WORKSHEET 1

CHAPTER 1 – LIFE PROCESSES (III) TRANSPORTATION

A. Tick (✓) the correct option.

1. The largest artery in the human body is
   a. systemic artery. b. renal artery. c. pulmonary artery. d. aorta.
2. Blood bank of the body is
   a. spleen. b. heart. c. liver. d. bone marrow.
4. In which of the following, heart does not pump oxygenated blood to different parts of the body?
   a. Pisces and Amphibians. b. Amphibians and Reptiles.
   c. Amphibians only. d. Pisces only.
4. The process of carrying food from the leaves to other parts of a plant is called
   a. transpiration. b. transportation. c. translocation. d. transformation.
5. Which vein brings clean blood from the lungs into the heart?
   a. Renal vein. b. Pulmonary vein. c. Vena cava. d. Hepatic vein.

B. Fill in the blanks.

1. _____ helps in blood clotting.
2. The blood bought into the heart by pulmonary veins is rich in _____
3. The blood leaving the tissues are rich in _____
4. WBCs fight against disease-causing germs and destroy the damaged cells by _____
5. Right side of the heart contains _____ blood.

C. State true (T) or false (F).

1. Arteries are more muscular than veins.
2. In fish, the heart receives only pure blood.
3. Lymph and plasma have the same chemical composition.
4. The velocity of blood in veins in greater than that in arteries.
5. Pericardial fluid is called lymph.

D. Match the following.

1. Three-chambered heart	(*a*) right atrium
2. Two-chambered heart	(*b*) left ventricle
3. Pulmonary artery	(*c*) fish
4. Aorta	(*d*) right ventricle
5. Vena cava	(*e*) Amphibia

Name: ..... Teacher's signature: .....

Class: ..... X ..... Date: .....

E. Answer the following questions.

1. Differentiate between atrium and ventricle.
2. Why is the force of blood greater in arteries than in veins?
3. Write a note on lymphatic system stating two major functions of lymph.
4. How does transpiration help in upward movement of water from root to leaves?
5. Draw a diagram to show double circulation in human heart.

ANSWERS

WORKSHEET 1

A. Tick (✓) the correct option.

1. d 2. a 3. d 4. c 5. b

B. Fill in the blanks.

1. Platelets 2. Oxygen 3. Carbon dioxide 4. Phagocytosis
5. Deoxygenated

C. State true (T) or false (F).

1. T 2. F 3. F 4. F 5. F

D. Match the following:

1. (*e*) 2. (*c*) 3. (*d*) 4. (*b*) 5. (*a*)

E. Answer the following questions.

1.

	Atrium	Ventricle
(*i*)	Upper chamber of the heart.	Lower chamber of the heart.
(*ii*)	Accepts pure blood in left atrium and impure in right atrium from all parts of the body and lungs.	Pumps blood to all parts of the body.
(*iii*)	Less muscular wall.	Thick muscular wall.
(*iv*)	Smaller chamber.	Larger chamber.

2. Arteries carry blood pumped by ventricles to all parts of the body. Ventricle being highly muscular contracts and pumps blood at high pressure into arteries so that blood in it reaches to all parts of the body. Blood thus moves from a region of high pressure to a region of low pressure.

3. The lymphatic system comprises a colourless fluid – lymph, a network of five channels – lymphatic capillaries and vessels and the lymph nodes.

   Through the pores present in the walls of capillaries some amount of plasma, proteins and blood cells escape into intercellular spaces in the tissues to form the tissue fluid or lymph. It is similar to plasma of blood but colourless and contains less protein. Lymph drains into lymphatic capillaries from the intercellular spaces, which join to form large lymph vessels and finally open into larger veins.

   Functions:

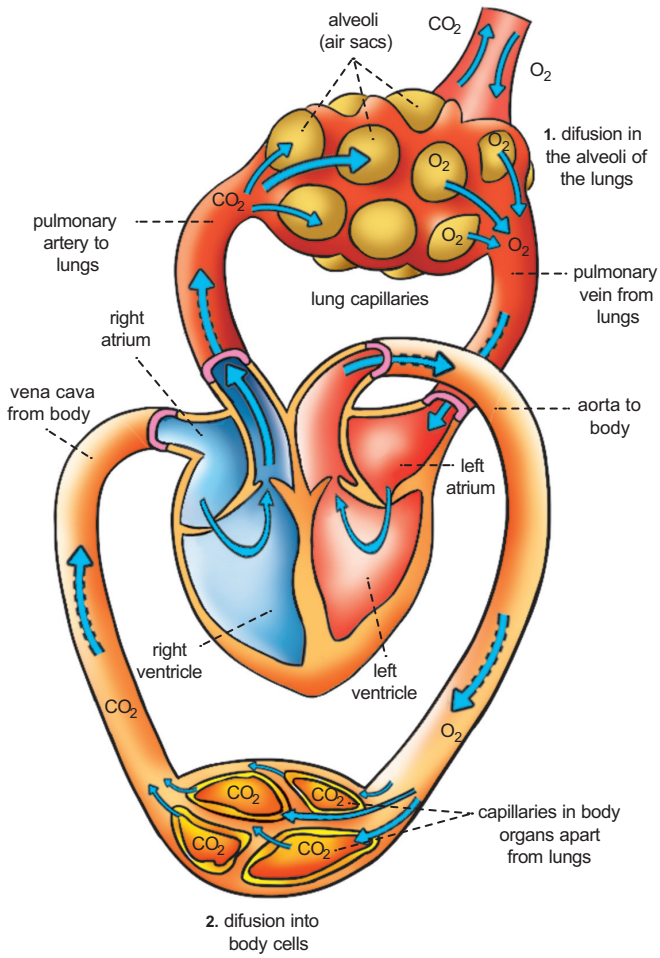
   Lymph carries digested and absorbed fat from intestine and drains excess fluid from extracellular space back into the blood.

4. (*i*) Water and minerals are absorbed from the soil by roots, move upward to leaf and diffuse out through the stomata leading to cell transpiration.

   (*ii*) This leads to generation of suction pressure in the leaf. The thin film of water vapour present in the mesophyll cells replaces the water vapour lost from the leaf by transpiration. During this process, water is pulled on by the adhesive and cohesive forces.

   (*iii*) This suction pressure draws water from the leaf xylem towards stomata through the mesophyll cells. The water lost via transpiration is replaced by the water that is pulled out of the leaf xylem.

5.



Double circulation in human heart