Name_____ Class_____ Date _____

Multiple Choice

Write the letter that best answers the question or completes the statement on the line provided.

____ **1.** Which of the following is NOT a characteristic of plants?
a. unicellular
b. contain cell walls made of cellulose
c. make their own food
d. eukaryotes

____ **2.** Plants that lack vascular tissue and depend on water for reproduction are classified as
a. bryophytes.
b. ferns.
c. gymnosperms.
d. angiosperms.

____ **3.** In the life cycles of the following plant groups, which have the diploid sporophyte as the dominant, recognizable stage?
a. bryophytes only
b. ferns only
c. gymnosperms and angiosperms
d. ferns, gymnosperms, and angiosperms

____ **4.** Both gymnosperms and angiosperms
a. require water for reproduction.
b. reproduce with flowers.
c. produce seeds.
d. reproduce with cones.

____ **5.** All annuals
a. are short-day plants.
b. complete a life cycle in one growing season.
c. reproduce with cones.
d. require water for reproduction.

____ **6.** Which tissue systems make up roots, stems, and leaves?
a. xylem and phloem
b. parenchyma, collenchyma, and sclerenchyma
c. dermal, vascular, and ground
d. nodes, internodes, and buds

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____ **7.** Unlike primary growth in stems, secondary growth
a. causes an increase in length.
b. causes an increase in width.
c. is produced by the apical meristem.
d. occurs in all seed plants.

____ **8.** On a hot and sunny day, a wilting plant will
a. release pollen.
b. have open stomata.
c. have closed stomata.
d. become dormant.

____ **9.** Water moves from the roots to the leaves
a. by root pressure, capillary action, and transpiration.
b. as described by the pressure-flow hypothesis.
c. by the force of adhesion.
d. by root pressure alone.

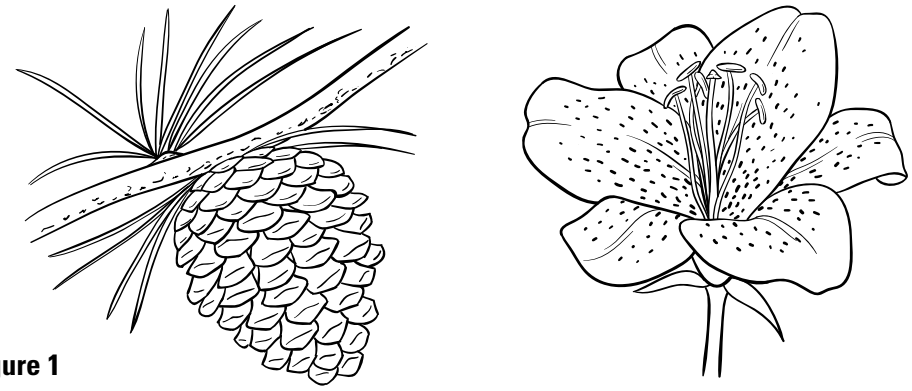

Figure 1

A **B**

____**10.** Which of the reproductive structures in Figure 1 is pollinated by wind?
a. A only
b. B only
c. both A and B
d. neither A nor B

____**11.** Which of the following are fruits?
a. peaches
b. beans
c. tomatoes
d. all of the above

____**12.** In plant propagation, horticulturists produce plants that are
a. genetically different from the parent.
b. genetically identical to the parent.
c. grown from seeds.
d. grown from stolons.

____**13.** The plant hormone that stimulates the growth of lateral buds is
a. auxin.
b. cytokinin.
c. gibberellin.
d. ethylene.

____**14.** In preparation for winter, deciduous plants
a. flower during short days.
b. increase their rate of photosynthesis.
c. produce less ethylene and more auxin.
d. form waxy scales around new leaf buds.

____**15.** Like parasites, carnivorous plants have
a. specialized cells to pump out salt.
b. extensive root systems.
c. specialized features to obtain nutrients.
d. air-filled spaces in their tissues.

Completion

Complete each statement on the line provided.

16. The plant life cycle alternates between the haploid _____ stage and the diploid _____stage.

17. The first plants were limited in height because they lacked _____.

18. The functions of _____ include absorbing water and dissolved nutrients from the soil.

19. As angiosperm seeds mature, the _____ thicken to form a fruit that encloses the developing seeds.

20. Plant _____ demonstrate the ability of plants to respond to external stimuli, such as gravity, light, and touch.

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Short Answer

In complete sentences, write the answers to the questions on the lines provided.

21. What must plants have to survive?

_____

_____

_____

22. List five ways in which monocots differ from dicots.

_____

_____

_____

_____

23. What is the function of meristematic tissue?

_____

_____

_____

Figure 2

24. How are the seeds in Figure 2 dispersed?

_____

_____

_____

25. How do plants defend themselves from insects?

_____

_____

_____

Name_____ Class_____ Date _____

Using Science Skills

Use the diagram below to answer the following questions on the lines provided.

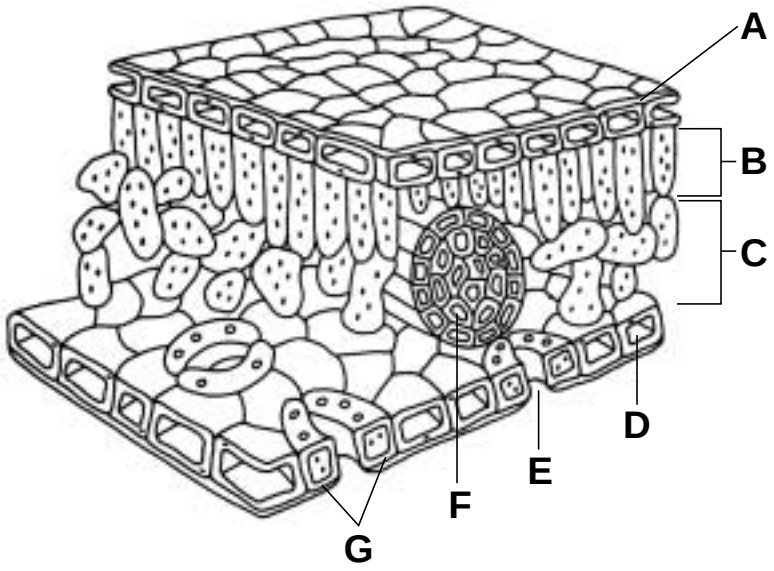

Figure 3

26. Applying Concepts What two functions does the structure in Figure 3 have?

_____

_____

27. Interpreting Graphics Would the structure in Figure 3 have come from a wilting plant? Explain.

_____

_____

_____

28. Interpreting Graphics What labeled structure in Figure 3 transports water and the products of photosynthesis?

_____

_____

_____

29. Inferring What happens in the structures labeled B and C in Figure 3 when cold weather approaches?

_____

_____

30. Applying Concepts If the structure in Figure 3 were part of a salt-tolerant plant, what adaptation would it have?

_____

_____

_____

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Essay

Write the answer to each question in the space provided.

31. Compare and contrast reproduction in bryophytes, ferns, gymnosperms, and angiosperms.

32. Explain how the life cycle of bryophytes is different from that of ferns.

33. Summarize the organization of plant organs, tissues, and cells.

34. Although plants are stationary organisms, they are able to get everything they need. Explain how angiosperms "use" animals to meet their needs.

35. Explain the effect of auxins on the growth, structure, and responses of flowering plants.