

INTERNATIONAL INDIAN SCHOOL BURAIDAH

Class: VII SCIENCE2024-2025

Topic: Transportation in  
animals and plants

1. Fill in the blanks.

- (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

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

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?

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.

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.

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 raising water in higher plants.

☑ It also causes loss of water absorbed by plants.

8. What are the components of blood?

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

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

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

\*Circulation of inhaled oxygen for the oxidation of food.

\* Transportation of nutrients to the different parts of the body.

\*Removal of waste products produced during digestion.

\*Elimination of carbon dioxide produced during respiration.

10. What makes the blood look red?

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

11. Describe the function of the heart.

The right auricle and ventricle receive blood rich in carbon dioxide from all parts of the body through vena cava. The collected blood is then pumped to the lungs for the purification through pulmonary artery. In lungs, the exchange of gases takes place and purified blood is sent back to left auricle through pulmonary vein. It pumps it to the left ventricle, which in turn pumps off the purified blood to all parts of body through aorta.

12. Why is it necessary to excrete waste products?

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.

Solve:

- a. Pumping of heart is \_\_\_\_\_.
- b. The tiny branches of blood vessels that connect arteries with the veins are called \_\_\_\_\_.
- c. Blood contains a pale yellow liquid called \_\_\_\_\_.
- d. The red blood cells contain \_\_\_\_\_.
- e. \_\_\_\_\_ destroy the germs that enter our body.
- f. The Heartbeat is indicated by \_\_\_\_\_.
- j. Bacteria are \_\_\_\_\_ organisms.
- h. \_\_\_\_\_ help in preventing the blood from flowing back.
- i. The lower chambers of the heart are called the \_\_\_\_\_.
- j. The impure blood is transported from the right ventricle to the lungs by \_\_\_\_\_.
- k. The \_\_\_\_\_ receives oxygenated blood from the left ventricle.
- l. The veins that collect blood rich in carbon dioxide from all the parts of the body is \_\_\_\_\_.
- m. The blood carried by the Pulmonary artery is \_\_\_\_\_.
- n. The contraction and relaxation of the heart is called the \_\_\_\_\_.
- o. Our heart beats \_\_\_\_\_ times per minute.
- p. The transport system in plants is called \_\_\_\_\_.
- q. The structure that transport water and minerals in plants is \_\_\_\_\_.
- r. Water rises in the xylem tubes due to \_\_\_\_\_.
- s. The tissue that transport food in plants is the \_\_\_\_\_.
- t. The loss of water from the stomata is called \_\_\_\_\_.

## Answer

- a. an involuntary action
  - b. capillaries
  - c. plasma
  - d. haemoglobin
  - e. White blood cells
  - f. pulse
  - g. unicellular
  - h. Valves
  - i. ventricle
  - j. pulmonary arteries
  - k. aorta
  - l. Vena cava
  - m. deoxygenated
  - n. Heartbeat
  - o. 70 to 80
  - p. vascular system
  - q. xylem
  - r. transpiration pull
  - s. phloem
  - t. transpiration
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## Very Short questions

### Question 3

- a. Name the artery which carries de-oxygenated blood.
- b. Name the plant tissue which transports water & minerals
- c. Name the plant tissues which transports food from leaves to different parts of plants
- d. Aquatic animals like fishes excrete body wastes as \_\_\_\_\_
- e. Animals like snakes excrete semi-solid white coloured compound called \_\_\_\_\_
- f. What is the average heartbeat of an adult human?
- g. Name the instrument which is used by doctor to measure rate of heart beat
- h. Name the vein which carries oxygenated blood
- i. Name the chamber of heart which receives de-oxygenated blood from whole body
- j. Name the chamber of heart which pumps oxygenated blood to whole body
- k. Name the process of cleaning the blood of a person by separating the toxic waste products using artificial kidney machine
- l. Name the instrument that helps to measure blood pressure.
- m. What is the main filtration unit in kidney?

## Answer

- a. Pulmonary artery
- b. Xylem
- c. Phloem
- d. Ammonia
- e. Uric acid
- f. 72 to 80 per min
- g. Stethoscope
- h. Pulmonary veins
- i. Right atrium
- j. Left ventricle
- k. Dialysis
- l. Sphygmomanometer
- m. Nephron

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## Short Answer question:

### Question 8

Give reasons:

1. Valves are present in veins.
2. Arteries have thick & elastic muscular wall.
3. Left ventricle has thicker wall than right ventricle.
4. White patches are formed on our clothes in summer.

### Question 9

- (a) Differentiate between transport of substances through xylem and phloem.
- (b) Differentiate between arteries and veins.
- (c) How do sponges and Hydra transport food and oxygen although they do not possess any circulatory system?
- (d) Name the organs of the circulatory system?
- (e) Name the gas that easily binds to the red blood cells?
- (f) What is heart rate?
- (g) Name the transport system in plants?
- (h) Name the organ of the excretory system in humans?
- (i) Which organ of the body filters the blood?
- (j) Why is blood red?
- (k) What type of blood cells protect us from infectious disease?
- (l) List the functions of blood?

## Long Answer question

### Question 10

- (a) Write a note on functioning of heart.
- (b) Explain excretory system in humans. Draw a well labelled diagram.
- (c) Describe the function of blood platelet?
- (d) What is the lymphatic system made up of?
- (e) What is the blood of vertebrates made up of?
- (f) Why does your heartbeat increase when you run?
- (g) Define excretion?
- (h) What is transpiration?

### Question 11

- (a) Describe the composition of blood?
- (b) Describe the structure of the human heart with a diagram?

### Question 12

- (a) How does oxygen rich blood reach every part of the body?
- (b) How is excretion different from egestion? Give at least two points of differences?

### Question 13

How is blood purified in the Kidney?

### Question 14

Describe the vascular system in plants?

### Question 15

What are xylem and phloem? What are their roles?

### Question 16

Draw a neat and labelled diagram of the human urinary system and explain the function of Kidneys?

### Question 17

Explain how the transportation of food, water and Minerals happens in plants?

### Question 18

Differentiate between arteries, veins and capillaries on the basis of wall type, valves, function and blood flow?

