

# EVOLUTION REVIEW

Chapters 10 & 11

## Question

- ▣ A change of an organism over time is also called \_\_\_\_\_.



## ANSWER

- ▣ Evolution

## Question

- ▣ *Any variation that makes an organism better suited to its environment so it can survive is called a what?*



## Answer

- ▣ Adaptation

## Question

- ▣ James Hutton's and Charles Lyell's work suggests that
  - ▣ A. Earth is many millions of years old
  - ▣ B. Earth is several thousands years old
  - ▣ C. All fossils were formed in the last 1000 years
  - ▣ D. All rock on Earth contain fossils

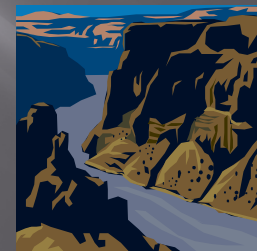


## ANSWER

- ▣ A. Earth is many millions of years old

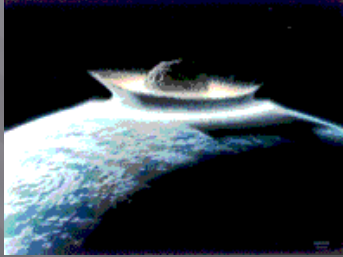
## Question

- ▣ The Geological Theory that states the Earth's surface was created as a result of sudden spectacular events is called:
  - ▣ A. Uniformitarianism
  - ▣ B. Gradualism
  - ▣ C. Evolution
  - ▣ D. Catastrophism



## Answer

- ▣ D. Catastrophism



## Question

- ▣ Darwin's voyage on the H.M.S. \_\_\_\_\_ led him to propose a revolutionary hypothesis about life.

- ▣ A. Collie
- ▣ B. Cheetah
- ▣ C. Beagle
- ▣ D. Lion



## Question

- ▣ C. Beagle

## Question

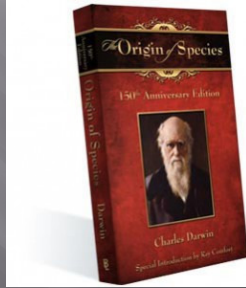
- ▣ The book in which Darwin first outlined his theory of evolution was titled:

- ▣ A) *On the Origin of Species*
- ▣ (B) *Finches and Me*
- ▣ (C) *Darwinism*
- ▣ (D) *Evolution: A Modern Synthesis*



## ANSWER

- A) *On the Origin of Species*



## Question

- What is the names of the Islands where Darwin observed differences in beaks in finches?



## ANSWER

- Galapagos Islands

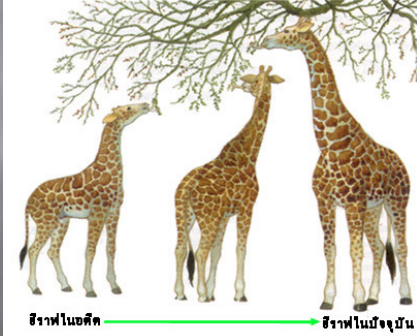


## Question

- Which is a major concept included in Lamarck's theory of evolution?
  - A. Change is the result of survival of the fittest
  - B. Body structure can change according to the actions of the organism.
  - C. Population size decrease the rate of evolution.
  - D. Artificial selection is the basis for evolution.

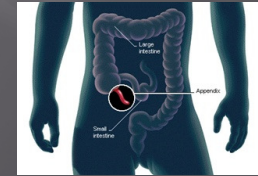
## ANSWER

- ❑ B. Body structure can change according to the actions of the organism.



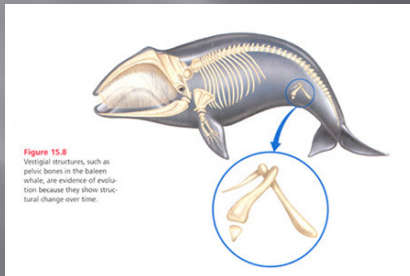
## Question

- ❑ The human appendix is an example of
  - ❑ A. Artificial selection
  - ❑ B. Acquired characteristics
  - ❑ C. Homologous Structure
  - ❑ D. Vestigial Structure



## ANSWER

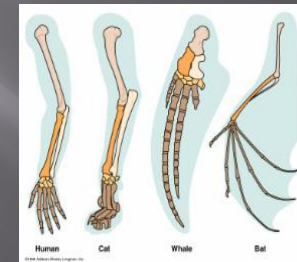
- ❑ D. Vestigial Structure



## Question

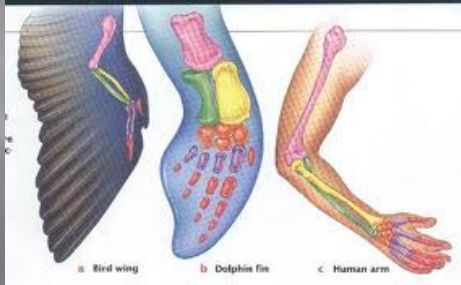
The image illustrates what evolutionary concept?

