

- _____ a. vestigial c. heterologous
b. analogous d. homologous
- _____ 5. What is the movement of genes into and out of a gene pool called?
a. direct evolution c. gene flow
b. nonrandom mating d. random mating
- _____ 6. Which answer BEST shows an animal's adaptation to the tropical rain forest?
a. an elephant's long trunk c. migration of birds in winter
b. camouflage in a tree frog d. the long neck of a giraffe
- _____ 7. Structures that have a similar evolutionary origin and structure but are adapted for different purposes, such as a bat wing and a human arm, are called _____.
a. homologous structures c. embryological structures
b. analogous structures d. homozygous structures

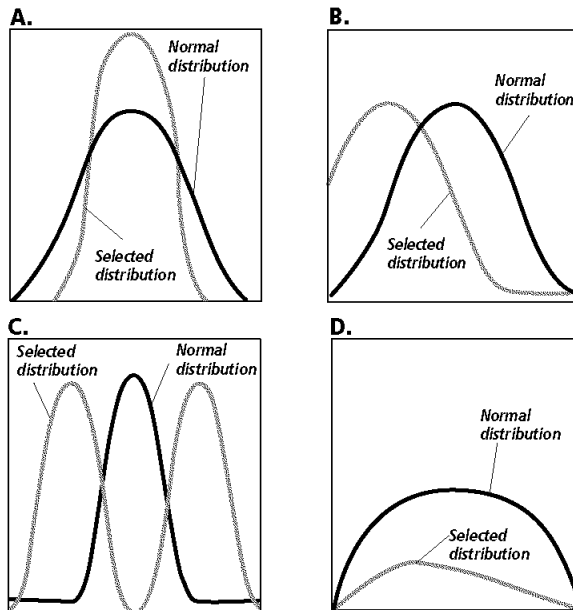


Figure 15-6

8. Which type of natural selection showed in Figure 15-6 favors average individuals?
 a. B c. A
 b. D d. C
9. Which type of selection shown in Figure 15-6 would favor giraffes that need to reach the tallest branches to eat?
 a. A c. D
 b. C d. B
10. The average individuals of a population are favored in _____ selection.
 a. directional c. stabilizing
 b. natural d. disruptive
11. The theory of continental drift hypothesizes that Africa and South America slowly drifted apart after once being a single landmass. The monkeys on the two continents, although similar, show numerous genetic differences. Which factor is probably the most important in maintaining these differences?
 a. geographic isolation c. fossil records
 b. comparative anatomy d. comparative embryology
12. In _____ selection, individuals with both extreme forms of a trait are at a selective advantage.
 a. disruptive c. directional
 b. natural d. stabilizing
13. The founder of modern evolution theory is considered to be _____.
 a. Alexander Oparin c. Lynn Margulis
 b. Stephen Jay Gould d. Charles Darwin

____ 14. Why might the beak of the Akialoa, pictured in Figure 15-7, developed this way?



Figure 15-7

- a. to dig through tree bark for insects
 - b. to crack open seeds
 - c. to reach nectar in flowers
 - d. to scoop up fish
- ____ 15. Which combination of characteristics in a population would provide the greatest potential for evolutionary change?
- a. large population, few mutations
 - b. large population, many mutations
 - c. small population, few mutations
 - d. small population, many mutations
- ____ 16. Which of the following is not a factor that causes changes in the allelic frequencies of individuals in a population?
- a. stabilizing selection
 - b. disruptive selection
 - c. random selection
 - d. directional selection
- ____ 17. What type of adaptation is shown in Figure 15-4?

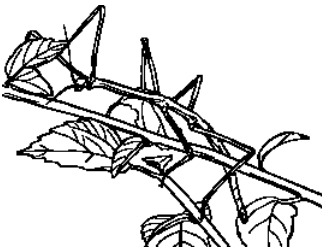


Figure 15-4

- a. artificial selection
 - b. mimicry
 - c. camouflage
 - d. homologous structure
- ____ 18. Natural selection can best be defined as the ____.
- a. survival and reproduction of the organisms that are genetically best adapted to the environment
 - b. survival and reproduction of the organisms that occupy the largest area
 - c. survival of the biggest and strongest organisms in a population
 - d. elimination of the smallest organisms by the biggest organisms
- ____ 19. A mechanism of Darwin's proposed theory is ____.
- a. artificial selection
 - b. variation
 - c. evolution
 - d. all of these

20. When checking shell color for a species of snail found only in a remote area seldom visited by humans, scientists discovered the distribution of individuals that is shown in the graph in Figure 15-1. Based on the information shown in the graph, the snail population is undergoing _____.

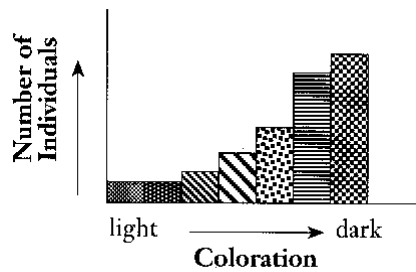


Figure 15-1

- a. stabilizing selection
b. artificial selection
c. directional selection
d. disruptive selection
21. Upon close examination of the skeleton of an adult python, a pelvic girdle and leg bones can be observed. These features are an example of _____.
a. comparative embryology
b. homologous structures
c. artificial selection
d. vestigial structures
22. The flying squirrel of North America closely resembles the flying phalanger of Australia. They are similar in size and have long, bushy tails and skin folds that allow them to glide through the air. The squirrel is a placental mammal, while the phalanger is a marsupial. These close resemblances, even though genetically and geographically separated by great distances, can best be explained by _____.
a. vestigial structures
b. divergent evolution
c. convergent evolution
d. spontaneous generation
23. A pattern of evolution that results when two unrelated species begin to appear similar because of environmental conditions is _____.
a. directional selection
b. disruptive selection
c. convergent evolution
d. divergent evolution
24. Natural processes such as speciation and gradualism provide the genetic basis for _____.
a. evolution
b. sexual reproduction
c. spontaneous generation
d. biogenesis
25. Within a decade of the introduction of a new insecticide, nearly all of the descendants of the target pests were immune to the usual-sized dose. The most likely explanation for this immunity to the insecticide is that _____.
a. the pests developed physiological adaptations to the insecticide
b. it destroyed organisms that cause disease in the insects, thus allowing them to live longer
c. eating the insecticide caused the bugs to become less resistant to it
d. eating the insecticide caused the bugs to become resistant to it

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