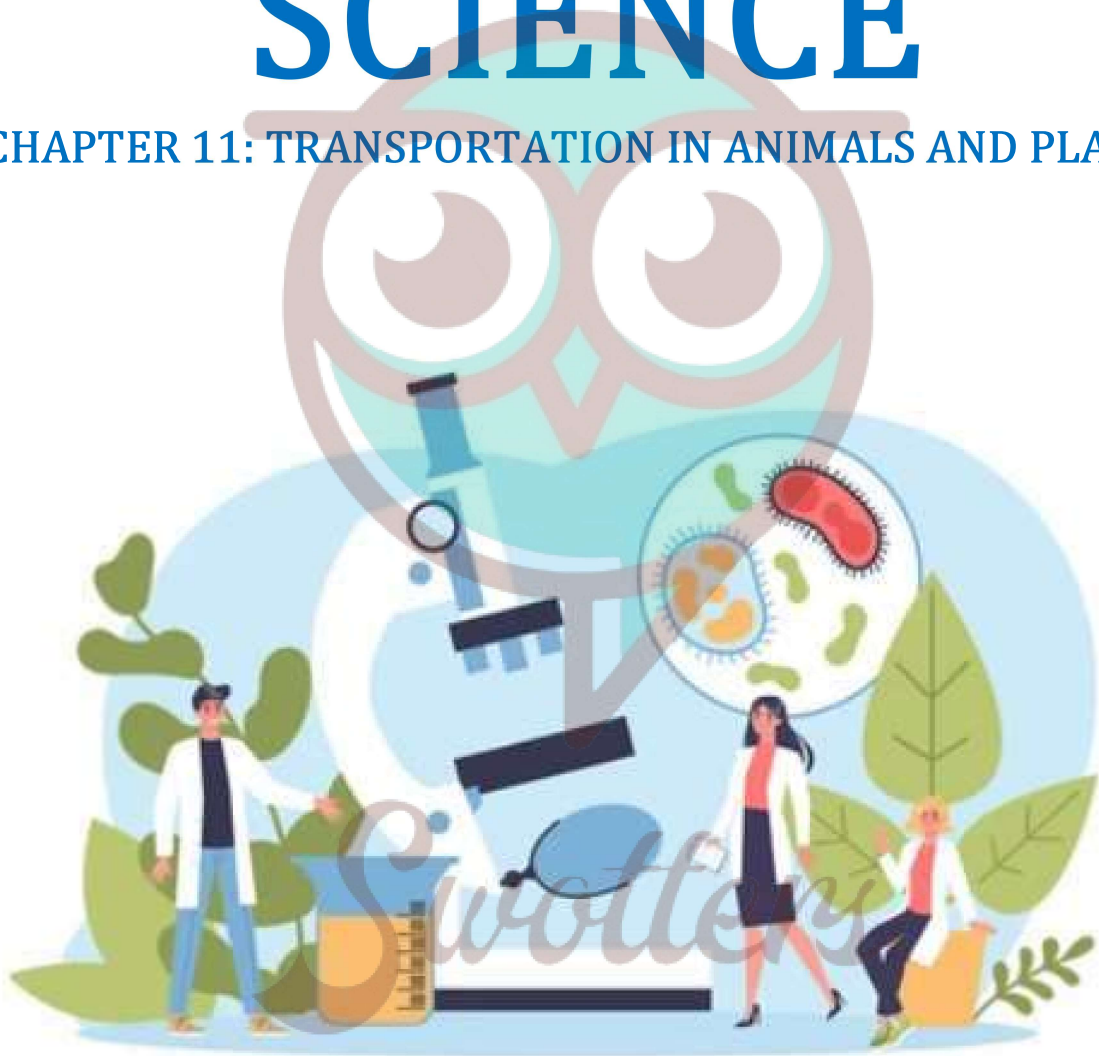


SCIENCE

CHAPTER 11: TRANSPORTATION IN ANIMALS AND PLANTS



Important Questions

➤ Multiple Choice Questions:

Question 1. The pumping organ of our circulatory system is

- (a) heart
- (b) artery
- (c) vein
- (d) all of these

Question 2. What is the state of the blood?

- (a) Solid
- (b) Fluid
- (c) Gas
- (d) None of these

Question 3. They are pipe-like, consisting of a group of specialised cells. They transport substances and form a two-way traffic in plants. Which of the following terms qualify for the features mentioned above?

