

## Skills Worksheet

# Test Prep Pretest

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In the space provided, write the letter of the term or phrase that best completes each statement or best answers each question.

- \_\_\_\_\_ 1. Although Linnaeus used the Latin polynomial system in his books, he created his own
- rules of grammar.
  - taxonomic categories.
  - evolutionary systematics.
  - two-word shorthand system, also in Latin.
- \_\_\_\_\_ 2. Scientists classify organisms by studying their forms and
- structures.
  - size.
  - method of reproduction.
  - cladograms.
- \_\_\_\_\_ 3. Cladograms determine evolutionary relationships between organisms by examining
- the strength of a character.
  - the degree of difference between organisms.
  - shared ancestral characters.
  - shared derived characters.
- \_\_\_\_\_ 4. All members of the kingdom Animalia are multicellular
- autotrophs whose cells have walls.
  - heterotrophs whose cells have walls.
  - heterotrophs whose cells lack walls.
  - autotrophs whose cells lack walls.
- \_\_\_\_\_ 5. Plant cells have cell walls composed of which of the following?
- cellulose
  - chitin
  - silica
  - peptidoglycan
- \_\_\_\_\_ 6. The characteristics that scientists use in cladistics are
- analogous structures.
  - shared derived characters.
  - convergent structures.
  - shared homologous traits
- \_\_\_\_\_ 7. Scientific names
- must have three Latin words and correct Latin grammar.
  - include the genus and family.
  - have rules established by British and American biologists.
  - enable biologists to communicate regardless of their native language.

**Test Prep Pretest *continued***

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- \_\_\_\_\_ 8. Bird wings and insect wings are
- a. homologous traits.
  - b. derived traits.
  - c. analogous traits.
  - d. phylogenetic traits.
- \_\_\_\_\_ 9. Which of the following lists the eight classification levels in proper descending order?
- a. domain, kingdom, phylum, class, order, family, genus, species
  - b. kingdom, domain, phylum, order, class, family, genus, species
  - c. kingdom, phylum, family, class, domain, order, genus, species
  - d. phylum, kingdom, domain, class, order, family, genus, species
- \_\_\_\_\_ 10. The scientific naming system requires all of the following *except* that
- a. both words should be underlined or italicized.
  - b. the genus is to be capitalized.
  - c. the species should be the second word.
  - d. the genus is never abbreviated.

**Complete each statement by writing the correct term or phrase in the space provided.**

11. The only domain that includes multicellular organisms is \_\_\_\_\_.
12. The two kingdoms in which all members are heterotrophs are \_\_\_\_\_ and \_\_\_\_\_.
13. The naming system developed by Linnaeus is called \_\_\_\_\_.
14. One genus can include several \_\_\_\_\_.
15. Similar features in organisms that do not share a recent common ancestor are the result of \_\_\_\_\_.
16. A(n) \_\_\_\_\_ is a set of groups that are related by descent from a single ancestral lineage.
17. The evolutionary history of a species is called its \_\_\_\_\_.

Test Prep Pretest *continued*

Read each question, and write your answer in the space provided.

18. Which classification system would probably be used first if a scientist discovered five unknown plants? Explain.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

19. List the six kingdoms, and indicate whether the organisms in each kingdom are prokaryotic or eukaryotic.

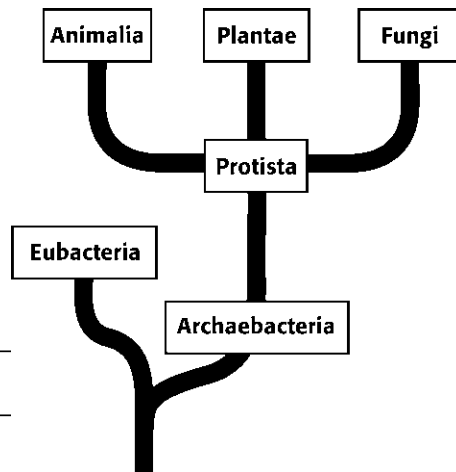
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Questions 20 and 21 refer to the figure at right, which shows a phylogenetic tree of the six kingdoms.



20. Explain why the kingdom Archaeobacteria is located on the branch of the tree that leads to the kingdoms Protista, Animalia, Plantae, and Fungi.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

21. Does the phylogenetic tree separate prokaryotes from eukaryotes? Explain.

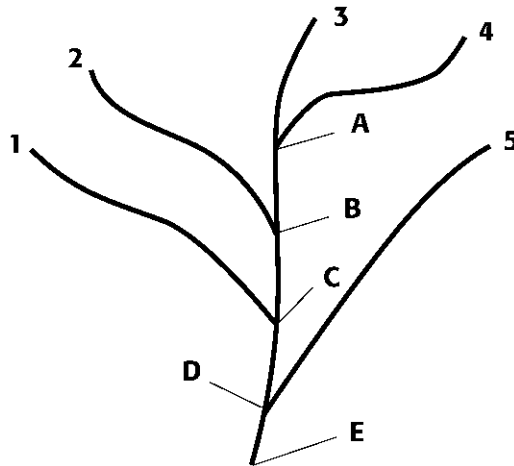
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\_\_\_\_\_

Test Prep Pretest *continued*

Questions 22–25 refer to the figure below. The phylogenetic tree shown indicates the evolutionary relationships for a hypothetical group of modern organisms, labeled 1–5, and their ancestors, labeled A–E.



22. Which two modern organisms are likely to be most closely related?

\_\_\_\_\_

23. What was the most recent common ancestor of the organisms labeled 1 and 5?

\_\_\_\_\_

24. Which two modern organisms are likely to be most distantly related?

\_\_\_\_\_

25. What was the most recent common ancestor of the organisms labeled 1 and 2?

\_\_\_\_\_