

Exercises

Ex. A) Fill in the blanks :. (Ans.)

- (1) carries oxygen
- (2) beans
- (3) ammonia
- (4) sweat
- (5) phloem
- (6) diastole
- (7) artery
- (8) pulmonary
- (9) uric acid
- (10) RBCs

(B) True or false:

1. False
2. False
3. True
4. False
5. False
6. False
7. True

(C) Give reasons for each of the following:

1. RBCs and red in colour.

Ans. Hemoglobin is an iron rich protein. when hemoglobin binds with oxygen, the interaction between them gives our blood its red colour.

2. Valves are present in the veins.

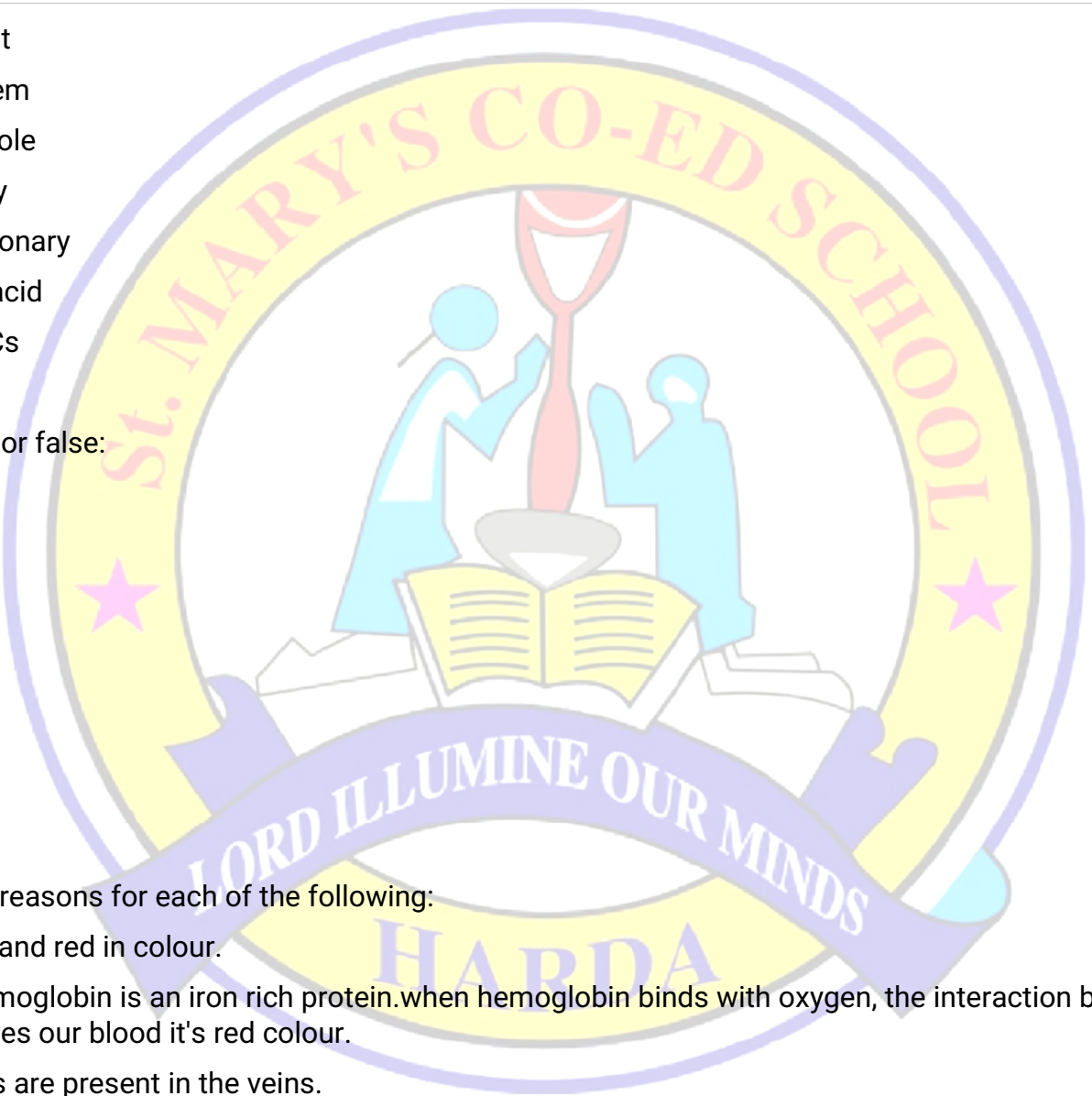
Ans. Unlike arteries, veins contain valves that ensure blood flows in only one direction. Valves also help blood travel back to the heart against the force of gravity.

- (3) Presence of septum in the heart.

