

Chapter 3 Quiz

Part A: Modified True/False

Indicate in the left-hand column whether each statement is true or false. If the statement is false, change the statement to make it true.

- ____ 1. Longitude and elevation are the most important factors that determine climate.

- ____ 2. The tundra and grasslands are the biomes that receive the least amount of rainfall every year.

- ____ 3. Coevolution describes a situation in which one species resembles another that is poisonous, dangerous, or distasteful.

Part B: Completion

Complete the sentence by filling in the correct word or words.

4. Hawks and owls feed on similar prey at different times of day. This is an example of _____.
5. _____ succession begins in an area that is lifeless and lacks nutrients.
6. _____ and _____ are the two factors most responsible for the distribution of life on Earth.

Part C: Multiple Choice

Circle the letter of the choice that best completes the statement or answers the question.

7. In which biome are conifers the dominant tree type?
- | | |
|------------------------|-------------------------------|
| A. boreal forest | C. temperate rainforest |
| B. tropical rainforest | D. temperate deciduous forest |
8. Which biome has no significant plant growth?
- | | |
|-----------|--------------|
| A. desert | C. polar ice |
| B. tundra | D. grassland |
9. Many plants have adaptations such as spines or thorns to deter herbivores, and many herbivores have specialized teeth or beaks that help them eat plants despite these adaptations. Which term best describes this relationship?
- | | |
|----------------|--------------------------|
| A. mimicry | C. adaptive radiation |
| B. coevolution | D. resource partitioning |

Chapter 3 Quiz (continued)

10. Monarch butterflies are distasteful and poisonous to many animals. Another species, the viceroy butterfly, is not poisonous, but is almost identical in appearance to the monarch. What is this phenomenon an example of?
- A. mimicry
 - B. extirpation
 - C. coevolution
 - D. proliferation
11. Which scenario is an example of adaptive radiation?
- A. A black bear feeds on berries because there are not enough fish available.
 - B. Various individuals in a fish population start to specialize on different food sources in a lake.
 - C. The number of individuals with thick fur in a population of rabbits increases from generation to generation.
 - D. Two species of ant with similar food and habitat requirements reproduce in the same area at different times of the year.
12. In which scenario is primary succession likely to occur?
- A. A hurricane causes a river to flood its banks.
 - B. A farmer ploughs his fields to remove all existing plant life.
 - C. Fire burns through a forest and kills all vegetation less than 1 m tall.
 - D. Increasing temperatures cause a glacier to recede from an area of rocky ground.
13. Which of the following examples illustrates the process of adaptation?
- A. A coyote takes advantage of any food source it can find.
 - B. The coat of an arctic fox changes from brown to white in winter.
 - C. An earthquake separates a population of squirrels into two groups.
 - D. The number of snakes with stripes in a population increases with each generation.
14. Which description is most appropriate for a keystone species?
- A. is the top carnivore
 - B. has the largest population
 - C. has the most specialized niche
 - D. determines numbers and types of other species

Part D: Short Answer

15. Choose a biome and describe three abiotic factors that influence what species are found in that biome.
