

Chapter Test

Plant Processes

Chapter

11

I. Testing Concepts

Directions: Match the description in the first column with the item in the second column by writing the correct letter in the space provided. Some items in the second column may not be used.

- | | |
|--|-----------------------|
| _____ 1. plant processes using light energy to produce food | a. auxins |
| _____ 2. anything in environment affecting the behavior of an organism | b. day-neutral plants |
| _____ 3. response of a plant to a stimulus | c. long-day plants |
| _____ 4. flowering response of a plant to changes in length of light and dark in a day | d. photoperiodism |
| _____ 5. plants requiring long nights to flower | e. photosynthesis |
| _____ 6. plants that flower over a wide range of night lengths | f. respiration |
| _____ 7. plant hormone that moves to shaded side of stem | g. short-day plants |
| _____ 8. releasing energy from food | h. stimulus |
| | i. gibberellins |
| | j. tropism |

Directions: For each of the following, write the letter of the term or phrase that best completes the sentence.

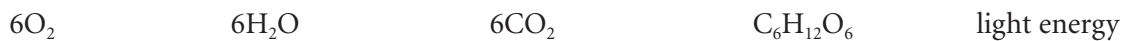
- _____ 9. Most carbon dioxide enters plants through stomata on the _____.
 a. lower surface of leaves c. tips of the stems
 b. root tips d. upper surface of leaves
- _____ 10. Light, _____, and carbon dioxide all affect the opening and closing of stomata.
 a. gravity b. insects c. minerals d. water
- _____ 11. The plant hormone that causes stomata to close and that helps plants respond to water loss is _____.
 a. cytokinin b. auxin c. gibberellin d. abscisic acid
- _____ 12. The autumn colors of tree leaves are due to _____ in the leaves.
 a. auxins b. carbon dioxide c. pigments d. chlorophyll
- _____ 13. Light energy for the plant to use in making its food is trapped by _____.
 a. carbon dioxide b. pigments c. chlorophyll d. water
- _____ 14. The type of growth response having to do with light is called _____.
 a. gravitropism b. photoperiodism c. phototropism d. photosynthesis
- _____ 15. _____ causes fruit to ripen.
 a. Auxin b. Ethylene gas c. Chlorophyll d. Gravity
- _____ 16. Plants that require short nights to flower are called _____ plants.
 a. long-day b. short-day c. day-neutral d. periodic

Chapter Test (continued)

II. Understanding Concepts

Skill: Sequencing

Directions: Place the following in the proper order to show the process of photosynthesis.



1. _____ + _____ + _____ →

2. _____ + _____

Skill: Comparing and Contrasting

Directions: Names and examples of two types of tropisms are listed in the table below. Complete the table by writing the stimulus of each type of tropism.

Type of tropism	Stimulus	Example
Gravitropism	3.	root growing downward
Phototropism	4.	plant growing toward Sun

Directions: Complete the table describing photoperiods of plants. First identify the type of photoperiodism described. In the last column, provide two examples of each type of photoperiodism.

Description	Type of photoperiodism	Plant examples
Plants that require long nights to flower	5.	6.
Plants that require short nights to flower	7.	8.
Plants that are not sensitive to length of night or day	9.	10.

Chapter Test (continued)

Directions: Complete the paragraph by filling in the blanks.

Gas exchange is one way living cells obtain raw materials and get rid of waste products. Each stoma on a plant is surrounded by two 11. _____ cells that control the size of the opening. When these cells absorb water, they swell and the stoma opens, letting 12. _____ in and 13. _____ out. In respiration, organisms break down food chemically to release 14. _____. Respiration that uses oxygen to break down food chemically is called 15. _____. This occurs in the 16. _____ in cells. Oxygen is used to break down food to produce 17. _____, water, and energy. This process is the direct opposite of the reaction that occurs in 18. _____.

III. Applying Concepts

Directions: State two reasons photosynthesis is important.

1. _____

2. _____

Directions: Classify each of the following as describing photosynthesis, or respiration.

3. Energy released: _____
4. Energy stored: _____
5. Light energy, $6\text{H}_2\text{O}$, and 6CO_2 at start: _____
6. $\text{C}_6\text{H}_{12}\text{O}_6$ and 6O_2 at start: _____
7. $\text{C}_6\text{H}_{12}\text{O}_6$ and 6O_2 at end: _____
8. 6CO_2 , $6\text{H}_2\text{O}$, and energy at end: _____
9. Takes place in all cells: _____
10. Takes place in cells with chlorophyll: _____

Chapter Test (continued)

Directions: In the table below, classify the type of tropism described, identify the tropism as positive or negative, and identify the stimulus to which the plant is responding.

	Tropism	Positive or negative	Stimulus
11. A plant stem turns toward the Sun.			
12. A plant's roots grow into the soil.			
13. A stem breaks through the soil.			

IV. Writing Skills

Directions: Answer the following questions on the lines provided.

1. What is the relationship between plant hormones and tropisms? Give an example.

2. What are the two types of reactions that can take place during photosynthesis? Explain.
