

THE KINSHIP OF ALL LIFE – QUIZ

Part I – Multiple Choice

Directions: Choose the best answer.

1. What does the phrase “kinship of all life” mean in biology?
 - A. All organisms live in the same habitat.
 - B. All living organisms are related through common ancestry.
 - C. All organisms have exactly the same physical characteristics.
 - D. All organisms depend on humans for survival.
2. What is the strongest evidence that all living organisms share a common ancestry?
 - A. All organisms live on Earth.
 - B. All organisms require sunlight.
 - C. Living organisms share fundamental features such as DNA and the genetic code.
 - D. All organisms reproduce in exactly the same way.
3. Which molecule carries the genetic information used by most living organisms?
 - A. DNA
 - B. Glucose
 - C. Water
 - D. ATP
4. What does the nearly universal genetic code suggest about living organisms?
 - A. Every organism has identical genes.
 - B. Organisms evolved independently with no relationship.
 - C. Many organisms inherited a common molecular system from an ancient ancestor.
 - D. Only animals share genetic information.
5. Which of the following is an example of a homologous structure?
 - A. The wing of a bird and the wing of an insect
 - B. The forelimb bones of a human and the flipper bones of a whale
 - C. The eye of an octopus and the eye of a human
 - D. The shell of a turtle and the scales of a fish
6. Why are similarities in cellular structures important evidence for the kinship of life?
 - A. They show that all organisms are the same species.
 - B. They suggest that organisms inherited important biological features from common ancestors.
 - C. They prove that all organisms have the same number of cells.
 - D. They show that organisms cannot evolve.
7. Which statement best explains the relationship between humans and other living organisms?
 - A. Humans are completely separate from the rest of life.
 - B. Humans share evolutionary ancestry with other organisms.
 - C. Humans evolved independently of all other species.
 - D. Humans are ancestors of every living species.

Part II – Select All That Apply

Directions: Select **ALL** answers that are correct.

8. Which observations provide evidence for common ancestry among living organisms?
 - A. Similarities in DNA sequences
 - B. Similarities in cellular processes
 - C. Homologous structures
 - D. Every organism having identical physical features

9. Which characteristics are shared by many or all forms of life?

- A. Genetic information
- B. Cellular organization
- C. Ability to reproduce or participate in reproduction
- D. Exactly the same body structure

Part III – True or False

Directions: Write **T** or **F** on the line.

10. _____ All living organisms are believed to have descended from common ancestral life forms.
11. _____ The presence of DNA in living organisms provides evidence of a shared biological history.
12. _____ Humans have no evolutionary relationship to other organisms.
13. _____ Similarities in DNA can be used to study evolutionary relationships among organisms.
14. _____ The kinship of life means that every living organism is genetically identical.

Part IV – Short Answer

15. Explain how DNA provides evidence that different organisms are related.

16. What is meant by “common ancestry”?

17. Give one example of a similarity between different organisms that supports the idea of common ancestry.