Ans. The septum separates the atria and ventricles in such a way that it forms a barrier between the heart chambers and this prevents mixing of oxygenated and deoxygenated blood.

- (4) The wall of the left ventricle is very thick.

Ans. This is due to the higher forces needed to pump blood through the systematic circuit (around the body) compared to the pulmonary circuit.



(5) Valves are present between atria and ventricles.

Ans. The 'main function' of the valves present between the atria and the ventricles is to prevent the 'back flow of blood' from one chamber of the heart to the other.

(D) Distinguish between:

1. RBC and WBC

RBCs.

- . Red in colour.
- . Round or ovoid in shape.
- . More in number.
- . Has no nucleus.

WBCs

- . No colour
- . Ovoid or amoeboid in shape
- . Less in number
- . Have nucleus

2. Artery and vein

Artery :

- . Blood vessels which go away from the heart are called arteries.
- . They are thick walled, and the inside space of the artery which is called lumen .

Vein :

- . The blood vessels that take blood to the heart are veins.
- . They are thin walled with, big lumen .

3. Atria and ventricles

Atria :

- . Heart upper two chambers are called atria.
- . Right atria receive impure blood. Atria also called auricle.

Ventricles :

- . Heart lower two chambers are called ventricles.
- . Right ventricle send impure blood to the lungs.

(E) choose the correct option.

1. arteries
2. both (I) and (ii)
3. to fight the infections
4. remove small amount of urea
5. Urethra
6. all the above

(F) Answer in short:

1. Arteries begin with the aorta, the large artery leaving the heart. They carry oxygen- rich blood away from the heart to all of the body's tissues.
2. The regular beating in our body as blood is pushed around it by our heart.

A normal testing heart rate for adults ranges from 60 to 100 beats per minute.

3. Capillaries help to connect our arteries and veins in addition to facilitating the exchange of certain elements between our blood and tissues.

Capillaries measure 5- 10 mm in diameter and are only cell thick.

4. The veins are the blood vessels that carry blood (deoxygenated) towards heart. only Pulmonary vein contain oxygenated blood.

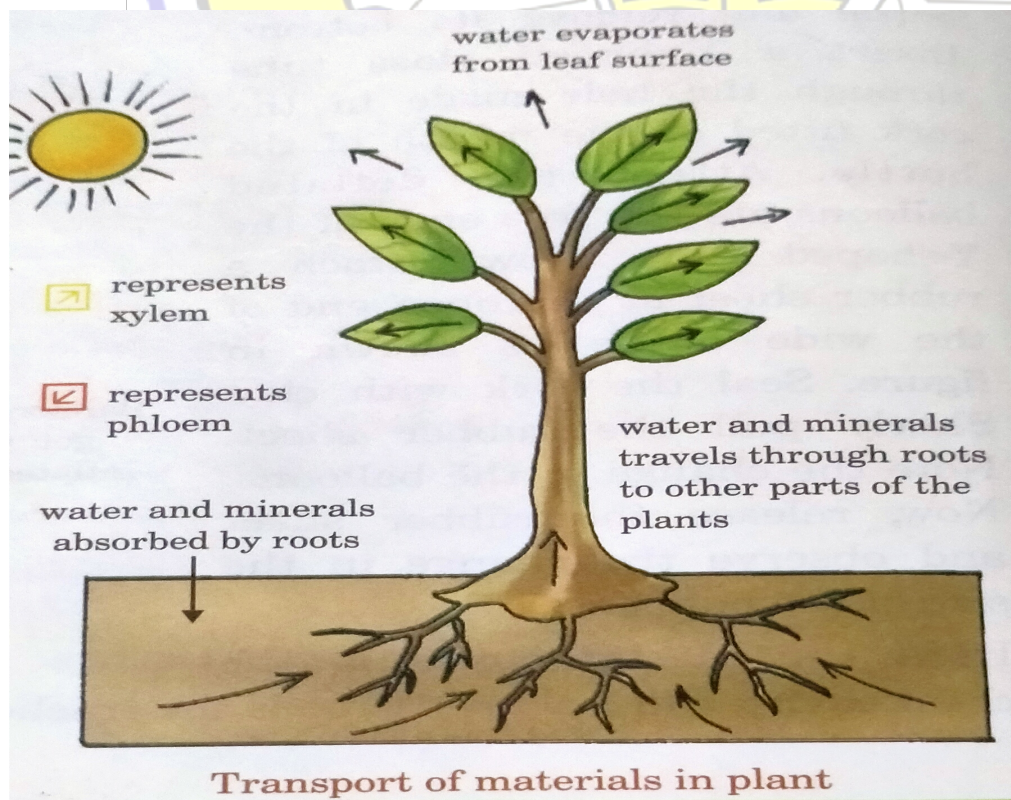
5. The three types of excretory products are : carbon- dioxide, water, salt (sweat) urea and uric acid.

