

CLASS V SCIENCE

CIRCULATORY SYSTEM

1. Tick the correct answer.

- a) In one minute the heart beats-(I) 70-72times
- b) Blood cells include-(IV) all of them.
- c) Blood vessels are – (IV) all of them.
- d) Blood vessels with thick, muscular walls are-(IV) arteries.
- e) Blood flows in jerks in – (II) arteries.

2. Write True or False.

- a) Plasma is a yellowish fluid-True.
- b) WBCs help in blood clotting-False.
- c) Veins carry blood from body organs to the heart – True.
- d) The heart has two chambers – False.
- e) The septum prevents mixing of deoxygenated and oxygenated blood-True.

3. Fill in the blanks.

- a) The right ventricle receives deoxygenated blood from the right auricle.
- b) Haemoglobin gives blood its red colour.
- c) In the heart, the auricle lies above the ventricle.
- d) The deoxygenated blood from the right ventricle is pumped into the pulmonary aorta and is transported to lungs by the pulmonary arteries.
- e) When both auricles and ventricles are relaxed the auricles get filled with blood.

4. Answer the following questions briefly.

a) Explain the structure of the heart.

Ans: The heart has four chambers –two auricles and two ventricles. The heart is divided into two halves by a thick muscular septum. Each half has an auricle above and a ventricle below. The right half of the heart has deoxygenated blood while the left half has pure oxygenated. The septum prevents the mixing of the deoxygenated and oxygenated blood.

b) How are arteries different from veins.

Ans:

Arteries	Veins
1) They have thick and muscular walls.	1) They have thin walls.
2) They carry blood away from the heart	2) They carry blood from body organs to the heart.
3) The blood in arteries is bright red in colour as it contains a lot of oxygen.	3) The blood in veins is darker in colour as it doesn't contain oxygen.

c) Name three types of blood cells. Write their functions.

Ans: Three types of blood cells and their functions are

1) Red blood cells (RBC)-They contain the pigment haemoglobin that gives red colour to the RBC and hence the blood.

2) White blood cells (WBC) – They defend the body against infections.

3) Blood platelets –They help to stop bleeding, by clotting of blood.

d) Explain the working of heart and the circulation of blood.

Ans: When both the auricles and ventricles are relaxed the auricles get filled with blood. The right auricle receives deoxygenated blood from all parts of the body and the left auricle receives oxygenated blood from the lungs by pulmonary veins. Next, both the auricles contract together and their valves open. Blood from the

left auricle comes into the left ventricle and from the right auricle into the right ventricle

Next, both the auricles and ventricles contract. The oxygenated blood from left ventricle is pumped into the aorta and is distributed to all parts by arteries. The deoxygenated blood from the right ventricle is pumped into pulmonary aorta and is transported to the lungs by pulmonary arteries for oxygenation.

e) Write three functions of the blood.

Ans: Three functions of the blood are-

- 1) It provides food and oxygen to every body cell.
- 2) It removes waste from the cells.
- 3) It helps in regulating body temperature.

f) What are capillaries?

Ans: Capillaries are the smallest blood vessels that connect arteries and veins.

g) Define heart beat.

Ans: The rhythmic contraction and relaxation of the auricles and ventricles is known as heart beat.

Assignment

1. Define the following:

i) Circulatory system ii) Arteries iii) Veins iv) Capillaries v) Blood.

2. Draw a neat diagram of the heart.

