Transport Of Substances In Pants And Animals

I.Tick the correct option to complete each sentence.

1. The tiny branches of blood vessels that connect arteries with the veins are called

- a) lymph nodes
- b) capillaries
- c) white blood cells
- d) trachea

 \rightarrow b) capillaries

- hoteshib.com 2. The heart beat is also called
- a) pulse
- b) transfusion
- c) circulation
- d) respiration

\rightarrow a) pulse

- 3. The red blood cells contain ...
- a) iodine
- b) plasma
- c) haemoglobin

d) platelets

 \rightarrow c) haemoglobin

4. The impure blood is transported from the right ventricle to the lungs by

- a) pulmonary veins
- b) pulmonary arteries
- c) aorta
- d) platelets
- \rightarrow b) pulmonary arteries
- 5. The transport system in plants is called.... teshub.com
- a) photosynthesis
- b) circulatory system
- c) vascular system
- d) transpiratory system
- \rightarrow c) vascular system
- 6. Water rises in the xylem tube due to...
- a) photosynthesis
- b) gravitation pull
- c) respiration
- d) transpiration pull

II.Tick (\checkmark) the true statements and cross (\bigstar) the false ones .

1. Unicellular animals have specialized organs to perform various functions . (\mathbf{x})

2. Transpiration is the evaporation of water from the stem of a plant . (\mathbf{x})

3. White blood cells protect the body against infectious diseases. (\checkmark)

4. The lungs are made up of filters that remove waste from the blood.(×)

5. Pulmonary veins carry oxygen-poor blood to all the parts of the body.(×)

6. Sweat is a waste material . (\checkmark)

III. Answer the following questions in one sentence .

1. What is blood circulation ?

Ans: The process of pumping blood constantly by the heart through the blood vessels to various parts of the body and back to the heart is called blood circulation .

2. What separates the right and left sides of the heart?

Ans: A muscular wall called **septum** separates the right and left sides of the heart .

3. What is the fluid portion of the blood called ?

Ans: The fluid portion of the blood is called **plasma** .

4. What does RBC stand for ?

Ans: RBC stands for Red Blood Cells .

5. What type of blood cells protect us from infectious diseases ?

Ans: White Blood Cells protect us from infectious diseases.

6. Which organ of the body filters the blood ?

Ans: Kidneys filters the blood.

7. Name the gases that easily bind to the red blood cells .

Ans: **Oxygen** and **Carbon dioxide** gases easily bind to the red blood cells.

8. Are xylem bundles present in the roots ?

Ans: Yes , xylem bundles are present in the roots .

IV. Answer the following questions in two sentences .

1.Describe the function of blood platelets ?

Ans: Blood clotting is the main function of blood platelets, which are tiny cell fragments.

2. Why does your heart beat increase when you run ?

Ans: Our heart beat increases when we run because, at such times, our body requires more oxygen to release more energy through respiration, and in order to supply more oxygen, the blood flows faster.

3. What is transpiration ?

Ans: Transpiration is the evaporation of water from the leaves through stomata present on the leaves .

4. What is the function of the lymph nodes ?

Ans: The function of the lymph nodes is to protect the body from disease-causing organisms and harmful substances.

5. List the organs of the excretory system .

Ans: Kidneys, ureters, urinary bladder, and urethra are the organs of the excretory system.

V. Answer the following questions in about four to five sentences .

1. Describe the structure of the human heart with a diagram .

Ans: The muscular organ that pumps oxygen-rich blood throughout the body is the heart, which is about the size of a fist. Four chambers make up the inside of the heart. The right atrium and left atrium are the names of the upper two chambers. The left ventricle and right ventricle are the names of the lower two chambers. The right and left sides of the heart are separated by a muscular wall known as the septum. A system of blood vessels called arteries and veins transports blood to all areas of the body.



2. How does oxygen-rich blood reach every part of the body ?

Ans: The lungs are where gas exchange first happens. The blood absorbs oxygen and releases carbon dioxide. The pulmonary vein transports the oxygen-rich blood to the left atrium, where it passes through a hole and into the left ventricle. The aorta is then used by the left ventricle to deliver oxygen-rich blood to every area of the body.

3. Explain the composition of blood .

Ans: Blood is mainly composed of – red blood cells (RBC), white blood cells (WBC) & blood platelets.

<u>Red blood cells (RBC)</u>: These are the most common cells found in the blood. Its main function is transferring of gases such as oxygen and carbon dioxide into the body.

<u>White blood cells (WBC)</u>: These are colourless and don't contain haemoglobin. They are fewer and bigger than the RBC .Their function is to kill germs and defend the body against infectious diseases .

Blood platelets : They are tiny cell fragments and they play an important role in the clotting of blood .

4. Differentiate between arteries and veins .

Ans:

Arteries	Veins
a. They carries blood away from	a. They carries blood towards
the heart.	the heart.
b. They are thick-walled blood	b. They are thin-walled blood
vessels .	vessels .
c. Carries oxygenated blood.	c. Carries deoxygenated blood .
d. No valves .	d. Valves present .
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5. How is blood purified in the kidneys ?

Ans: The kidneys receive blood through the arteries. The tiny tubules in the kidneys filter the blood as it passes through them, removing waste. The end product of this process is urine ,which contains water and waste materials filtered out from the blood .

6. Describe the vascular system in plants .

Ans: The xylem and the phloem are the two main tissue types that make up the vascular system. Water and dissolved minerals are distributed upward through the plant by the xylem, from the roots to the leaves. Food is transported from the leaves to the roots through the phloem.

<u>Extra – Questions</u>

1. Define unicellular organisms with an example .

Ans: Organisms which are made up of single cell are called unicellular organisms . Eg : Amoeba .

2. Define multicellular organisms with an example.

Ans: Organisms which are made up of millions of cells are called multicellular organisms. Eg : Plants .

3. What is the circulatory system made up of ?

Ans: The circulatory system is made up of a heart and an extensive network of blood vessels that spreads in the entire body .

4. How many times does the human heart pumps blood in a minute?

Ans: The human heart pumps blood nearly 70 times in a minute .

5. Define heart rate .

Ans: The pulse count per minute is called heart rate .

6. What does the heart rate indicates ?

Ans: The heart rate indicates how fast the heart beats in a minute .

7. Why is blood red ?

Ans: Blood is red due to the presence of haemoglobin, which is red in colour .

8. What is the blood of vertebrates made up of ?

Ans: The blood of vertebrates is made up of red blood cells (RBC).

9. What is the lymphatic system made up of ?

Ans: The lymphatic system is made up of lymph vessels and lymph nodes .

10. Define Excretion .

Ans: It is a process through which waste products from the blood are removed from the body .

11. Name some minerals required by the plants to perform various functions .

Ans: Minerals like potassium (K),phosphorus (P),magnesium (Mg),calcium (Ca) and iron (Fe) are required by the plants to perform various functions .

12. Define ascent of sap.

Ans: The upward movement of sap is called ascent of sap .

13. Define translocation .

Ans: The phloem cells transport food made by the leaves to the stem ,branches , flowers ,fruits and roots and this process is called translocation .

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