

Pretest: Patterns of Evolution

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

1. What is a beneficial inherited trait that is passed on to future generations?
A. system
B. stimulus
C. adaptation
D. homeostatic mechanism
2. What is the term for the difference in the physical traits of an individual from those of other individuals in a group?
A. variation
B. adaptation
C. change
D. species
3. Individuals that are well adapted to their environment will survive and produce _____.
A. better traits
B. stronger genes
C. more offspring
D. fewer mutations
4. Which of these is an example of a cost of a behavior?
A. The behavior increases the animal's chances of survival.
B. The behavior requires the animal to use a great deal of energy.
C. The behavior results in an increase in the rate of the animal's reproduction.
D. The behavior allows the animal to communicate with other members of its species.
5. Which of these is the measurement of the occurrence of a particular allele in a population?
A. gene pool
B. phenotype
C. mutation rate
D. allele frequency
6. Which of these is the term for natural selection that changes the distribution of a trait to favor one extreme phenotype?
A. directional selection
B. disruptive selection
C. stabilizing selection
D. normalizing selection
7. Chance changes in allele frequencies within a population are called _____.
A. genetic drift
B. gene flow
C. gene pool
D. sexual selection
8. Fighting between male elephant seals over females is an example of _____.
A. founder effect
B. bottleneck effect
C. intrasexual selection
D. intersexual selection

9. Which condition indicates that the population is most likely in Hardy-Weinberg equilibrium?
- A. Mating is random.
 - B. Gene flow is common.
 - C. The population is small.
 - D. Mutations occur frequently.
10. The total and permanent disappearance of a species from Earth is called _____.
- A. radiation
 - B. extinction
 - C. coevolution
 - D. equilibrium
11. A river has cut a deep canyon that has separated a population of rodents into two groups. This separation is an example of what type of isolation?
- A. founder
 - B. temporal
 - C. behavioral
 - D. geographic
12. What is the term for the kind of behavior in which an animal reduces its own fitness to help other members of its social group?
- A. kinship
 - B. inclusive
 - C. eusocial
 - D. altruism
13. The total number of genes an animal and its relatives contribute to the next generation is called its _____.
- A. kin selection
 - B. indirect fitness
 - C. direct kinship
 - D. inclusive fitness
14. What is speciation?
- A. isolation that affects mating behavior
 - B. timing of mating that prevents normal sexual selection
 - C. divergence of two or more species from an existing one
 - D. combining of two species to form one with different traits
15. Which of these occurs in a population during stabilizing selection?
- A. The intermediate phenotype becomes rare.
 - B. Both extreme phenotypes shift toward the middle.
 - C. The intermediate phenotype becomes more common.
 - D. The population shifts toward one of two extreme phenotypes.