

Name \_\_\_\_\_

Date \_\_\_\_\_ Hour \_\_\_\_\_

4

## Plant and Soil Science

### **Multiple Choice**

*Choose the answer that best completes each statement or question.*

- \_\_\_\_\_ 1. What levels of classification give plants individual scientific names?
- A. kingdom and class
  - B. division and class
  - C. order and family
  - D. genus and species
- \_\_\_\_\_ 2. The individual scientific name of a plant is also called its \_\_\_\_\_.
- A. common name
  - B. botanical name
  - C. English name
  - D. commercial name
- \_\_\_\_\_ 3. Plants that complete their entire life cycle, including reproduction, within one growing season are \_\_\_\_\_.
- A. simple plants
  - B. annual plants
  - C. biennial plants
  - D. perennial plants
- \_\_\_\_\_ 4. Plants that need two growing seasons to complete their life cycle are \_\_\_\_\_.
- A. complex plants
  - B. annual plants
  - C. biennial plants
  - D. perennial plants
- \_\_\_\_\_ 5. Plants that grow season after season are \_\_\_\_\_.
- A. complex plants
  - B. annual plants
  - C. biennial plants
  - D. perennial plants

- \_\_\_\_\_ 6. Plants that lose their leaves during the dormant period are called \_\_\_\_\_.
- A. evergreens
  - B. deciduous
  - C. biennial
  - D. perennial
- \_\_\_\_\_ 7. How many seed leaves does a dicot plant have?
- A. one
  - B. two
  - C. three
  - D. four
- \_\_\_\_\_ 8. How many seed leaves does a monocot plant have?
- A. one
  - B. two
  - C. three
  - D. four
- \_\_\_\_\_ 9. Plants lose water via openings in the skin of the leaf through a process called \_\_\_\_\_.
- A. respiration
  - B. transpiration
  - C. photosynthesis
  - D. perspiration
- \_\_\_\_\_ 10. The plant uses oxygen taken in through the leaves and water from the roots to convert the stored sugar into usable energy through a process called \_\_\_\_\_.
- A. respiration
  - B. transpiration
  - C. photosynthesis
  - D. perspiration
- \_\_\_\_\_ 11. The process of food production is called \_\_\_\_\_.
- A. respiration
  - B. transpiration
  - C. photosynthesis
  - D. perspiration

- \_\_\_\_\_ 12. What part of a plant contains chlorophyll?
- A. roots
  - B. seed
  - C. leaves
  - D. stem
- \_\_\_\_\_ 13. A plant's structure consists mostly of \_\_\_\_\_.
- A. water
  - B. xylem cells
  - C. phloem cells
  - D. epidermal cells
- \_\_\_\_\_ 14. The carbon dioxide that plants use in photosynthesis comes from \_\_\_\_\_.
- A. air
  - B. soil
  - C. water
  - D. stored reserves
- \_\_\_\_\_ 15. Most agricultural plants prefer a temperature between \_\_\_\_\_.
- A. 40 and 70° F
  - B. 50 and 80° F
  - C. 60 and 90° F
  - D. 70 and 100° F
- \_\_\_\_\_ 16. Which organic media has high water and nutrient retention capabilities and is commonly used in commercial greenhouses?
- A. peat moss
  - B. pine bark
  - C. compost
  - D. sawdust
- \_\_\_\_\_ 17. Which organic media absorbs nutrients and releases them slowly, decomposes slowly, and is often used by nurseries?
- A. peat moss
  - B. pine bark
  - C. compost
  - D. sawdust

- \_\_\_\_\_ 18. Which inorganic media is simply volcanic rock that has been crushed and heated to 1800° F.?
- A. perlite
  - B. sphagnum
  - C. vermiculite
  - D. sediment
- \_\_\_\_\_ 19. Which inorganic media is a heated mica compound and is used to improve moisture retention?
- A. perlite
  - B. sphagnum
  - C. vermiculite
  - D. sediment
- \_\_\_\_\_ 20. Which inorganic media is used to improve aeration in growth media but also lacks ability to hold nutrients?
- A. perlite
  - B. sphagnum
  - C. vermiculite
  - D. sediment
- \_\_\_\_\_ 21. Which soil particle feels gritty and allows water to drain through the soil quickly?
- A. sand
  - B. silt
  - C. clay
  - D. loam
- \_\_\_\_\_ 22. Which soil particle feels powdery to the touch?
- A. sand
  - B. silt
  - C. clay
  - D. loam
- \_\_\_\_\_ 23. Which soil particle does not allow water to penetrate or drain well?
- A. sand
  - B. silt
  - C. clay
  - D. loam

\_\_\_\_\_ 24. When using the textural triangle, a soil that has 20% clay and 30% sand would have \_\_\_\_ silt.

- A. 20%
- B. 30%
- C. 50%
- D. 70%

\_\_\_\_\_ 25. For ideal plant growing conditions, the soil would have \_\_\_\_\_.

- A. no air and some water
- B. more water than air
- C. more air than water
- D. about equal amounts of air and water

### **Matching**

*Match each term with its definition.*

- A. sand
- B. silt
- C. clay
- D. parent material
- E. organic matter

\_\_\_\_\_ 26. soil particle that holds water and nutrients in the soil well

\_\_\_\_\_ 27. component in soil made of decaying material from living organisms

\_\_\_\_\_ 28. soil particle that is the smallest; less than 0.002 millimeters in diameter

\_\_\_\_\_ 29. soil particle that is the largest; between 0.05 and 2.0 millimeters in diameter

\_\_\_\_\_ 30. original matter from which soil particles are formed

## **Short Answer**

31. What are the five factors that affect soil formation? \_\_\_\_\_

\_\_\_\_\_

32. Why is it important for builders to understand soil properties when they design and construct buildings?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

33. What is the most important layer or natural soil for plant production? \_\_\_\_\_

\_\_\_\_\_