

Pretest: Evidence for Evolution

Read each question. Circle the letter of the correct answer.

1. What is the hypothesis that evolution occurs at a slow, gradual pace?
 - A. gradualism
 - B. adaptation
 - C. slow motion
 - D. natural selection

2. What is the selective agent in natural selection?
 - A. humans
 - B. breeders
 - C. mutations
 - D. environment

3. What is the name given for genetic changes in living things over time?
 - A. evolution
 - B. adaptation
 - C. homeostasis
 - D. negative feedback

4. The DNA sequences of whales and ungulates, or hooved animals, are very similar. What type of evidence of evolution is this?
 - A. fossil
 - B. vestigial
 - C. molecular
 - D. embryological

5. Charles Lyell developed a theory that influenced Darwin's ideas about evolution taking place slowly throughout time. What is the name of this theory?
 - A. evolution
 - B. adaptation
 - C. catastrophism
 - D. uniformitarianism

6. Darwin's observations of finches indicated descent with _____.
 - A. convergence
 - B. modification in bills
 - C. no change in species
 - D. inheritance of large bills

7. What is the process in which humans breed organisms for certain traits?
 - A. artificial selection
 - B. natural selection
 - C. descent without modification
 - D. inheritance of acquired characteristics

8. On which of these issues did Lamarck and Darwin have similar views?
 - A. the age of Earth
 - B. changes in the frequency of certain alleles in a population
 - C. plants and animals producing more offspring than can survive
 - D. adaptations to the environment

9. Which aspects of life on Earth are accounted for by evolution?
 - A. diversity and unity
 - B. interaction and conflict
 - C. lack of genetic and physical change
 - D. divergence of structure and function

10. What would two closely related organisms have?
 - A. no proteins in common
 - B. very similar DNA sequences
 - C. exactly the same DNA sequences
 - D. completely different DNA sequences

- 11.** Fossil evidence shows that structures considered vestigial in living organisms _____.
- A.** have always been vestigial
 - B.** were useful to their ancestors
 - C.** do not fill gaps in the fossil record
 - D.** are not found in ancient organisms
- 12.** Which of these is most likely indicated when two species have similar DNA sequences?
- A.** The species are not closely related.
 - B.** The species will have similar fitness.
 - C.** The species share a common ancestor.
 - D.** The species have no evolutionary relationship.
- 13.** What evidence for a past evolutionary relationship can be seen in different groups of vertebrates?
- A.** totally different protein sequences
 - B.** no homologous structures in their anatomy
 - C.** similar features in early stages of embryos
 - D.** different features in early stages of embryos

- 14.** According to Darwin's view of natural selection, what is overproduction?
- A.** too many species in one area
 - B.** more offspring than can survive
 - C.** more food than is needed by a population
 - D.** too few organisms to enable all to survive
- 15.** What was the major idea that Darwin presented in his book *The Origin of Species*?
- A.** elephants and bacteria changed constantly
 - B.** animals changed, but plants remained the same
 - C.** species changed over time by natural selection
 - D.** species changed over time and never competed with each other