- ❑ A. embryological similarities
- ❑ B. variation among species
- ❑ C. vestigial structures
- ❑ D. homologous structures



## ANSWER

- D. homologous structures



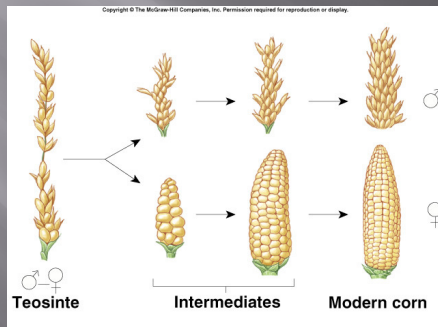
## Question

- The dog breeds we have today were developed through:
  - A. natural selection
  - B. artificial selection
  - C. sexual selection
  - D. acquired selection



## ANSWER

- B. artificial selection



## Question

- Walrus live in the Arctic and have a thick fat layer. The ancestors of modern-day walrus might not have had a thick layer of fat. Over time, the walrus have changed. According to evolution by natural selection, what is the MOST likely reason for such a change?
  - A. The walrus wanted to adapt to the cold climate, so they learned to grow thicker layers of fat.
  - B. The walrus inherited a thicker layer of fat directly from their parents
  - C. The walrus that had thicker fat layers were more adapted to survive and reproduce.
  - D. Individual walrus mutated.



## ANSWER

- ❑ C. The walrus that had thicker fat layers were more adapted to survive and reproduce.



## Question

- ❑ Today, the term species is defined as:
  - ❑ A. A grouping of morphologically similar organisms
  - ❑ B. A grouping of organisms that do not interbreed
  - ❑ C. A group of populations that can interbreed to produce viable offspring
  - ❑ D. A group of populations that live in the same area

## ANSWER

- ❑ C. A group of populations that can interbreed to produce viable offspring



## Question

- ❑ The ability of that individual to survive to reproductive is called its \_\_\_\_\_.



## ANSWER

- ☐ Fitness



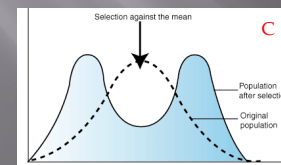
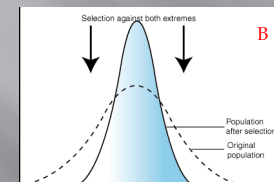
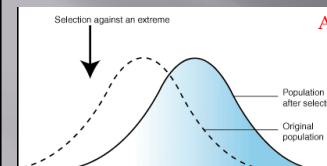
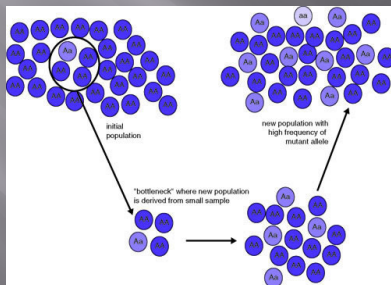
## Question

- ☐ The Pilgrims illustrated which effect?
  - ☐ A. Founder Effect
  - ☐ B. Bottleneck effect
  - ☐ C. Genetic drift
  - ☐ D. Both A and C



## ANSWER

- ☐ D. Both A and C



What type of distribution is each graph showing?

Stabilizing Selection  
Disruptive Selection  
Directional Selection



## ANSWER

- ☐ A. Directional
- ☐ B. Stabilizing
- ☐ C. Disruptive

## Question

- **GENETIC DRIFT** is the changes in allele frequency due to chance alone.
- What are two causes of genetic drift?

