

1. Short answer questions:**i. What does haemoglobin do in the body?**

Ans: Hemoglobin is a protein that contains iron, which allows it to pick up oxygen from the air we breathe and deliver it everywhere in the body. It is found in red blood cells, and gives red blood cells their color, too.

ii. What is the main job of the circulatory system?

Ans: The main function of the circulatory system is to provide oxygen, nutrients and hormones to muscles, tissues and organs throughout your body.

iii. Name four of the materials carried by the blood.

Ans: Respiratory gases like oxygen and carbon dioxide (from and to the lungs). Nutrients (from the digestive system). Waste materials (from different body parts to the excretory system). Hormones (from glands to different parts of the body).

iv. What work does a valve in the heart or a vein do?

Ans: The valves prevent blood from flowing backward. The heart has four valves. The tricuspid valve separates the right atrium and right ventricle. The mitral valve separates the left atrium and left ventricle.

v. Why humans cannot live without blood?

Ans: Humans cannot live without blood because blood is vital for carrying oxygen to our cells, removing waste products, and transporting essential nutrients throughout the body.

2. Long answer questions:**i. A drop of blood has just left one of your lungs. Describe the route it takes to get back to the lungs.**

- Blood leaves the lung through the pulmonary veins.
- It enters the left atrium of the heart.
- From the left atrium, it goes to the left ventricle.
- The left ventricle pumps it into the aorta.
- The blood circulates throughout the body, delivering oxygen and picking up carbon dioxide.

- Oxygen-poor blood returns to the right atrium via the superior and inferior vena cava.
- It's then pumped into the right ventricle.
- Blood exits the heart through the pulmonary artery, heading back to the lungs.
- In the lungs, it exchanges carbon dioxide for oxygen in the pulmonary capillaries.

ii. How do veins differ from arteries and capillaries in their structure and function?

Veins, arteries, and capillaries are different types of blood vessels. Veins have thinner walls and carry blood back to the heart, often deoxygenated, and they have valves to prevent backflow. Arteries have thick walls and carry oxygenated blood away from the heart to various body parts. Capillaries, the smallest blood vessels, have thin walls and enable the exchange of oxygen, nutrients, and waste products between the blood and body tissues. So, veins are like the return highways to the heart, arteries are the outgoing highways carrying oxygen, and capillaries are the tiny streets where the real exchange happens.

iii. Why is it not correct to say that all arteries carry oxygenated blood and all veins carry deoxygenated blood?

Saying that all arteries carry oxygenated blood and all veins carry deoxygenated blood is not correct because there are exceptions. While most arteries do carry oxygenated blood away from the heart, the pulmonary artery is a special case as it carries deoxygenated blood from the heart to the lungs. Conversely, although most veins transport deoxygenated blood back to the heart, the pulmonary vein is another exception as it carries oxygenated blood from the lungs to the heart. These exceptions show that the oxygen content in arteries and veins can vary, depending on their specific functions and locations within the body.

iv. What is the importance of white blood cells?

White blood cells (WBCs), also known as leukocytes, play a vital role in the body's immune system. Their importance lies in their ability to

defend the body against infections and diseases. WBCs are responsible for identifying and attacking foreign invaders such as bacteria, viruses, fungi, and other pathogens. They help to:

- Fight infections
- Provide immunity
- Remove dead cells

Monitor abnormalities

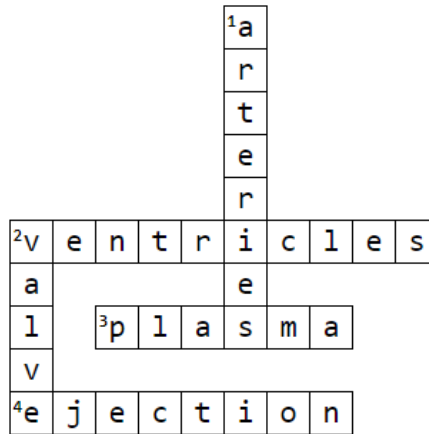
3. Tick the right option.

