



UNIQUE STUDY POINT

Chapter 11 Transportation in Animals and Plants

EXERCISES

Question 1: Match structures given in Column I with functions given in Column II.

Column- I	Column-II
(i) Stomata	(a) Absorption of water
(ii) Xylem	(b) Transpiration
(iii) Root hairs	(c) Transport of food
(iv) Phloem	(d) Transport of water
	(e) Synthesis of carbohydrates

Answer:

Column- I	Column-II
(i) Stomata	(b) Transpiration
(ii) Xylem	(d) Transport of water
(iii) Root hairs	(a) Absorption of water
(iv) Phloem	(c) Transport of food

Question 2: Fill in the blanks.

- (i) The blood from the heart is transported to all parts of the body by the _____
- (ii) Haemoglobin is present in _____ cells.
- (iii) Arteries and veins are joined by a network of _____.
- (iv) The rhythmic expansion and contraction of the heart is called _____
- (v) The main excretory product in human beings is _____
- (vi) Sweat contains water and _____.

- (vii) Kidneys eliminate the waste materials in the liquid form called _____.
- (viii) Water reaches great heights in the trees because of suction pull caused by _____.

- Answer:** (i) The blood from the heart is transported to all parts of the body by the **arteries**.
- (ii) Haemoglobin is present in **red blood** cells.
- (iii) Arteries and veins are joined by a network of **capillaries**.
- (iv) The rhythmic expansion and contraction of the heart is called **heartbeat**.
- (v) The main excretory product in human beings is **urea**.
- (vi) Sweat contains water and **salts**.
- (vii) Kidneys eliminate the waste materials in the liquid form called **urine**.
- (viii) Water reaches great heights in the trees because of suction pull caused by **transpiration**.

Question 3: Choose the correct option:

(a) In plants, water is transported through

- (i) xylem
- (ii) phloem
- (iii) stomata
- (iv) root hair

Answer: (i) Xylem

(b) Water absorption through roots can be increased by keeping the plants

- (i) in the shade
- (ii) in dim light
- (iii) under the fan
- (iv) covered with a polythene bag

Answer: (iii) under the fan

Question 4: Why is transport of materials necessary in a plant or in an animal? Explain.

Answer: Transport of materials is necessary for plants or animals because due to it the nutrients and oxygen are made available to all the parts of the body. If the transport of necessary nutrients and oxygen does not take place in the body, the body will not be able to survive.

Or

Transport of materials is necessary in both plants and animals as every cell needs a regular supply of nutrients and oxygen for releasing energy through respiration. The food that we eat is broken down into smaller components to be absorbed by the cells. The oxygen that we inhale is also transported to all the cells of the body. Our body also requires a constant removal of waste materials such as carbon dioxide. For the transport of all these materials (food, oxygen, and wastes), our body has a specialised transport system. Similarly, in plants, the transport of water and food is accomplished with the help of a complex transport system.

Question 5: What will happen if there are no platelets in the blood?

Answer: Platelets are responsible for clotting of blood. If there are no platelets, the blood would not clot in case of an injury. This will lead to excess blood loss and finally in death of the person.

Question 6: What are stomata? Give two functions of stomata.

Answer: The numerous pores under the surface of leaf are called stomata.

Functions of stomata:

- It helps in the transpiration of water, i.e., the loss of excess water from the plant.
- Loss of water from the stomata creates an upward pull, i.e., suction pull which helps in absorption of water from the roots.
- They help in exchange of gases.

Question 7: Does transpiration serve any useful function in the plants? Explain.

Answer: Transpiration serves the following functions in plants

- It helps in lowering temperature of plants, thus preventing heat injury of plants.
- Helps in transpiration pull, which helps in raining water in higher plants.
- It also causes loss of water absorbed by plants.

Question 8: What are the components of blood?

Answer: Blood is a liquid, which has cells of various kinds suspended in it. Main components of blood are:

- **Plasma:** The fluid part of the blood is called plasma.
- **RBC:** One type of cells are the red blood cells (RBC) which contain a red pigment called haemoglobin.
- **WBC:** The blood also has white blood cells (WBC) which fight against germs that may enter our body.
- **Platelets:** The clotting of blood is caused by another type of cells in the blood, called platelets.

Question 9: Why is blood needed by all the parts of a body?

Answer: Blood is needed by all parts of the body as it is an important part of the transport system of our body. It performs the following important functions:

- (i) It transports O_2 from the lungs to all the body cells.
- (ii) It carries CO_2 , a waste product back to the lungs so that it can be exhaled easily.
- (iii) It transmits heat, thus regulating the body temperature.
- (iv) It also fights off diseases and infections.

Question 10: What makes the blood look red?

Answer: The presence of haemoglobin makes blood appear red.

Question 11: Describe the function of the heart.

Answer: The heart is an organ which beats continuously to act as a pump for the transport of blood, which carries other substances with it. The heart has four chambers. The two upper chambers are called the atria (singular: atrium), and the two lower chambers are called the ventricles. The partition between the chambers helps to avoid mixing up of blood-rich in oxygen with the

Question 12: Why is it necessary to excrete waste products?

Answer: When our cells perform their functions, certain waste products are released. These are toxic for our body and hence need to be removed from the body.

Question 13: Draw a diagram of the human excretory system and label the various parts.

Answer:

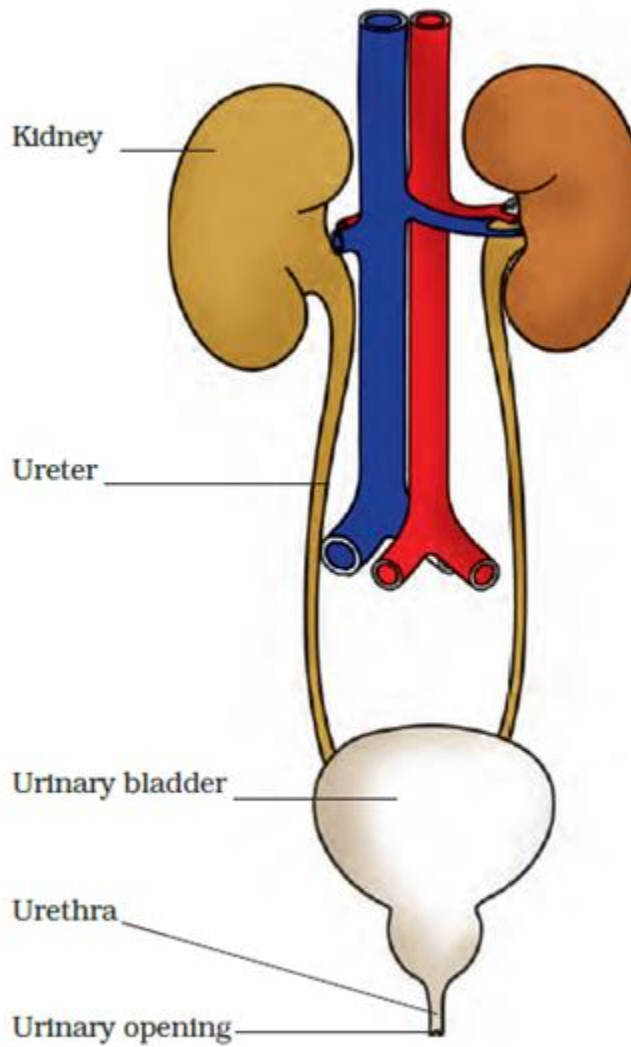


Fig. 11.6 Human excretory system

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