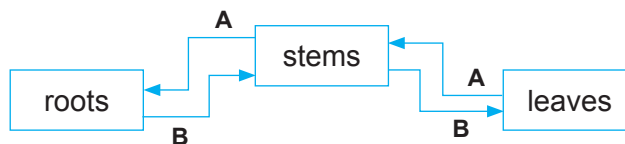


The Plant Transport System

For each of the questions, choose the correct option and write its number (1, 2, 3 or 4) in the brackets.

1. Which of the following statements about the function of the water-carrying tubes in plants is correct?
- (1) They keep the plant upright.
 - (2) They help the plant to make food.
 - (3) They transport food made by the leaves to the rest of the plant.
 - (4) They transport water and dissolved mineral salts from the roots to the rest of the plant.
- ()

2. The diagram below shows how both A and B are transported in a plant.

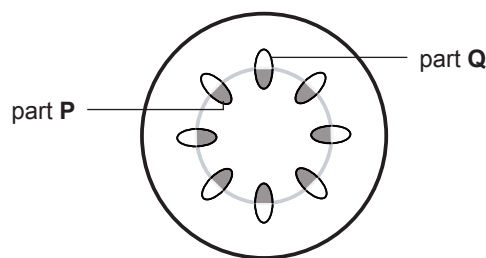


What could be represented by **A** and **B**?

	A	B
(1)	water	mineral salts
(2)	starch	water
(3)	mineral salts	starch
(4)	mineral salts	water

()

3. The diagram below shows a cross section of a stem.

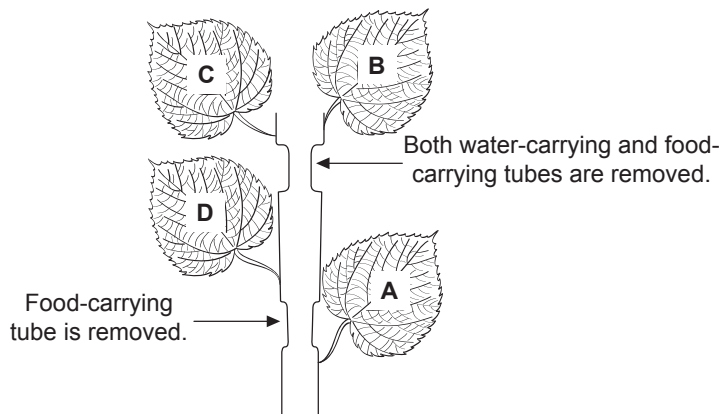


What substances are transported by parts **P** and **Q** respectively?

	Part P	Part Q
(1)	food and oxygen	water only
(2)	mineral salts only	food and carbon dioxide
(3)	water and mineral salts	food only
(4)	food only	water and mineral salts

()

4. Diameters of different thickness are cut and removed from the stem shown below.

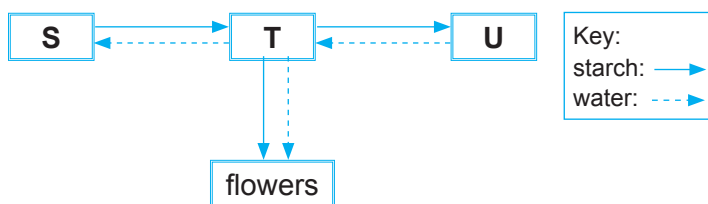


Identify the leaves which are still able to make their own food.

- (1) A only
- (2) A and D only
- (3) B and C only
- (4) None of them

()

5. The diagram below shows how starch and water are transported in a plant.



Which one of the following shows the parts of the plants correctly?

	S	T	U
(1)	stem	roots	leaves
(2)	stem	leaves	roots
(3)	leaves	roots	stem
(4)	leaves	stem	roots

()

6. Keith puts a plant with white flowers in a container filled with blue liquid for a few hours. After a day, he observes that the white flowers have turned slightly blue. What has caused the flowers to change their colours?

- (1) The flowering plant has been affected by a fungal disease.
- (2) The pigment found in the leaves of the flowering plant has turned the flowers blue.
- (3) The roots absorb the blue liquid which is then transported to the flowers by the stem.
- (4) The roots of the flowering plant have taken in the blue liquid and transported it to the flowers.

()

The Plant Transport System

1. (4)

The function of the water-carrying tubes (xylem) is to transport water and dissolved mineral salts from the roots to all parts of the plant. The leaves make food for the plant during photosynthesis. The stem of the plant keeps it upright. The food-carrying tubes (phloem) transport food from the leaves to the rest of the plant.

2. (2)

A represents starch made by the leaves which is transported by the food-carrying tubes (phloem) in the stem from the leaves to all parts of the plant. **B** represents water and mineral salts which are absorbed by the roots and transported to all parts of the plant via the water-carrying tubes (xylem) in the stem.

3. (3)

Part **P** represents the water-carrying tubes (xylem) while part **Q** represents the food-carrying tubes (phloem). The water-carrying tubes (xylem) transport both water and mineral salts from the roots to all parts of the plant while the food-carrying tubes (phloem) carry food made by the leaves to all parts of the plant. There is no transportation of gases in plants. The exchange of gases only takes place in the leaves.

4. (2)

Leaves **A** and **D** can continue making food as they are still able to receive water and mineral salts transported by the water-carrying tubes (xylem). On the other hand, leaves **B** and **C** are not able to make any food as they do not receive any water and mineral salts, since both the water-carrying and food-carrying tubes have been removed.

5. (4)

The roots (**U**) will take in water and the stem (**T**) will help to transport it to all parts of the plant. The leaves (**S**) will make food and the stem (**T**) will carry the food to all parts of the plant.

6. (3)

The water-carrying tubes (xylem) in the stem transport the blue liquid which is absorbed by the roots and transported to all parts of the plant, including its flowers. It is not the function of the roots to transport the liquid to the flowers directly. The pigment found in the leaves (chlorophyll) is only needed to trap sunlight for the plant to make food.