

## Assessment

# Chapter Test B

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## Populations and Communities

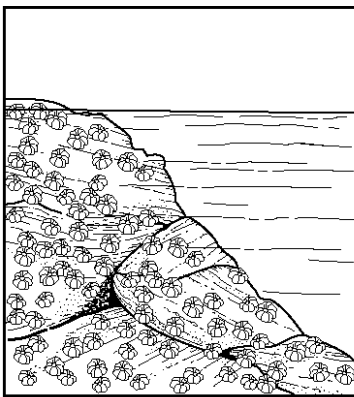
In the space provided, write the letter of the term or phrase that best completes each statement or best answers each question.

- \_\_\_\_\_ 1. The evolution of one species in response to an adaptation of another is known as
- a. parasitism.
  - b. succession.
  - c. coevolution.
  - d. stability.
- \_\_\_\_\_ 2. A tick feeding on a human is an example of
- a. parasitism.
  - b. mutualism.
  - c. symbiosis.
  - d. predation.
- \_\_\_\_\_ 3. Over time, selection pressure from predators will often cause prey species to evolve
- a. into parasites.
  - b. into a new niche.
  - c. toxic compounds.
  - d. ways to avoid predation.
- \_\_\_\_\_ 4. In a population in which most members are of reproductive age, which is a reasonable prediction if resources are plentiful?
- a. The population is growing exponentially.
  - b. The population is growing logistically.
  - c. The population has no carrying capacity.
  - d. The population will keep growing indefinitely.
- \_\_\_\_\_ 5. Which of the following determines what organisms can live in a particular community?
- a. climate
  - b. rainfall
  - c. temperature
  - d. All of the above
- \_\_\_\_\_ 6. Compared with an ecosystem that contains 25 different plant species, a forest that contains 55 different plant species
- a. is larger.
  - b. is older.
  - c. has a higher biodiversity.
  - d. has more animal species.

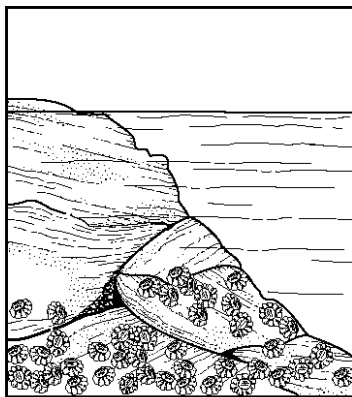
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- \_\_\_\_\_ 7. An ecologist studying an ocean ecosystem performed an experiment in which predatory sea stars were removed from the ecosystem. After the removal of the sea stars,
- the ecosystem became more diverse.
  - the size of the ecosystem was increased.
  - food webs in the ecosystem became more complex.
  - the number of species in the ecosystem was reduced.

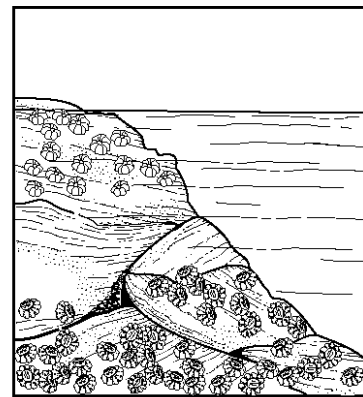
**Questions 8–10 refer to the figures below, which illustrate experiments performed with two species of barnacles that live in the same area.**



**A.** The barnacle *Chthamalus stellatus* can live in both shallow and deep water on a rocky coast.



**B.** The barnacle *Semibalanus balanoides* lives mostly in deep water



**C.** When the two barnacles live together, *Chthamalus* is restricted to shallow water.

- \_\_\_\_\_ 8. Figure B indicates that *Semibalanus balanoides* lives mostly in deep water. Deep water is this barnacle's
- competitive niche.
  - realized niche.
  - fundamental niche.
  - exclusive niche.
- \_\_\_\_\_ 9. Figure C indicates that when the two barnacles live together, *Chthamalus stellatus* occupies only shallow water. This is an example of
- realized niche.
  - competitive exclusion.
  - divided resources.
  - fundamental niche.
- \_\_\_\_\_ 10. Because the two species of barnacles attempt to use the same resources, they
- are parasites of each other.
  - have a symbiotic relationship.
  - have a mutualistic relationship.
  - are in competition with each other.

**Chapter Test B *continued***

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**In the space provided, write the letter of the description that best matches each term.**

- |                                 |                                                                                                      |
|---------------------------------|------------------------------------------------------------------------------------------------------|
| _____ 11. carrying capacity     | a. the role an organisms plays in its environment                                                    |
| _____ 12. commensalism          | b. a symbiotic relationship in which both participating species benefit                              |
| _____ 13. niche                 | c. benefits ecosystems by reducing competition and promoting stability and biodiversity              |
| _____ 14. symbiosis             | d. one species evolves in response to another                                                        |
| _____ 15. parasitism            | e. a symbiotic relationship in which one species benefits and the other is neither harmed nor helped |
| _____ 16. mutualism             | f. the part of its fundamental niche that a species occupies                                         |
| _____ 17. predation             | g. the largest population the environment can support at any given time                              |
| _____ 18. coevolution           | h. a relationship in which one of the partners is harmed                                             |
| _____ 19. realized niche        | i. the elimination of a species due to competition                                                   |
| _____ 20. competitive exclusion | j. a relationship in which two species live in close association with each other                     |