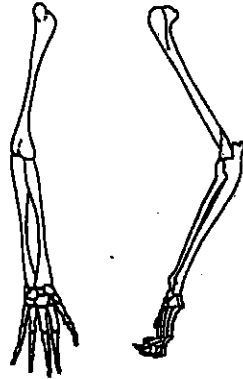


1. The diagrams at right show the bones in the forelimbs of a cat and a human. The similarities between these appendages suggest that humans and cats

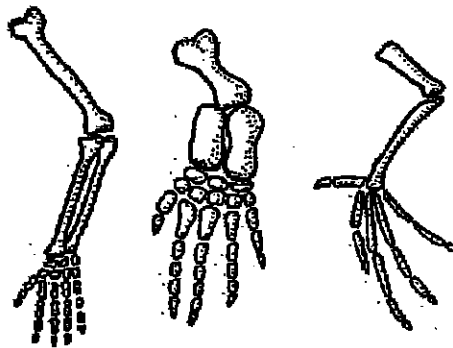
- 1 have identical genetic material
- 2 have the same direct ancestor
- 3 once shared a common ancestor
- 4 evolved in the same environment



3. After the Industrial Revolution in England, the number of light-colored moths decreased and the number of dark-colored moths increased. How can this be explained in terms of natural selection?

- 1 The dark-colored moths chased the light-colored moths away from the soot-covered trees.
- 2 The light-colored moths changed their colors in order to blend in with the darker trees.
- 3 Once the trees were dark, light-colored moths had a genetic variation that gave them an advantage over dark-colored moths.
- 4 Once the trees were dark, dark-colored moths had a genetic variation that gave them an advantage over light-colored moths.

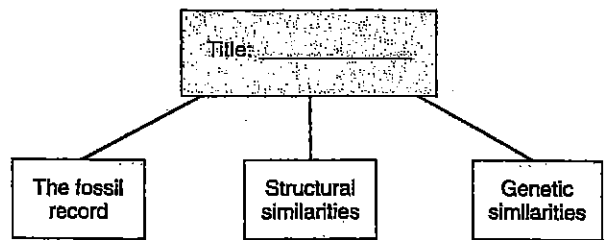
Use the diagrams below, which illustrate the forelimb bones of three different mammals, to answer question 2.



2. Differences in the bone arrangements support the hypothesis that these animals

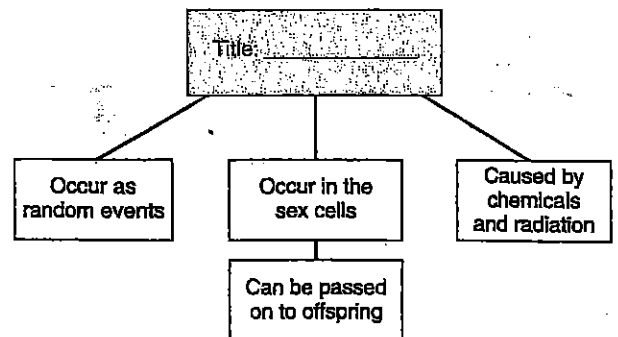
- 1 are probably members of the same species
- 2 have adaptations for different environments
- 3 most likely have no ancestors in common
- 4 all contain the same genetic information

The best title for the chart below would be



- 4.
- 1 Evolutionary Pathways
  - 2 Proof of Evolution
  - 3 Natural Selection
  - 4 Mutations in Evolution

The best title for the chart below would be

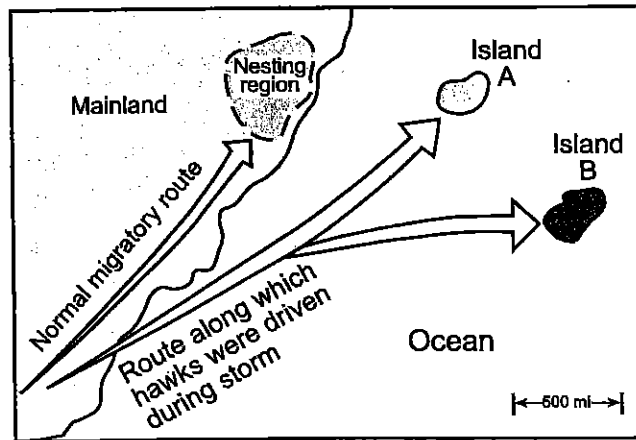


- 5.
- 1 Types of Natural Selection
  - 2 Characteristics of Mutations
  - 3 Survival of the Fittest
  - 4 Asexual Reproduction

15 According to modern evolutionary theory, genes responsible for new traits that help a species survive in a particular environment will usually

- 1 not change in frequency
- 2 decrease gradually in frequency
- 3 decrease rapidly in frequency
- 4 increase in frequency

16 Thousands of years ago, a large flock of hawks was driven from its normal migratory route by a severe storm. The birds scattered and found shelter on two distant islands, as shown on the map below. The environment of island A is very similar to the hawk s original nesting region. The environment of island B is very different from that of island A. The hawks have survived on these islands to the present day with no migration between the populations.



Which statement most accurately predicts the present-day condition of these island hawk populations?

- 1 The hawks that landed on island B have evolved more than those on island A.
- 2 The hawks that landed on island A have evolved more than those on island B.
- 3 The populations on islands A and B have undergone identical mutations.
- 4 The hawks on island A have given rise to many new species.

17 Several white potato plants are grown from pieces of a potato placed in the ground. This method of reproduction is most similar to

- 1 sexual reproduction
- 2 cloning
- 3 genetic engineering
- 4 zygote formation

18 Which statement best explains the significance of meiosis in the evolution of a species?

- 1 Meiosis produces eggs and sperm that are alike.
- 2 Meiosis provides for genetic variation in the gametes produced by an organism.
- 3 Equal numbers of eggs and sperm are produced by meiosis.
- 4 The gametes produced by meiosis ensure the continuation of any particular species by asexual reproduction.