

## Assessment

# Chapter Test C

## Evolutionary Theory

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

- \_\_\_\_\_ 1. The part of Lamarck's work that proved to be correct was that
- evolution is linked to an organism's environmental conditions.
  - evolution relies on the use and disuse of physical features.
  - changed traits are passed on to offspring.
  - changed traits develop slowly and gradually.
- \_\_\_\_\_ 2. The forelimbs of vertebrates
- serve the same function.
  - contain the same kinds of bones.
  - have different kinds of bones.
  - evolved from wings.
- \_\_\_\_\_ 3. There is clear evidence from fossils and other sources that the species now on Earth
- have evolved from ancestral species that are extinct.
  - have reached the ultimate in evolution.
  - will eventually evolve into the same species.
  - have always been the way they are now.
- \_\_\_\_\_ 4. In South America, Darwin found fossils of armadillos that were
- identical to the armadillos living there.
  - similar to the armadillos living there.
  - not similar to the armadillos living there.
  - not extinct.
- \_\_\_\_\_ 5. Darwin developed the theory of evolution by natural selection from
- Malthus's ideas of population growth.
  - the observations he made during the voyage of the *Beagle*.
  - years of reflecting on his data.
  - All of the above
- \_\_\_\_\_ 6. Members of a species can interbreed and
- have separate reproductive strategies.
  - are distantly related to each other.
  - produce fertile offspring.
  - have a very different appearance.

Chapter Test C *continued*

- \_\_\_\_\_ 7. Fossils have been found that provide a link in the evolution of whales from
- two-legged mammals.
  - legless amphibians.
  - four-legged mammals.
  - flightless birds.
- \_\_\_\_\_ 8. Species have changed over time, and their genes
- are less complex.
  - are not important in their evolution.
  - have changed as well.
  - All of the above
- \_\_\_\_\_ 9. The fossil record seems to provide evidence for
- intermediate forms.
  - extinction.
  - natural selection.
  - All of the above
- \_\_\_\_\_ 10. The traits of the individuals best suited to a particular environment tend to
- increase in a population over time.
  - decrease in a population over time.
  - stay the same.
  - fluctuate according to the weather.
- \_\_\_\_\_ 11. The final step of natural selection is
- adaptation.
  - divergence.
  - isolation.
  - variation.
- \_\_\_\_\_ 12. One mechanism for microevolution is
- coevolution.
  - convergent evolution.
  - isolation.
  - mate choice.
- \_\_\_\_\_ 13. Which statement best defines the concept of genetic variation?
- Offspring that do not survive do not pass their genes on to future generations.
  - In any population, there is an array of individuals that differ slightly from one another.
  - Individuals that are better able to cope with environmental conditions leave more offspring.
  - The environment dictates the amount and direction of change.
- \_\_\_\_\_ 14. An example of natural selection in an observable time frame is
- the development of an aquatic lifestyle in whales.
  - proliferation of intermediate species between fishes and amphibians.
  - antibiotic resistance in bacteria.
  - the evolution of multicellular life-forms.

**Chapter Test C *continued***

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- \_\_\_\_\_ 15. The evolution of beak shapes in Galápagos finches is a response to the
- a. available food supply.
  - b. presence of humans.
  - c. number of predators.
  - d. sizes of the finches.

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

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|----------------------------------|--|
| _____ 16. adaptation             | a. periods of rapid change in species separated by long periods of little or no change                         |
| _____ 17. speciation             | b. similar anatomical arrangements of body parts of different species indicating a shared common ancestor      |
| _____ 18. punctuated equilibrium | c. trace or remains of an organism that lived long ago   |
| _____ 19. homologous structures  | d. changes in species over time  |
| _____ 20. evolution              | e. a change in the kind or number of alleles that is one source of variation for natural selection to act upon |
| _____ 21. fossil                 | f. a trait that has become common in a population because it provides a selective advantage                    |
|                                  | g. the formation of a new species  |

**Chapter Test C *continued***

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**Read each question, and write your answer in the space provided.**

23. What role does the environment play in natural selection?

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24. What can a comparison of the hemoglobin of different species tell about the hereditary relationships among the species?

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25. What do you think Darwin meant when he referred to “the preservation of favorable variations” as natural selection?

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