- (a) Xylem tissue
- (b) Vascular tissue
- (c) Root hairs
- (d) Phloem tissue

Question 4. The fluid part of the blood is known as

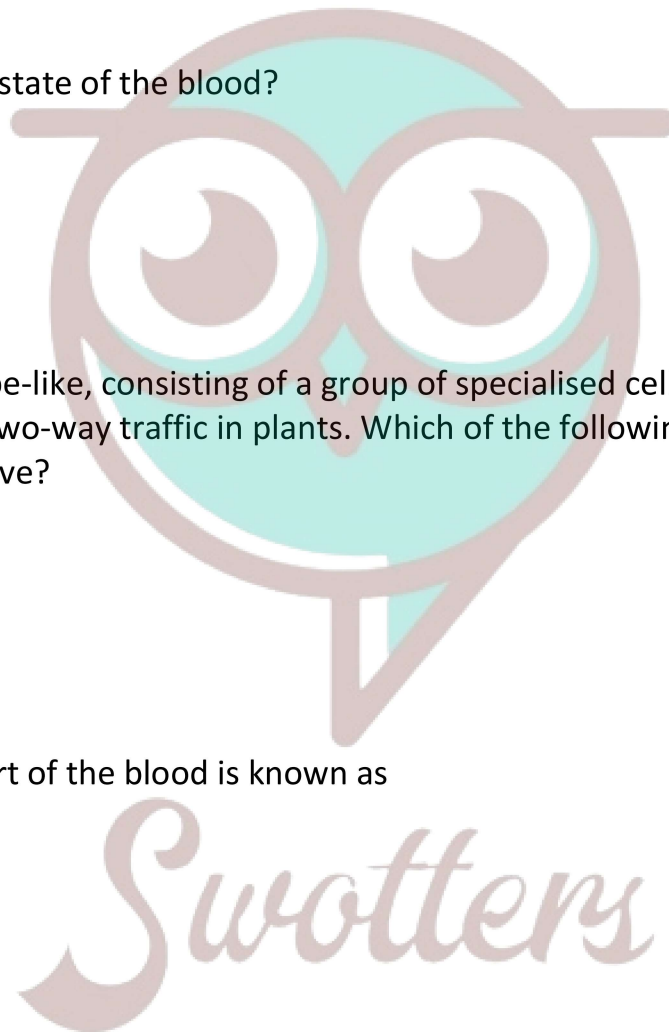
- (a) membrane
- (b) plasma
- (c) RBC
- (d) WBC

Question 5. The red pigment present in the RBC of the blood is

- (a) haemoglobin
- (b) WBC
- (c) pulse
- (d) none of these

Question 6. Which blood cells are a significant part of the immune system of the body?

- (a) RBC



- (b) WBC
- (c) Platelets
- (d) All of these

Question 7. The cells in the blood which help in clotting are.

- (a) Haemoglobins
- (b) Platelets
- (c) Red blood cells
- (d) White blood cells

Question 8. The part of human body which lacks sweat gland is

- (a) scalp
- (b) armpits
- (c) lips
- (d) palms

Question 9. Which blood vessel carries oxygen-rich blood?

- (a) Arteries
- (b) Veins
- (c) Both (a) and (b)
- (d) None of these

Question 10. The number of heart beats per minute is called

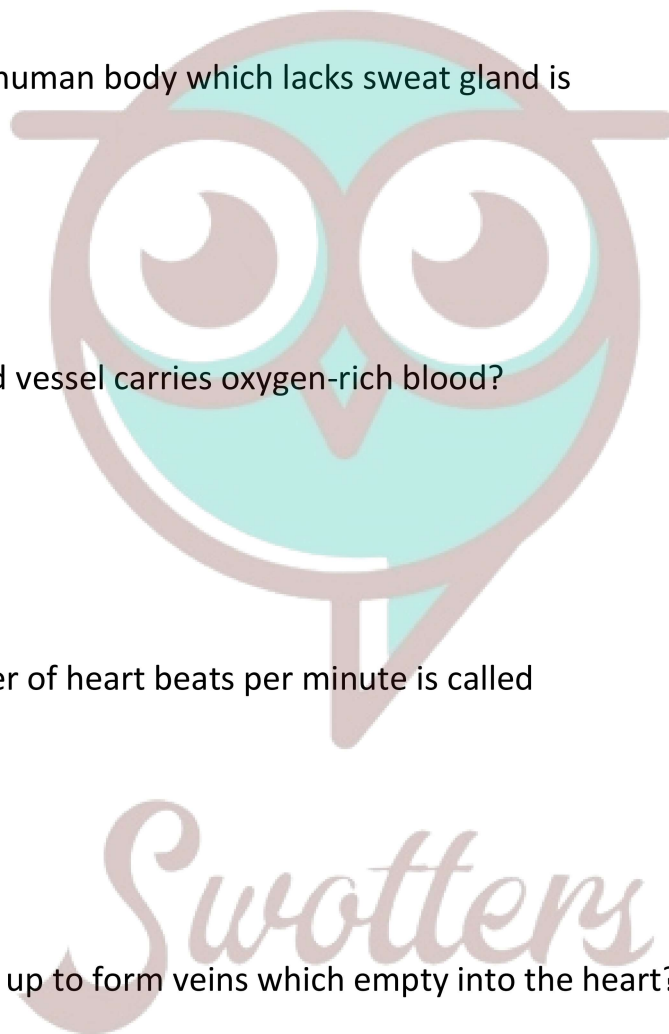
- (a) pulse rate
- (b) throbbing
- (c) beating
- (d) none of these

Question 11. What joins up to form veins which empty into the heart?

