



### TRANSPORTATION IN ANIMALS AND PLANTS

#### EXERCISE

##### Question 1:

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

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

##### Answer:

(a) – (ii), (b) – (iv), (c) – (i), (d) – (iii)

##### Question 2:

Fill in the Blanks.

- (a) The blood from the heart is transported to all parts of the body by the \_\_\_\_\_.
- (b) Haemoglobin is present in \_\_\_\_\_ cells.
- (c) Arteries and veins are joined by a network of \_\_\_\_\_.
- (d) The rhythmic expansion and contraction of the heart is called \_\_\_\_\_.
- (e) The main excretory product in human beings is \_\_\_\_\_.
- (f) Sweat contains water and \_\_\_\_\_.
- (g) Kidneys eliminate the waste materials in the liquid form called \_\_\_\_\_.
- (h) Water reaches great heights in the trees because of suction pull caused by \_\_\_\_\_.

##### Answer:

- (a) arteries
- (b) Red Blood Cells (RBCs)
- (c) capillaries
- (d) heartbeats

- (e) urea
- (f) salts
- (g) urine
- (h) 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:**

- (a) (i) In plants, water is transported through xylem.
- (b) (iii) Water absorption through roots can be increased by keeping the plants under the fan.

**Question 4:**

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

**Answer:**

All organisms (plants and animals) need food, water, and oxygen for survival. They need to transport all these to various parts of their body. Further, animals need to transport wastes to the parts from where they can be removed or excreted. That's why transportation is necessary in both plants and animals.

**Question 5:**

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

**Answer:**

The blood clot is formed due to the presence of the cells called platelets in the blood. If there were no platelets in the blood, then bleeding caused by a cut from an injury would not stop. This would cause loss of too much blood from the body of a person, leading to death.

### Question 6:

What are stomata? Give two functions of stomata.

### Answer:

The tiny pores present on the surface of leaves are called stomata.

Functions of stomata are as follows:

- (i) Stomata help in the exchange of gases.
- (ii) Water evaporates through the stomata present on the surface of the leaves by the process of transpiration.

### Question 7:

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

### Answer:

Transpiration is the evaporation of water from the surface of plants. It is important for plants as:

- (i) It generates a force which pulls up water absorbed by the roots from the soil, to reach the stem and leaves.
- (ii) It also helps in cooling in plants.

### Question 8:

What are the components of blood?

### Answer:

Blood consists of four components -

- **Red blood cells (RCBs):**  
Red blood cells are red in colour because it contains a red colour pigment called **haemoglobin**. The pigment binds with oxygen and transports it to all parts of the body and ultimately to all the cells.
- **White blood cells (WBCs):**  
White blood cells **fight against infection and protect us from diseases**. WBCs destroys the germs (like bacteria) that cause diseases.
- **Plasma:**  
It is the liquid part of the blood which is **pale yellow in colour**. Plasma carries water and dissolved substances such as digested food and waste products from one part to another part of the body.
- **Platelets:**  
They are small, irregular shaped cell fragments in the blood. Platelets **helps in the clotting of blood in a cut or wound area**.

**Question 9:**

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

**Answer:**

Blood is a significant part of transport system in our body, and we need blood for the following reasons: It 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 helps in removal of wastes from the body.

**Question 10:**

What makes the blood look red?

**Answer:**

The red pigment (haemoglobin) present in the red blood cells of the blood makes the blood look red.

**Question 11:**

Describe the function of the heart.

**Answer:**

The heart acts as a pump for the transport of blood. The human heart is divided into four chambers. The upper two chambers are called the atria and the lower two chambers are called the ventricles. The right side of the heart, i.e., the right atrium and ventricle, receive carbon dioxide-rich blood from all parts of the body and transport it to the lungs. Its left side, i.e., the left atrium and ventricle, receive oxygen-rich blood from the lungs which is transported to all parts of the body.

**Question 12:**

Why is it necessary to excrete waste products?

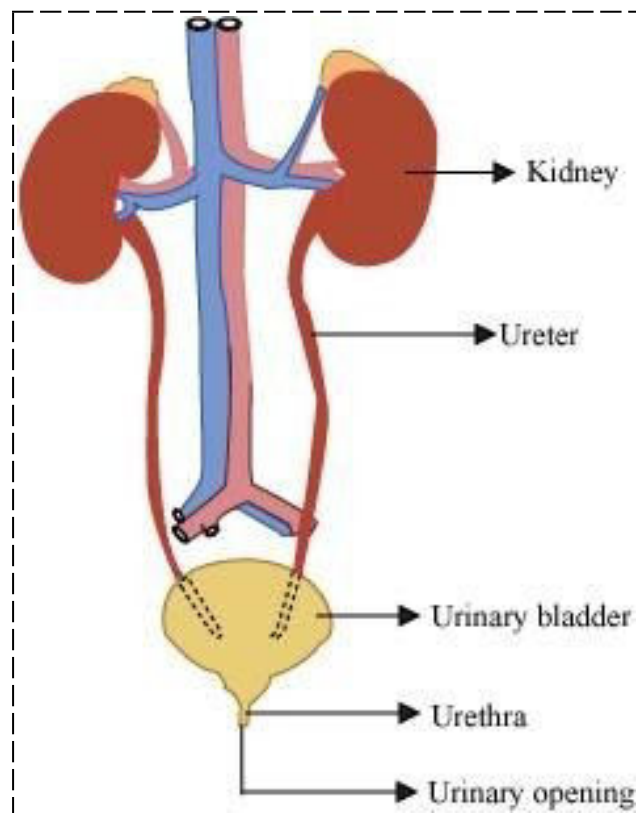
**Answer:**

When our cells perform their functions, certain waste products are produced. These waste products are toxic and hence need to be removed from the body. The process of removing waste products produced in the cells of living organisms is called excretion.

**Question 13:**

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

**Answer:**



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