

Science

(Chapter – 11) (Transportation in Animals and Plants)
(Class – VII)

Exercises

Question 1:

Match structures given in Column I with functions given in Column II.

Column I

- (i) Stomata
- (ii) Xylem
- (iii) Root hairs
- (iv) Phloem

Column II

- (a) Absorption of water
- (b) Transpiration
- (c) Transport of food
- (d) Transport of water
- (e) Synthesis of carbohydrates

Answer 1:

Column I

- (i) Stomata
- (ii) Xylem
- (iii) Root hairs
- (iv) Phloem

Column II

- (b) Transpiration
- (d) Transport of water
- (a) Absorption of water
- (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 2:

- (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 *salt*.
- (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

(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 3:

(a) In plants, water is transported through (i) xylem.

(b) Water absorption through roots can be increased by keeping the plants (iii) under the fan.

Question 4:

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

Answer 4:

The cells of different organs of plants and animals need various necessary substances to carry out many metabolic activities and different type of waste products are created during these metabolic activities. So, transport of materials is necessary to supply the required substances and to remove the waste products.

Question 5:

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

Answer 5:

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 6:

The numerous pores under the surface of leaf are called stomata. Transpiration and exchange of gases (carbon dioxide and oxygen) are the main functions of stomata.

Question 7:

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

Answer 7:

Transpiration serves very important function in plants. Transpiration creates the transpiration pull, which is responsible for the rise of water to great heights in tall plants and other trees.

Question 8:

What are the components of blood?

Answer 8:

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 9:

Blood transports substances like digested food from the small intestine to the other parts of the body. It carries oxygen from the lungs to the cells of the body. It also transports waste for removal from the body. So, it acts as a carrier of various substances. Every part of the body needs certain substances to perform its functions. Additionally, every part creates some waste products for removal. Blood is needed by all parts of the body so that various substances can be supplied to them and waste can be removed from them.

Question 10:

What makes the blood look red?

Answer 10:

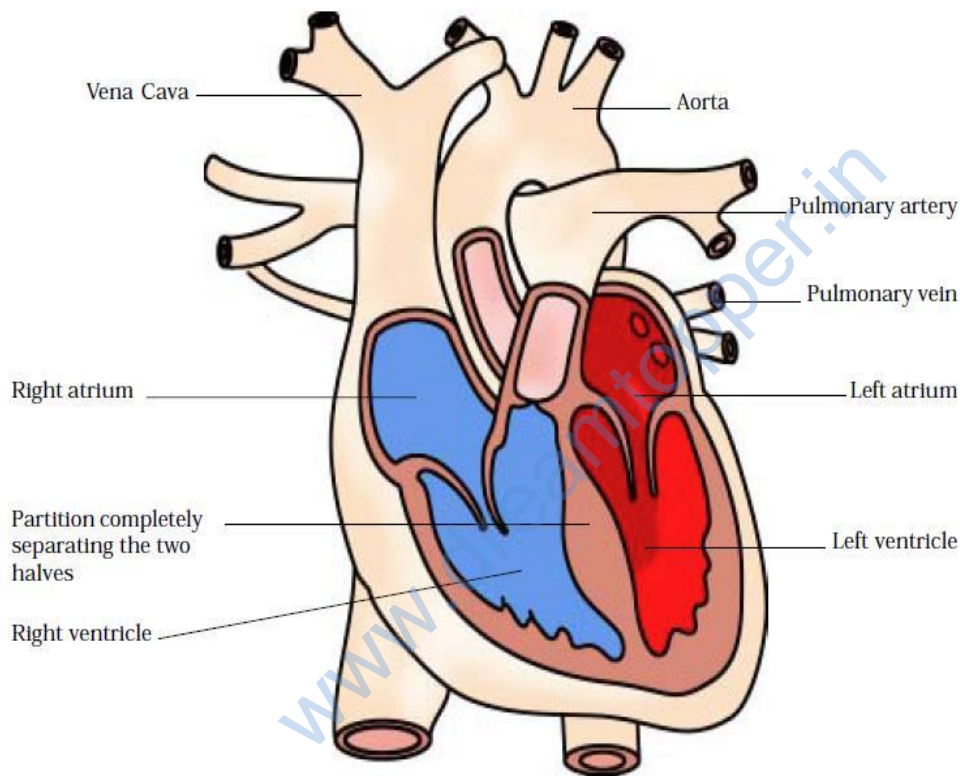
The presence of haemoglobin makes blood appear red.

Question 11:

Describe the function of the heart.

Answer 11:

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 pumps the deoxygenated blood to the lungs for oxygenation and receives oxygenated blood from lungs. It pumps the oxygenated blood to different parts of the body.



Sections of human heart

Question 12:

Why is it necessary to excrete waste products?

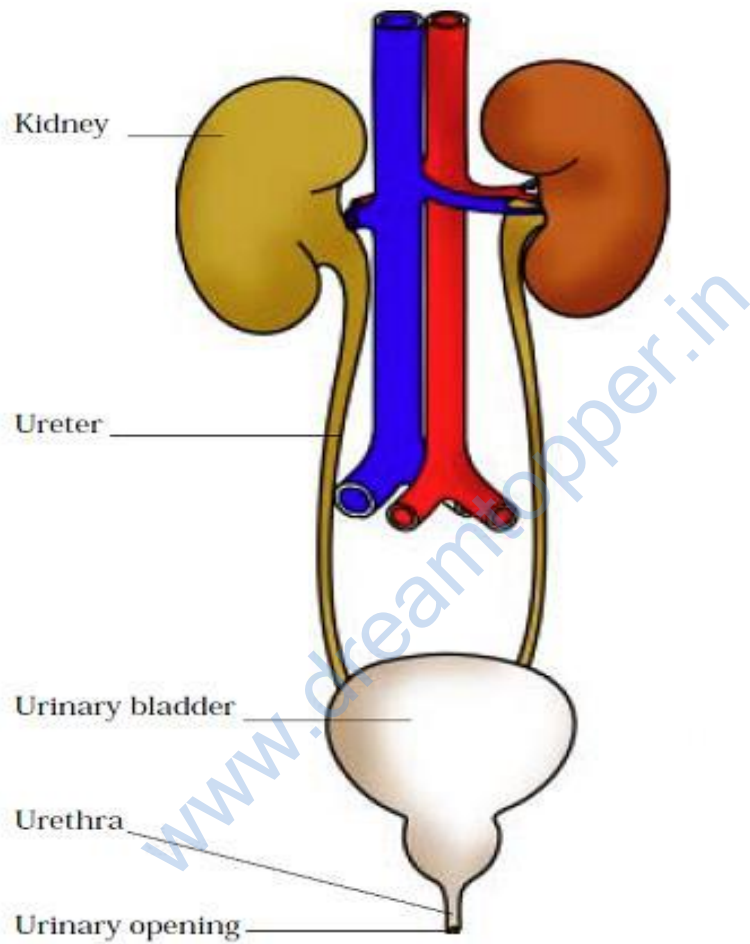
Answer 12:

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 13:



Human excretory system