



Name _____ Class _____ Date _____

- 1 A chewing insect damages the **vascular tissue** of a plant stem. This damage will most directly affect the
- A** excretion of carbon dioxide by root cells
- B** conduction of water and minerals between the roots and leaves
- C** synthesis of auxins in the roots
- D** diffusion of oxygen between root cells



- 3 **Leaves** at the top of a giant redwood tree receive **water** from the
- A** vascular tissue in the branches, trunk, and roots
- B** epidermal cells in the trunk and branches
- C** process of photosynthesis in the



- 2 Which statement correctly describes a characteristic of **cells** in the **stems** of plants?
- A** They exchange gases through stomates.
- B** They exchange gases by diffusion directly between the cells and root hairs.
- C** They carry on photosynthesis and do not exchange gases.
- D** They carry on respiration and exchange gases through lenticels.

- 4 **Gases** move into intercellular spaces in leaves through **openings** known as

- A** stomates
- B** lenticels
- C** phloem tubes
- D** xylem tubes



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T
f
a

A
B
C
D



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- A** carbon dioxide, only
- B** both carbon dioxide and oxygen
- C** oxygen, only
- D** neither carbon dioxide nor oxygen



- A** regulate the rate of gas exchange
- B** store food for winter dormancy
- C** undergo mitotic cell division
- D** give support to the veins in the leaf

- 9 In most plants, specialized **epidermal cells** which absorb water and minerals are found in the
- A** roots
- B** stems
- C** lenticels
- D** flowers



- 10 The **exchange of oxygen** and **carbon dioxide** between internal leaf cells and the external environment will occur most efficiently if
- A** the surfaces of these cells are dry and the stomates are closed
- B** these cells are dry and the stomates are open
- C** the surfaces of these cells are moist and the stomates are open
- D** the cells are moist and the stomates are closed



ANSWER KEY

A chewing insect damages the **vascular tissue** of a plant stem. This damage will most directly affect the



- A** excretion of carbon dioxide by root cells
- B** conduction of water and minerals between the roots and leaves
- C** synthesis of auxins in the roots
- D** diffusion of oxygen between root cells

(c)

Which statement correctly describes a characteristic of **cells** in the **stems** of plants?

- A** They exchange gases through stomates.
- B** They exchange gases by diffusion directly between the cells and root hairs.
- C** They carry on photosynthesis and do not exchange gases.
- D** They carry on respiration and exchange gases through lenticels.

(d)

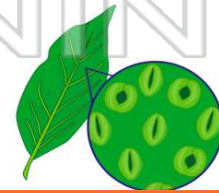
Leaves at the top of a giant redwood tree receive **water** from the



- A** vascular tissue in the branches, trunk, and roots
- B** epidermal cells in the trunk and branches
- C** process of photosynthesis in the trunk and branches
- D** vacuoles in cells in the roots

(a)

Gases move into intercellular spaces in leaves through **openings** known as



- A** stomates
- B** lenticels
- C** phloem tubes
- D** xylem tubes

(a)



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- B** both carbon dioxide and oxygen
- C** oxygen, only
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- B** store food for winter dormancy
- C** undergo mitotic cell division
- D** give support to the veins in the leaf

In most plants, specialized **epidermal cells** which absorb water and minerals are found in the



- A** roots
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- C** lenticels
- D** flowers

(a)

The **exchange of oxygen** and **carbon dioxide** between internal leaf cells and the external environment will occur most efficiently if

- A** the surfaces of these cells are dry and the stomates are closed
- B** these cells are dry and the stomates are open
- C** the surfaces of these cells are moist and the stomates are open
- D** the cells are moist and the stomates are closed

(c)