1. The function of white blood cells is to:			
I. Transport oxygen	II. Build immunity	III. Carry hormones	IV. Blood clotting
2. The circulatory system delivers oxygen to the cells through the:			
I. Blood cells	II. Bone marrow	III. Blood vessels	IV. Proteins
3. The components of the circulatory system are:			
I. 3	II. 4	III. 5	IV. 6
4. The function of red blood cells is to:			
I. Carry oxygen	II. Prevent disease	III. Clot the blood	IV. Carry dissolved food
5. Function of platelets is to;			
I. Protect against germs	II. Clot the blood	III. Carry hormones	IV. Carry oxygen

4. Fill ups

- i. Blood is pumped from the heart to **arteries** and then to the rest of the body.
- ii. **Oxygen** is transported by red blood cells.
- iii. **Capillaries** are smallest blood vessels.
- iv. The heart has **four** chambers.
- v. The heart is a **muscular** organ.

4. Crosswords



Across	Down
2.The lower chambers of the heart	1.Carry oxygenated blood away from heart
3.The liquid component of blood	2.Prevents backflow of blood in heart
4.The process of blood leaving the heart	

5. Words Search

Find the following word in the words search.

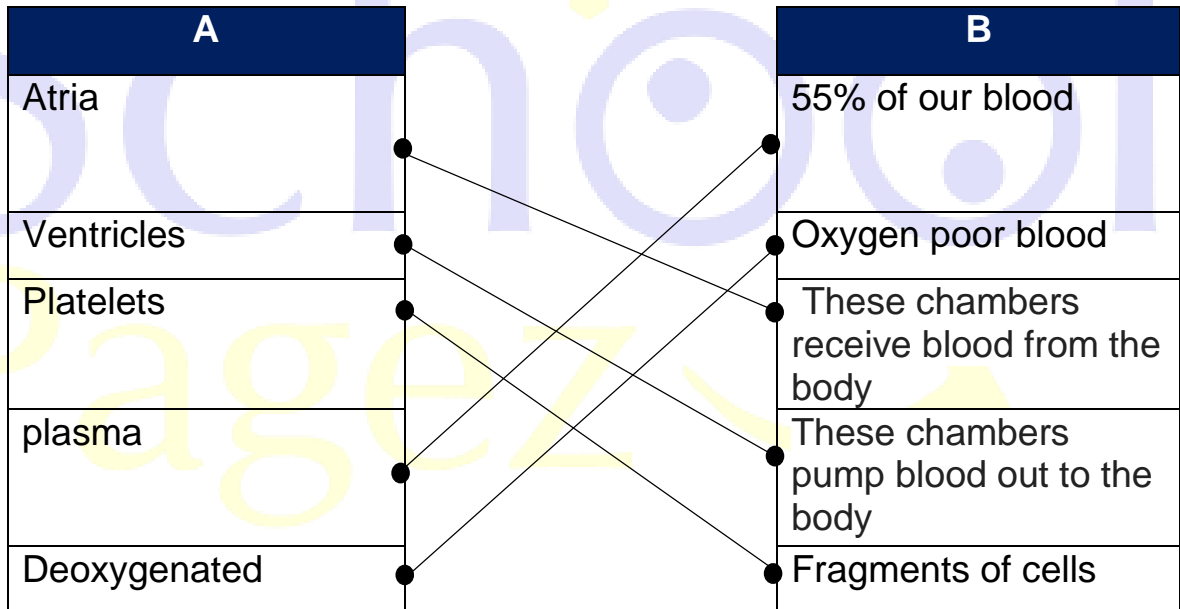
Valve	Ventricle	Chamber	Aorta	Cardiac
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S	C	A	T	S	A	L	T	C
K	Y	A	G	E	N	E	V	A
B	T	C	H	A	M	B	E	R
G	O	O	U	R	C	E	N	R
P	P	N	K	H	E	A	T	D
O	L	I	U	E	E	R	R	I
V	A	L	V	E	T	I	I	A
E	S	P	I	N	D	L	C	C
C	M	B	T	U	I	M	L	T
G	U	A	O	R	T	A	E	W

