

Test-Taking Tip

If you have trouble answering a question, make a mark beside it and go on. (Do not write in this book.) You may find information in later questions that will allow you to eliminate some answer choices in your unanswered question.

Directions: Choose the letter that best answers the question or completes the statement.

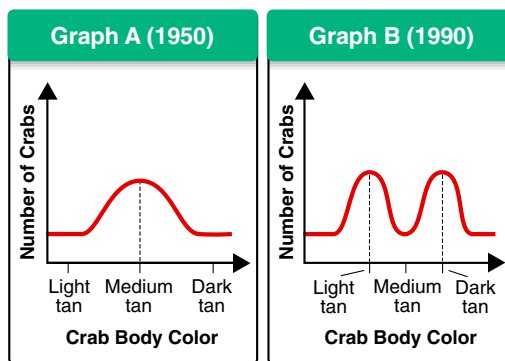
- Which of the following conditions is likely to result in speciation?
 - random mating
 - small population size
 - no migrations into or out of the population
 - absence of natural selection
 - lack of mutations
- Which of the following is a source of genetic variation?
 - Mutations
 - Polygenic traits
 - Genetic shuffling that results from sexual reproduction
 - I only
 - II only
 - I and III only
 - II and III only
 - I, II, and III
- In a population of lizards, the smallest and largest lizards are more easily preyed upon than middle-sized lizards. What kind of natural selection is most likely to occur in this situation?
 - genetic drift
 - sexual selection
 - stabilizing selection
 - directional selection
 - disruptive selection
- When two species reproduce at different times, the situation is called
 - temporal isolation.
 - speciation.
 - genetic drift.
 - temporal selection.
 - geographic isolation.
- A situation in which a population's allele frequencies remain relatively constant is called
 - genetic equilibrium.
 - polygenic traits.
 - a gene pool.
 - fitness.
 - genetic variation.

Questions 6–8 Each of the lettered choices below refers to the following numbered statements. Select the best lettered choice. A choice may be used once, more than once, or not at all.

- Fitness
 - Single-gene trait
 - Polygenic trait
 - Hardy-Weinberg principle
 - Gene pool
- The combined genetic information of all members of a particular population
 - Survival and reproduction of individuals best suited to their environment
 - Characteristic of the traits that Mendel tracked in pea plants

Questions 9–10

The graphs show the changes in crab color at one beach.



- What process occurred over the 40-year period?
 - artificial selection
 - sexual selection
 - stabilizing selection
 - disruptive selection
 - directional selection
- Which of the following is most likely to have caused the change in distribution?
 - A new predator prefers dark-tan crabs.
 - A new predator prefers light-tan crabs.
 - A new beach color makes medium-tan crabs the least visible to predators.
 - A new beach color makes medium-tan crabs the most visible to predators.
 - A food source died out.

Standardized Test Prep

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|------|------|-------|
| 1. B | 5. A | 9. D |
| 2. C | 6. E | 10. D |
| 3. C | 7. A | |
| 4. A | 8. B | |