

## Exercise Questions

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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

**Solution:**

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

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 \_\_\_\_\_ .

**Solution:**

- (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 .

**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**

**Solution:**

- a) i) Xylem
- b) iii) under the fan

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

Transport of materials is necessary in a plant or an animal for the following reasons:

- To transport food to various parts of the body
- Animals need to transport wastes to parts from where they can be removed.

**5. What will happen if there are no platelets in the blood?****Solution:**

If there are no platelets, then blood will not clot as platelets release blood clotting factor at the site of injury.

**6. What are stomata? Give two functions of stomata.****Solution:**

Tiny pores present on the leaf surface are known as stomata.

Functions of stomata

- Helps in exchange of gases
- Evaporation of water through leaves occurs due to stomata.

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

Transpiration serves following function 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.

### 8. What are the components of blood?

**Solution:**

Red blood cells, white blood cells, platelets and plasma.

### 9. Why is blood needed by all the parts of a body?

**Solution:**

Blood is a significant part of transport system in our body, and we need blood for the following reasons:

- For the transport of oxygen to all parts of our body
- To expel out carbon dioxide from our body
- To transmit heat thus helping in the regulation of body temperature.
- It is required to fight out infections and diseases.

### 10. What makes the blood look red?

**Solution:**

Haemoglobin, a red pigment present in the blood makes it look red.

### 11. Describe the function of the heart.

**Solution:**

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 blood-rich in carbon dioxide. Blood flows from the heart to the lungs and back to the heart from where it is pumped to the rest of the body.

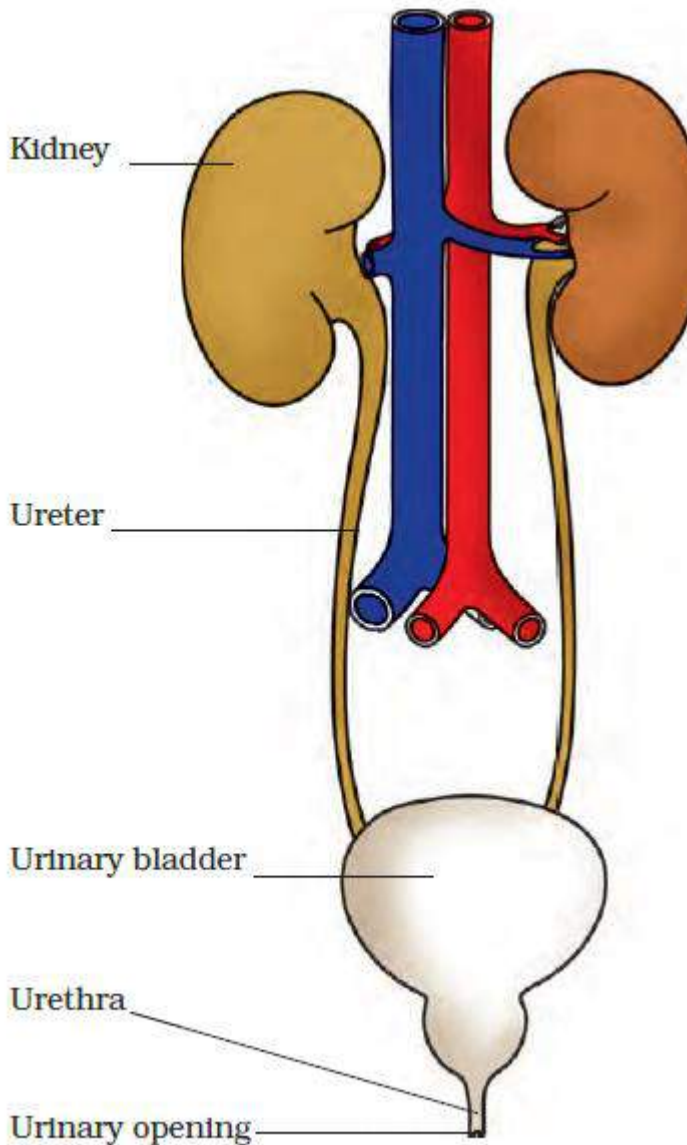
### 12. Why is it necessary to excrete waste products?

**Solution:**

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

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

Solution:



**Fig. 11.6** Human excretory system