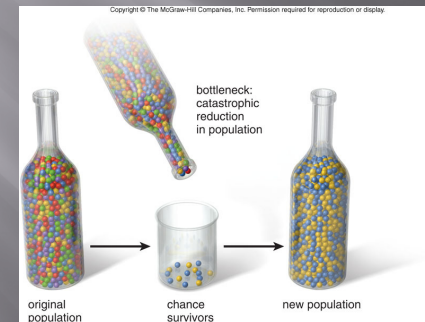
## ANSWER

- ☐ Natural Disasters
- ☐ Ex: Earthquakes, floods, overhunting



## Question

Which population has more variation?  
Original or New



## ANSWER

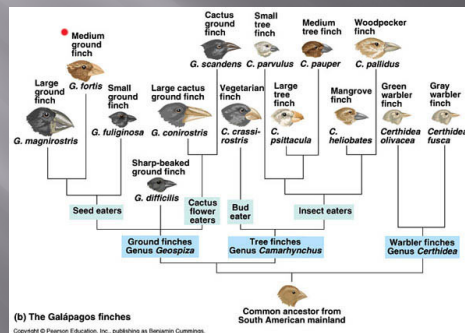
- ❑ Original Population

## Question

- ❑ The creation of several new species from a single parent species is called:
  - ❑ A. Balanced polymorphism
  - ❑ B. Adaptive radiation
  - ❑ C. Inheritance of acquired traits
  - ❑ D. Stabilizing selection

## ANSWER

- ❑ B. Adaptive radiation



## Question

- ❑ The economist Thomas Malthus suggested that
  - ❑ A. In the human population, people die faster than babies are born.
  - ❑ B. There would soon be insufficient food for the growing human population.
  - ❑ C. In the 1700s, England needed more housing.
  - ❑ D. The majority of a species' offspring die.

## ANSWER

- ▣ B. There would soon be insufficient food for the growing human population.



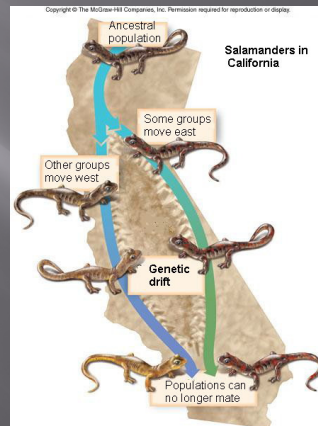
## Question

- ▣ When great distance or a physical barrier prevents to populations from interbreeding, they are experiencing what kind of reproductive isolation?
- ▣ A. Gametic
- ▣ B. Geographic
- ▣ C. Temporal
- ▣ D. Behavioral



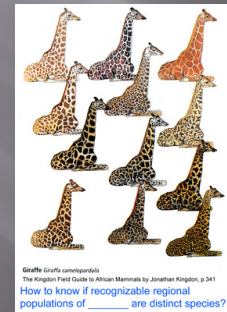
## ANSWER

- ▣ B. Geographic



## Question

- ▣ What is one sources that create genetic variations among a population?

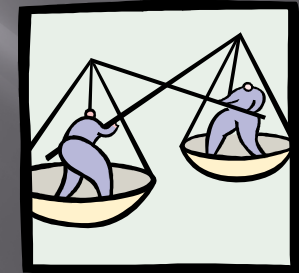


## Answer

- ☐ Mutation
- ☐ Recombination

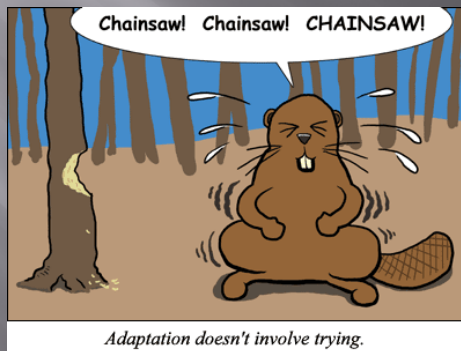
## Question

- ☐ Which of the following is NOT a condition of Hardy-Weinberg equilibrium?
- ☐ A. No mutation
- ☐ B. Large population
- ☐ C. Natural Selection
- ☐ D. Random mating



## ANSWER

- ☐ C. Natural Selection



## Question

- ☐ Predict what would happen over time to a population of bacteria that has been exposed to a NEW antibiotic?



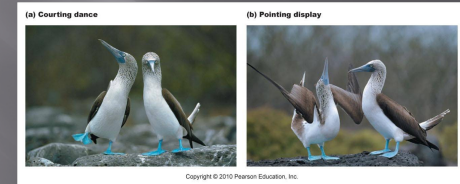
## ANSWER

- Over many generations, the bacteria would become resistant to the antibiotic.