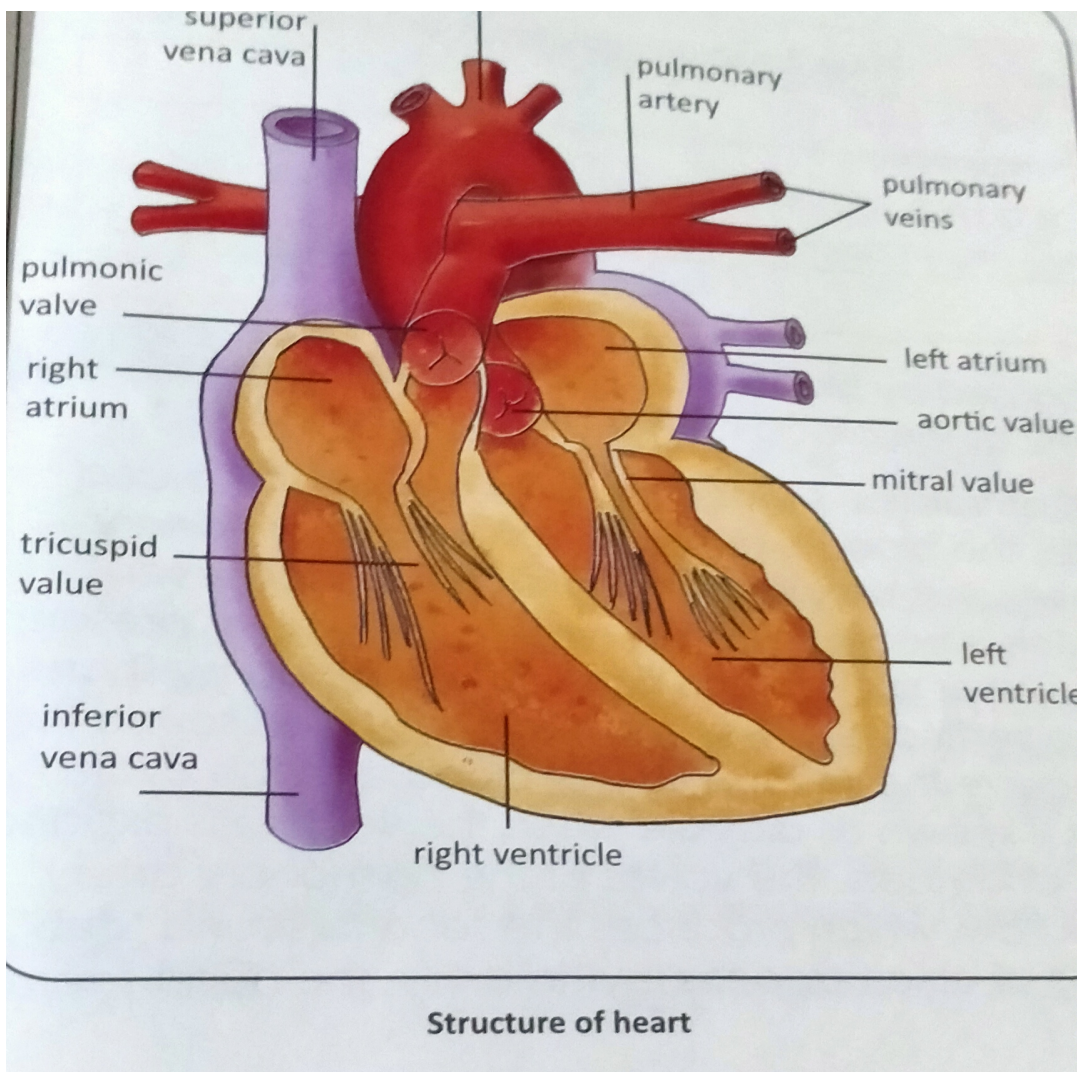
6. Kidneys are dark- red in colour and are bean - shaped and the main organ to remove the wastes by filtration.

(G) Answer in detail :

1. Removal of wastes from our body is known as excretion. Human excretory system comprises of a pair of kidneys, a pair of ureters, urinary bladder and a urethra. Kidneys are dark-red in colour and bean - shaped and are the main organs to remove the wastes by filtration. All the blood goes through the kidneys. The blood that reached the kidneys contains both useful and harmful substances. The useful substances are reabsorbed back into the blood. The wastes are dissolved in water and are removed from the body as urine. From the kidneys, the urine goes in to ureters on either side of the kidneys. The urine is stored for some time in the urinary bladder. Urinary bladder ends in a muscular tube called Urethra.

