Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pd: \_\_\_\_\_\_\_

Phylogeny Quiz—This is an open note quiz.

1. Complete the dichotomous key by writing the **number** of each organism in the correct blank.



I. A. Legs present…………………………………………………………………………….Go to 2

 B. Legs not present………………………………………………………………………Go to 3

II. A. Four legs………………………………………………………………………………..\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 B. Eight legs………………………………………………………………………………\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

III. A.Fins………………………………………………………………………………………\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 B. No fins………………………………………………………………………………….\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. The diversity of life we see today is a result of…
A. Extinction
B. Evolution
C. Migration
D. Fossilization
2. Which of the following items could become a fossil?
A. Pollen
B. Footprints
C. Bones
D. All of the above
3. What kind of information do you get from a phylogenetic tree?
A. The DNA sequence of organisms
B. How different groups of organisms are related
C. An organism’s habitat
D. How many fossils there are of an organism
4. Name two pieces of evidence scientists have that suggest all organisms share common ancestors.
5. What is a transitional fossil?

Use the phylogenetic tree below to answer questions 5-10.

D

E

C

B

A

Fins

Wings

Fur

Vertebrae

1. What species on this tree has fins?
A. A
B. B
C. C
D. A and B
E. B and C
2. Which trait is only found in species E?
A. Fins
B. Fur
C. Wings
D. Vertebrae
3. What trait does every species on the tree have?
A. Wings
B. Fur
C. Fins
D. Vertebrae
4. Species D is most closely related to…
A. Species A
B. Species B
C. Species C
D. Species E
5. The arrow on this tree is pointing to…
A. The most recent common ancestor of A and E
B. The most recent common ancestor of B and C
C. The most recent common ancestor of D and E
D. The most recent common ancestor of A and B
6. Species E is most closely related to…
A. Species A
B. Species B
C. Species C
D. Species D

Use the map below for questions 11-15. X, Y, and Z are all islands off of the mainland.
There are groups of related turtles that live on these islands.

Mainland

Y

X

Z

1. Which island was most likely to have been colonized first by finches from the mainland?
A. X
B. Y
C. Z
2. Which island has finches that are most closely related to the finches on the mainland?
A. X
B. Y
C. Z
3. Which island has finches that are the most different from the finches on the mainland?
A. X
B. Y
C. Z
4. Complete the phylogenetic tree below using X, Y, and Z to represent the finches on the different islands. One has been filled in for you.

Mainland Ancestor

Z

1. The finches on island X are most closely related to…
A. Finches on Island Y
B. Finches on Island Z
C. Finches on the mainland

Use the table below to complete the phylogenetic tree. Place all of the organisms and all of the traits on the tree.

|  |  |  |  |
| --- | --- | --- | --- |
| **Trait** | **Reptiles** | **Mammals** | **Birds** |
| Vertebrae | yes | yes | Yes |
| Scales | yes | No | No |
| Lays eggs | yes | no | yes |
| Wings | no | no | yes |

Birds

Does not lay eggs