- (a) Arteries
- (b) Capillaries
- (c) Red blood cells
- (d) White blood cells

Question 12. The heart is located in the

- (a) chest cavity
- (b) stomach
- (c) lungs



(d) all of these

Question 13. How many chambers does the human heart have?

- (a) Three
- (b) Four
- (c) Five
- (d) Two

Question 14. Name an instrument/device used to amplify the sound of heart.

- (a) Stethoscope
- (b) UV machine
- (c) Both (a) and (b)
- (d) Ultrasound machine

Question 15. The absorption of nutrients and exchange of respiratory gases between blood and tissues take place in

- (a) veins
- (b) arteries
- (c) heart
- (d) capillaries

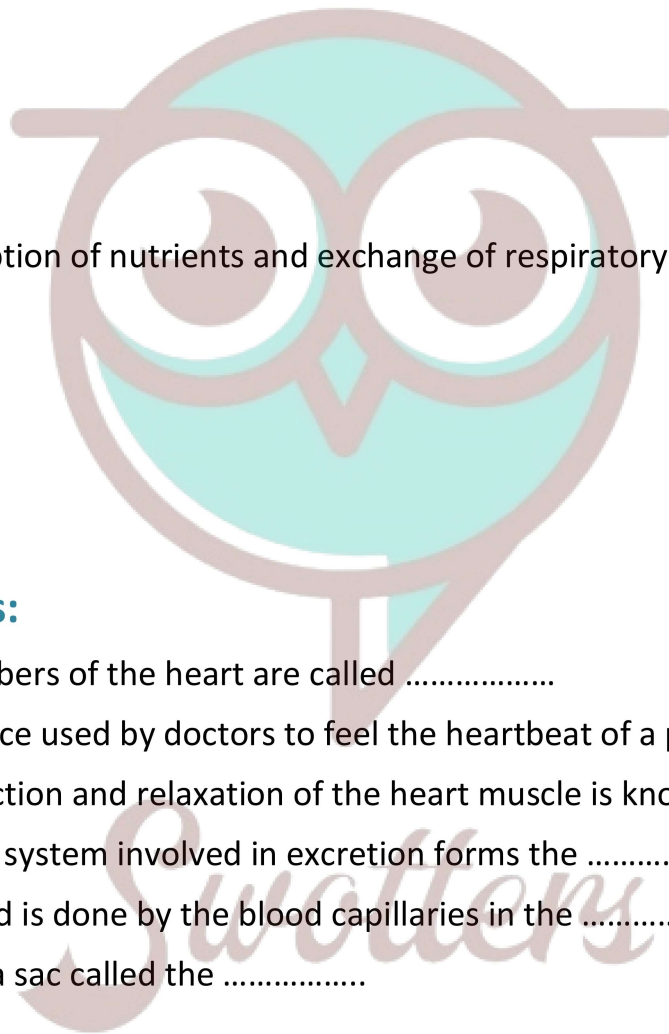
➤ **Fill In the Blanks:**

1. The two upper chambers of the heart are called
2. is the device used by doctors to feel the heartbeat of a patient.
3. The rhythmic contraction and relaxation of the heart muscle is known as
4. The organ and organ system involved in excretion forms the
5. The filtration of blood is done by the blood capillaries in the
6. Urine gets stored in a sac called the

➤ **True or False:**

1. We need only oxygen for survival.
2. Right auricle receives oxygenated blood from the pulmonary veins.
3. There are two types of blood vessels.
4. Plasma is the fluid part of blood.
5. WBCs contain haemoglobin.
6. Pulmonary arteries bring oxygenated blood from lungs to heart.

➤ **Very Short Question:**



1. Name the system in the body responsible for removal of unwanted harmful substances and excess water in the body cells.
2. Name the fluid part of blood.
3. Name the three types of cells present in blood.
4. When a blood vessel is cut, blood comes out immediately. After some time, a dark red clot is formed on the cut. Name the cell responsible for this.
5. Name the two types of blood vessels
6. Which of the two carry oxygen rich blood, arteries or vein?
7. Where is heart located in human body?
8. Name the vein in the body that carries oxygen-rich blood.
9. What is heart beat?
10. What is pulse?

