true.

1. The interactions of abiotic and biotic factors result in conditions that are suitable for some organisms but not for others.
2. Food availability and temperature can be biotic factors for a particular organism.
3. A limiting factor is any biotic or abiotic factor that promotes the existence, numbers, reproduction, or distribution of organisms.
4. At high elevations where the soil is thin, vegetation is limited to large, deep-rooted trees.
5. Factors that limit one population in a community may also have an indirect effect on another population.
6. Tolerance is the ability of an organism to withstand fluctuations in biotic and abiotic environmental factors.
7. A population of deer would become larger as conditions move away from optimal toward either extreme of the deer’s range of tolerance.
8. Different species may have different ranges of tolerance.

In your textbook, read about succession: changes over time. Use each of the terms below just once to complete the passage.

climax primary decades succeed pioneer succession species slows down

The natural changes and (9) ________________ replacements that take place in the communities of ecosystems are known as (10) ________________ . It can take (11) ________________ or even centuries for one community to (12) ________________, or replace, another. When new sites of land are formed, as in a lava flow, the first organisms to colonize the new area are (13) ________________ species. This colonization is called (14) ________________ succession. The species inhabiting the area gradually change. Eventually, succession (15) ________________ and the community becomes more stable. Finally, a mature community that undergoes little or no change, called a (16) ________________ community, develops.

Write the letter of the matching item

17. Sequence of community changes where soil is formed, allowing small, weedy plants to inhabit the area
   a. a severe drought
   b. primary succession
   c. amount of plant growth
   d. secondary succession
   e. climax community

18. Sequence of community changes occurring as a result of a natural disaster, such as a forest fire
19. A stable, mature community with little or no succession occurring
20. An example of a biotic limiting factor affecting a community of organisms
21. An example of an abiotic limiting factor affecting a community of organisms

The statements below describe the secondary succession that occurred within an area of Yellowstone National Park. Number the events in the order in which they occurred or will occur.

22. Grasses, ferns, and pine seedlings inhabited the area.
23. Annual wildflowers grew from the bare soil.
25. A climax community of lodgepole pines developed.
26. Bare soil covered the area.
In your textbook, read about aquatic biomes: life in the water.
Complete each statement.
1. A large group of ecosystems sharing the same type of ______________ is called a ________________.
2. Biomes located in bodies of ___________ , such as oceans, lakes, and rivers, are called ________________.
3. The water in marine biomes is ________________.
4. Oceans contain the largest amount of ________________, or living material, of any biome on Earth. Yet, many of the organisms are so ________________ that they cannot be seen without magnification.
5. The ________________ is that part of marine biomes shallow enough to be penetrated by sunlight.
6. Deep-water regions of marine biomes receiving no sunlight make up the ________________.

Circle the letter of the response that best completes the statement.
7. Many rivers eventually flow into
   a. a lake.  b. a stream.  c. an ocean or a sea.  d. a swamp.

8. The body of water where freshwater from a river mixes with salt water is called
   a. an estuary.  b. a shoreline.  c. a sandbar.  d. a sea.

9. Organisms living in intertidal zones have structural adaptations that protect them from
   a. the dark.  b. sunlight.  c. wave action.  d. temperature.

10. Life is abundant in photic zones because
    a. there are no waves.  c. the water is clean.
    b. the water is cold.  d. there are many nutrients.

11. The greatest number of organisms living in the photic zone of a marine biome are
    a. dolphins.  b. plankton.  c. plants.  d. sharks.

12. Fewer organisms live at the bottom of a deep lake than at the top because of the lack of
    a. sunlight.  b. space.  c. niches.  d. bacteria.

In your textbook, read about terrestrial biomes.
Answer the following questions.
13. Which two abiotic factors generally determine the type of climax community that will develop in a particular part of the world?
14. In which terrestrial biome is the ground permanently frozen?
15. What are some adaptations that desert plants have developed?
16. Describe the three layers of a tropical rain forest, including organisms that live in each layer.

Write the name of each major terrestrial biome next to its description.
17. Arid land with sparse, drought-resistant plants, minimal rainfall
18. Largest terrestrial biome that supports small plants and grasses, but few trees
19. Treeless land where ground remains frozen except for top few centimeters
20. Warm, highly humid land that supports many species of organisms; extensive annual rainfall
21. Land with coniferous forests, peat swamps, and long, harsh winters
22. Land populated with broad-leaved hardwood trees that lose their leaves annually