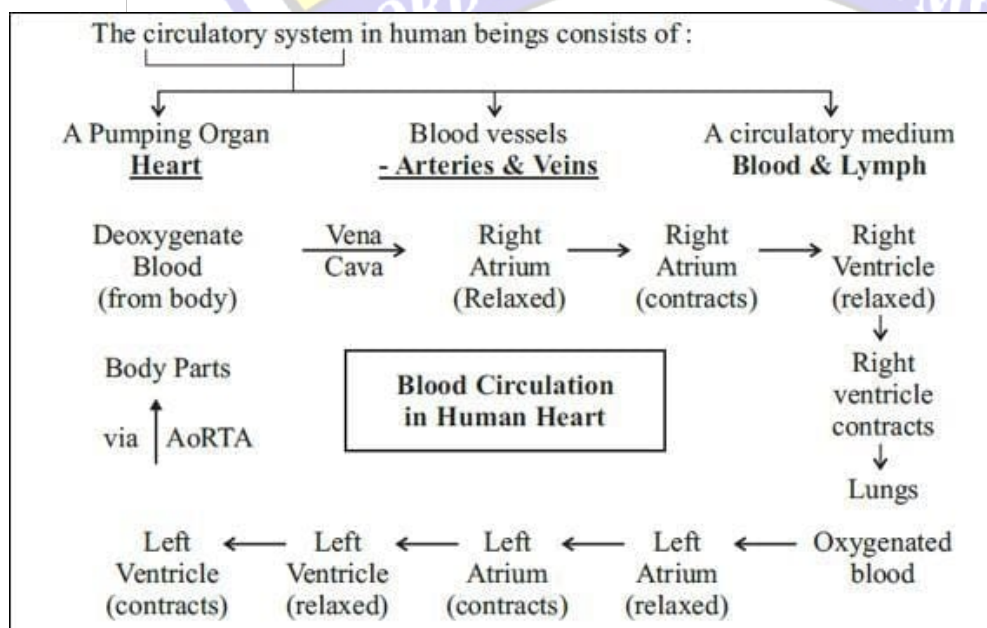
2. Transport system in plants : Transportation in plants is a necessary feature for plant growth. The plant meets its requirement through roots and vascular tissue. Plants have a well developed transport system called vascular system. There are special conducting tissues namely - Xylem and phloem which make up the vascular system. Water and dissolved minerals ,salts, are absorbed by roots by the process of osmosis. These materials are transported by xylem tissue to the leaves that make food for the plant. Nutrients, such as sugar made leaves, are transported to the parts of the plant by phloem tissue.



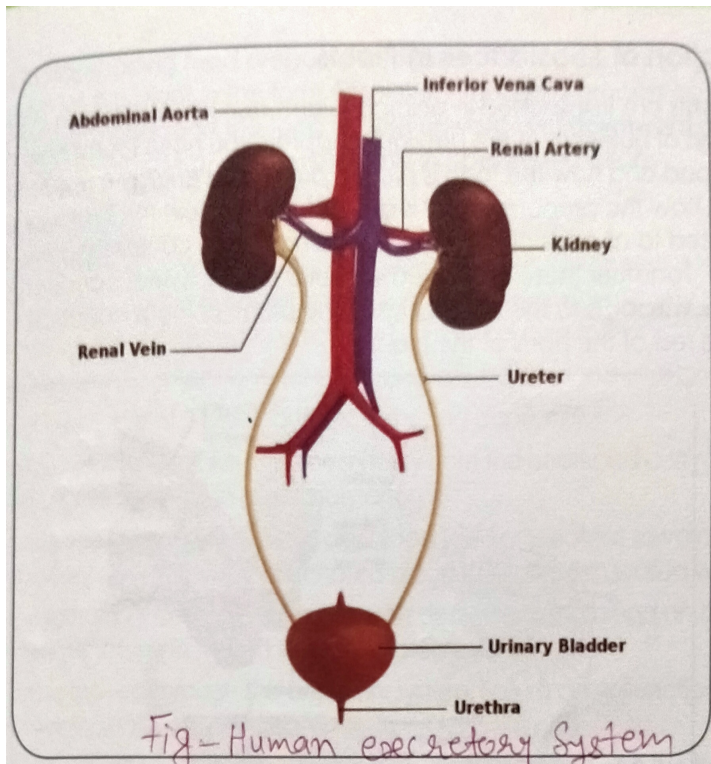


3. The internal structure of heart.

4. The transport of blood in the human being through a flow chart.



5. A labelled diagram of human excretory system.



HOTS :

Ans. 1) During a check-up, our doctor will use a stethoscope to listen to our heart beat to determine whether our heart is beating properly and has a normal rhythm.

Ans.2) The pulmonary veins carry oxygenated blood from the lungs to the left atrium of the heart. This great vessel is still considered a vein because it carries blood towards the heart.

Ans.3) Usually, kidney donation is something that happens after we die, but it is also possible to give the gift of living kidney donation. Our kidney donation could transform the life of someone dependent on daily dialysis.