➤ **Short Questions:**

1. What do you mean by dialysis? Explain.
2. Write the two functions of kidneys.
3. State one function of the following:
 - Arteries
 - Vein
 - Capillaries
4. Why is heart known as the pumping organ of the human body?
5. What is the significance of dividing heart into different chambers?
6. Explain pulse and pulse rate.
7. Why walls of veins are thinner than the walls of arteries?
8. How do plants absorb water and minerals from soil?

➤ **Long Questions:**

1. What is the function of RBCs?
2. Does transpiration serve any useful function in the plants? Explain.
3. Explain stomata and its function in plants.

✓ **Answer Key-**

➤ **Multiple Choice Answers:**

1. (a) heart
2. (b) Fluid

3. (b) Vascular tissue
4. (b) plasma
5. (a) haemoglobin
6. (b) WBC
7. (b) Platelets
8. (c) lips
9. (a) Arteries
10. (a) pulse rate
11. (b) Capillaries
12. (a) chest cavity
13. (b) Four
14. (a) Stethoscope
15. (d) capillaries

➤ **Fill In the Blanks:**

1. atria
2. Stethoscope
3. heartbeat
4. excretory system
5. kidneys
6. urinary bladder

➤ **True or False:**

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

➤ **Very Short Answers:**

1. Answer: Excretory system
2. Answer: Plasma
3. Answer: White blood cell, red blood cell and platelets



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4. Answer: Platelets
5. Answer: Arteries and vein
6. Answer: Arteries
7. Answer: Heart is located in the chest cavity with its lower parts towards the left.
8. Answer: pulmonary vein
9. Answer: The muscles of the heart contract and relax, which constitutes a heartbeat.
10. Answer: Throbbing that occurs in arteries due to flowing of blood is called pulse or the flow of blood in an artery over a bone is called the pulse.

➤ Short Answers:

1. Answer: Dialysis is an artificial process of getting rid of waste and unwanted water from the blood by dialysis machines. Dialysis machines contain a tank with solution of water glucose and salt. Patient's blood allowed passing through solution for removal of waste. The cleaned blood pumped to vein. The dialysis continues till all blood has been purified.
2. Answer: The two functions of kidney are excretion and osmoregulation. Excretion is the elimination of metabolic waste products from the body. Osmoregulation is regulating osmotic pressure of the body fluids by controlling the amount of water and salts in the body.
3. Answer:
 - Arteries- carry blood from heart to different parts of body
 - Veins-carry blood from different parts of body to the heart.
 - Capillaries-exchange of material between blood and surrounding cells.
4. Answer: Heart is the pumping organs of a human body as it continuously act as a pump for transporting blood to all body parts. Heart pumps carbon-dioxide rich blood to lungs and oxygen rich blood to rest of the body.
5. Answer: The division of heart into different chambers ensures that there is no intermixing of oxygenated and deoxygenated blood. This ensures a better efficiency of circulation and transportation of oxygen.
6. Answer: When blood flows in arteries, it gives throbbing sensation in arteries. This throbbing sensation is known as a pulse. The rate of heart beat or throbbing is known as pulse rate. A person has a pulse rate between 72 to 80 beats per minute. A stethoscope is an instrument used to measure the sound heartbeat.
7. Answer: Veins do not have thick walls because blood in vein is no longer under pressure but blood emerges from the heart is under high pressure. So arteries have thick walls.
8. Answer: Plants absorb water and minerals from soil by the roots. The root hair absorbs water and dissolved mineral nutrients from the soil. The roots remain in contact with underground water.

➤ Long Answers:

Answer: Red Blood Cells (RBCs) contain a red pigment called haemoglobin. Haemoglobin binds with oxygen and transports it to all the parts of the body and ultimately to all the cells. It will be difficult to provide oxygen efficiently to all the cells of the body without haemoglobin. The presence of haemoglobin makes blood appear red.

Answer: Plants absorb mineral nutrients and water from the soil. Not all the water absorbed is utilised by the plant. The water evaporates through the stomata present on the surface of the leaves by the process of transpiration. The evaporation of water from leaves generates a suction pull which can pull water to great heights in the tall trees. Transpiration also cools the plant.

Answer: Stomata are tiny pores present on the surface of the leaves. These pores are surrounded by 'guard cells'. Following are its function in plants:

- The carbon dioxide required in the process of photosynthesis is made available by Stomata, through direct absorption from the air.
- Stomata help Plants in absorption of mineral nutrients and water from the soil. Not all the water absorbed is utilised by the plant. The water evaporates through the stomata present on the surface of the leaves by the process of transpiration. The evaporation of water from leaves generates a suction pull which can pull water to great heights in the tall trees. Transpiration also cools the plant.



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