

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? _____