## Question

- Which type of reproductive isolation is the image showing below?
- A. Behavioral
- B. Temporal
- C. Geographic
- D. Convergent



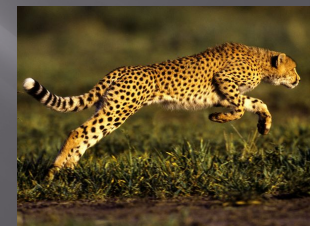
## ANSWER

- A. Behavioral



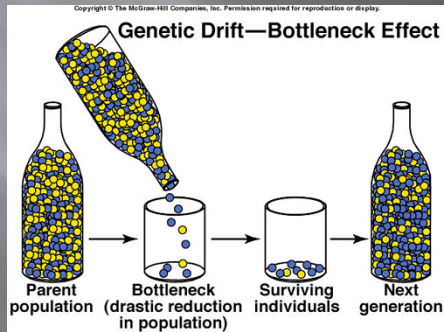
## Question

- Cheetah population are genetically similar due to overhunting. This is an example of
- A. Directional selection
- B. The bottleneck effect
- C. Migration
- D. Disruptive selection



## Question

- B. The bottleneck effect



## Question

- Female guppies tend to choose brightly colored mates. Over time, the population of guppies become more colorful. This is an example of:

- A. Kin Selection
- B. Sexual Selection
- C. Natural Selection
- D. Gamete Incompatibility



## Question

- B. Sexual Selection



## Question

- In addition to observing living organisms, Darwin studied the preserved remains of ancient organisms called \_\_\_\_\_.



## ANSWER

- ☐ Fossils



## Question

- ☐ Darwin referred to the "survival of the fittest" as \_\_\_\_\_.



## ANSWER

- ☐ Natural Selection

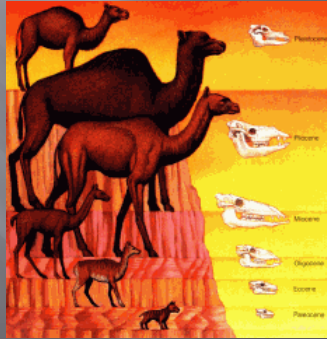


## Question

- ☐ The idea that each living species has descended with changes from other species over time is called:
  - ☐ A. struggle for existence
  - ☐ B. Descent with modification
  - ☐ C. Artificial Selection
  - ☐ D. Acquired traits

## ANSWER

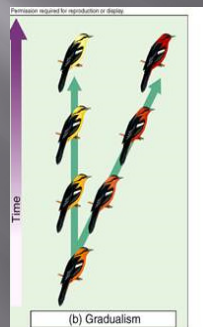
- ▣ B. Descent with modification



## Question

- ▣ Darwin believed in the idea that evolution happened slowly over a long period of time called \_\_\_\_\_
- ▣ A. punctuated equilibrium
- ▣ B. gradualism
- ▣ C. symbiosis
- ▣ D. mass extinction

- ▣ B. gradualism



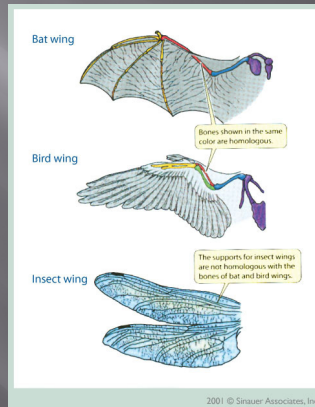
## Question

- ▣ Whales, sharks, and penguins all have streamlined body and appendages for moving in water even though they belong in different classes of animal classes (mammals, birds, fish)
- ▣ What pattern of evolution is this?



## ANSWER

- Convergent

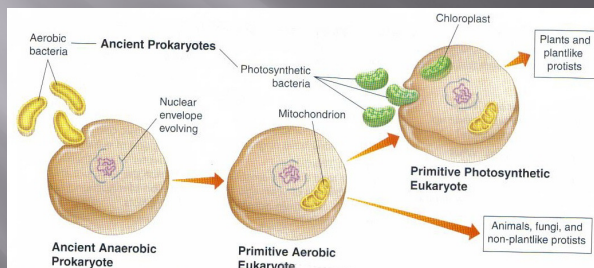


## Question

- What theory proposes that eukaryotic cells arose from living communities formed by prokaryotic organisms?
- A. Uniformitarianism
- B. Endosymbiotic
- C. Gradualism
- D. Evolution

## Answer

- B. Endosymbiotic Theory



## Question

- A technique using natural decay rate of unstable isotopes found in materials to calculate the age of materials is called \_\_\_\_\_.

*Answer*

- ▣ Radioactive Dating