C. Very Short Answer Questions.

1. Pulmonary vein brings the oxygenated blood from the lungs into the left atrium of heart.
2. Xylem and phloem
3. Aorta
4. Ascent of sap
5. Left atrium
6. Arteries

D. Short Answer Type-I Questions.

1. Plants need a transport system for following reasons:
   (i) To transport water and minerals absorbed by the roots up to the leaves
   (ii) To transport food prepared by the leaves to all the parts of the plant which cannot make food
2. The process of removal of waste products produced in the cells of the living organism is called excretion.
3. Blood is a red-coloured fluid which flows in the blood vessels to every part of the body. Blood consists of two components:
   (i) Fluid components : blood plasma
   (ii) Solid components : RBC, WBC, platelets
4. Osmosis is the process of passage of water across a semi-permeable membrane from a region where its concentration is higher to a region where its concentration is lower.
5. This is because at such time, the body cells need more oxygen to release more energy through respiration. To supply more oxygen, the blood flows faster.

E. Short Answer Type-II Questions.

1. Transpiration helps in transport of water and minerals by producing a 'suction pull' which pulls the water from roots upwards to great heights.
2. (a) It is because the blood flow is rapid and at high pressure in the arteries.
   (b) It is because they lie quite deep under the skin.
   (c) It is because the blood flow is not rapid and at low pressure.
3. (a) When both the kidney's of a person stop working the waste products start accumulating in the blood and the person may die in a week or so.
   (b) Care for parents.

4. Differences between RBCs and WBC.

S. No.	Parameter	RBCs	WBCs
1.	Nucleus	Nucleus absent	Nucleus present
2.	Function	Carry oxygen	Protect the body
3.	Colour	Red	Colourless

5. RBCs are produced in the red bone marrow of bones. The average lifespan of RBCs is about 120 days. RBCs are red in colour due to presence of a red pigment called haemoglobin.

F. Long Answer Questions.

1. Differences between arteries and veins

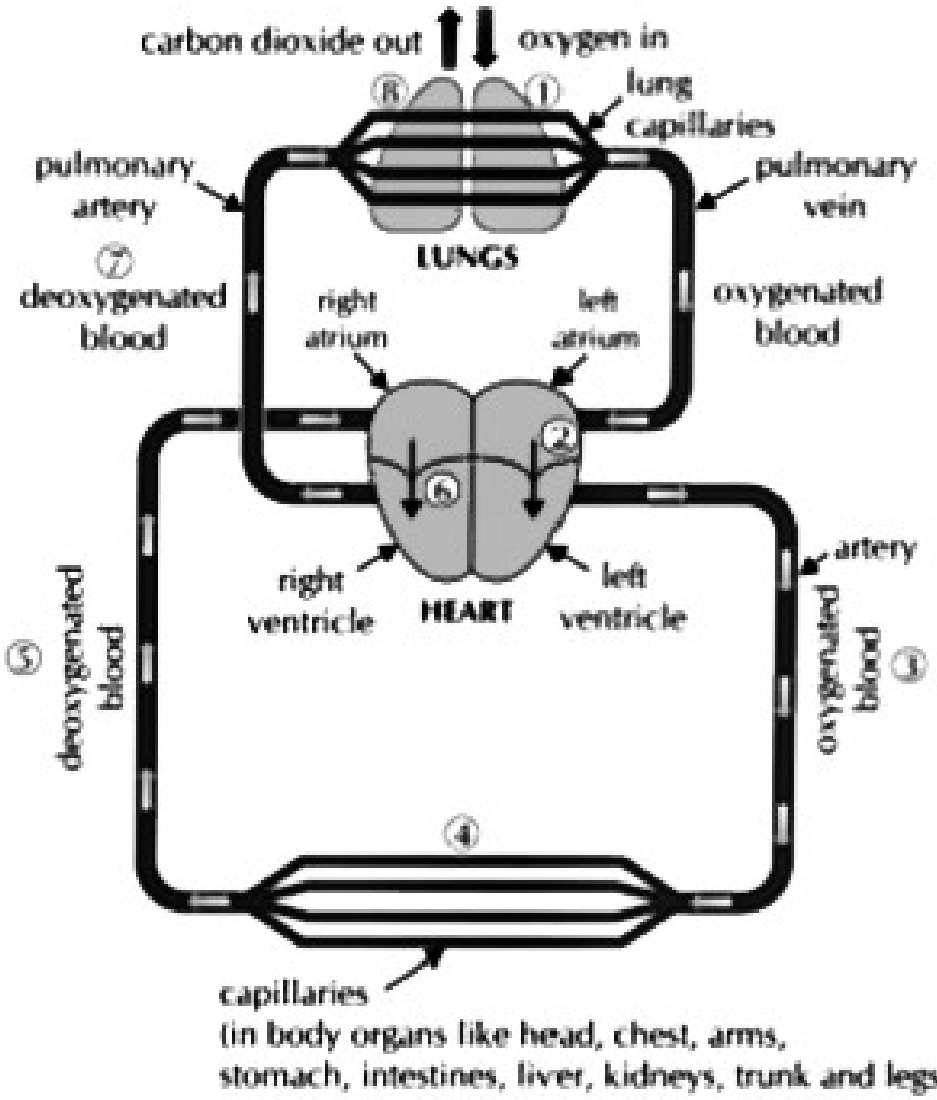
S. No.	Parameters	Arteries	Veins
1.	Direction of blood flow	Carry blood from the heart to various body parts.	Carry blood from different body parts to the heart.
2.	Nature of blood	Carry oxygen-rich blood (except pulmonary artery).	Carry carbon dioxide-rich blood (except pulmonary vein).
3.	Flow of blood	Blood flows at a high speed and high pressure.	Blood flows at a low speed and low pressure.
4.	Walls	Walls are thick and elastic.	Walls are thin and less elastic.
5.	Valves	Valves are absent.	Valves are present.
6.	Position in the body	Arteries are deeply seated.	Veins are not deeply seated.

2. The blood is circulated in the human body by regular contractions and relaxations of the heart. Circulation of the blood occurs in following way:

(i) When blood passes through the capillaries of the lungs, then oxygen from air enters the blood. The blood is now oxygen-rich called **oxygenated blood**.

(ii) The **pulmonary vein** brings the oxygenated blood from the lungs into the **left atrium** of the heart. When the **left atrium contracts,** the oxygenated blood is pushed into the **left ventricle** .

(iii) When the **left ventricle contracts,** it pumps oxygenated blood into the main artery called **aorta**. The aorta branches into many arteries which supply oxygenated blood to all the organs of the body (except lungs).



Schematic diagram of blood circulation in human body

(iv) When **oxygenated blood** from arteries passes through the capillaries of the body organs, then it gives food and oxygen to the body cells. At the same time, carbon dioxide produced as a waste product in the body cells during respiration enters the blood through capillaries.

(v) The **deoxygenated** blood (rich in carbon dioxide) collected from the body organs enters the **right atrium**.

(vi) When the **right atrium contracts, the deoxygenated blood** is pushed into **right ventricle**.

(vii) When the **right ventricle contracts,** the **deoxygenated blood** is pumped into the lungs through the pulmonary artery.

(viii) In the lungs, deoxygenated blood gives out carbon dioxide and absorbs fresh oxygen from the air being breathed in. So, the blood becomes oxygenated again.