6. Jumbled Words

- | | | | |
|-----------------|-------------|-------------------|-------------|
| i. diumcarepi | Epicardium | ii. monpulary | Pulmonary |
| iii. diumcarmyo | Myocardium | iv. olesyst | Systole |
| v. diumcarendo | Endocardium | vi. stoledia | Diastole |
| vii. cularmus | Muscular | viii. tionlacircu | Circulation |
| ix. mpup | Pump | x. atedgenoxy | Oxygenated |

7. Columns

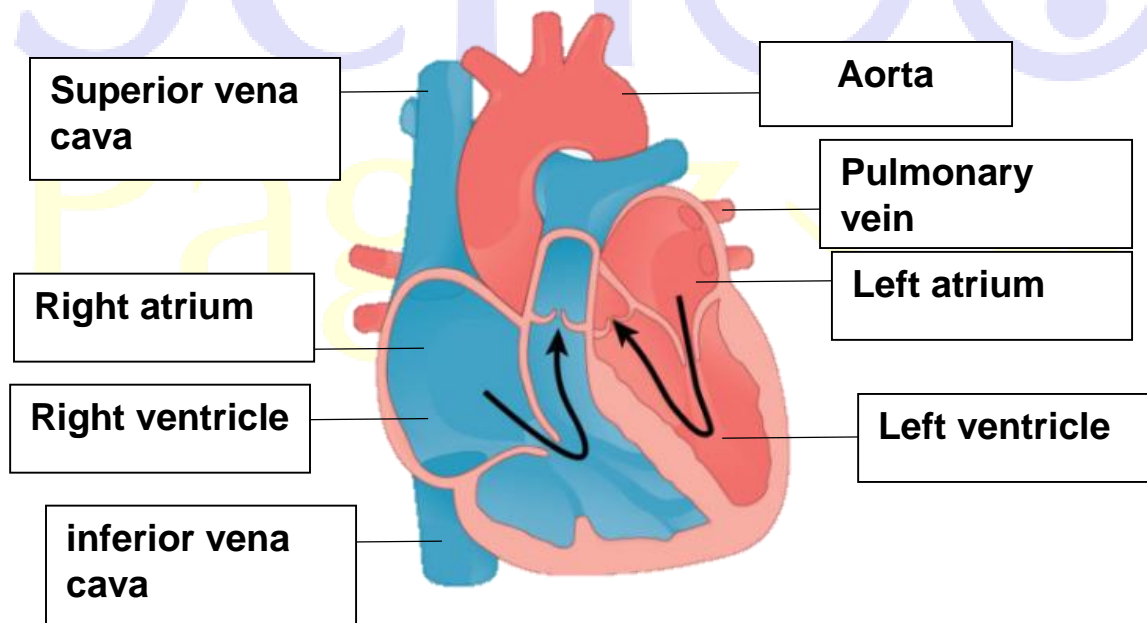


8. Write “T” for the true and “F” for the false statement.

- i. Hypertension is a condition in which the force of blood against the walls of the arteries is too high.
- ii. Capillaries connect arteries and veins.
- iii. The average life span of red blood cells is about 150 days.
- iv. Veins carry blood away from heart.
- v. Stroke is a sudden interruption of blood flow to the brain






T
T
F
F
T

11. Label the diagram.



9. Drag and Drop

Look at the pictures and write their names in the relevant column.

				
Red blood cells	White blood cells	Platelets	Blood vessels	Blood

Structure	Function
Red blood cells	Carry oxygen from the lungs to the rest of the body
White blood cells	Build up immunity
Platelets	Help in blood clotting
Blood vessels	Tubes that carry blood throughout the body
Blood	connective tissue that transports oxygen and nutrients

10. Comprehension

Answer the following questions after reading the paragraph and observe the picture carefully.



The circulatory system, also known as the cardiovascular system, plays a crucial role in maintaining the body's overall health. It consists of the heart, blood vessels, and blood. The heart acts as a pump and blood vessels that are like roads. The heart pumps blood, and this blood travels through the vessels to reach every part of our body. It brings important things like oxygen and nutrients, making sure our organs and tissues work well. It's like delivering supplies to different places in our body.

I. What does circulatory system consist of?

Ans: It consists of the heart, blood vessels, and blood.

II. What is the function of heart?

Ans: The heart pumps blood.

III. What is cardiovascular system?

Ans: The circulatory system is also known as the cardiovascular system.