

Chapters 1

Human Body: The Circulatory System

Model answers for exercise questions (Pages 22 to 23):-

1. Choose the correct answer.
 - a. (ii) Tissues
 - b. (iii) Heart
 - c. (ii) Blood
 - d. (iii) Both i. and ii.
 - e. (iii) Exercise

2. Write true or false.
 - a. False
 - b. True
 - c. False
 - d. True
 - e. False

3. Give one word for the following.
 - a. Auricles or atria
 - b. Carotid artery
 - c. Heartbeat
 - d. Capillaries
 - e. Superior vena cava

4. Short answer questions.
 - a. It is responsible for the movement or circulation of substances inside our body.
 - b. The four yogasanas that are good for heart are
 - i. Tadasana
 - ii. Vrikshasana
 - iii. Bhujangasana and
 - iv. Dhanurasana
 - c. Blood vessels are hollow muscular tubes through which the blood moves in the body. They form a network throughout the body to transport blood in all parts of the body.
 - d. Capillaries are fine blood vessels which connect the arteries and veins. It is through thin walls of capillaries that the nutrients, oxygen, carbon dioxide and waste products enter or leave the cells of the body parts.
 - e. Meditation reduces stress and helps clear our mind of all negative thoughts.

5. Long answer questions.
 - a. Our heart is a four-chamber muscular organ. The upper two chambers are called auricles and atria, while the lower two chambers are called ventricles. The auricles are smaller than the ventricles. The auricles receive blood into the heart, and the ventricles pump out blood from the heart. When the heart contracts, the

blood is pumped out of the ventricles; and when it relaxes, the blood enters the auricles.

b.

- | Arteries | Veins |
|---|--|
| (a) They carry blood away from the heart to different body parts. | (a) They carry blood back to the heart. |
| (b) They are thick-walled without valves. | (b) They are thin-walled with valves. |
| (c) All arteries carry pure blood except the pulmonary artery. | (c) All veins carry impure blood except the pulmonary veins. |

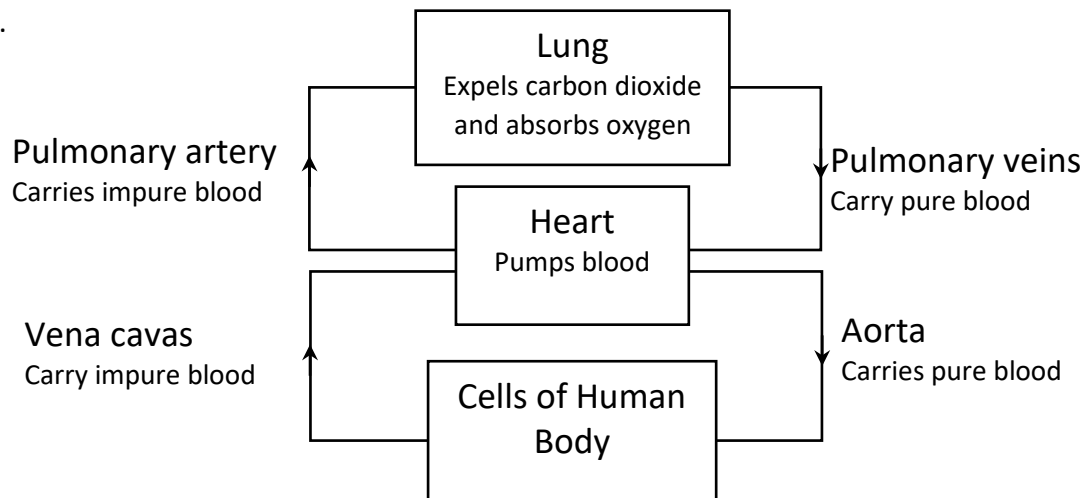
c. The three major functions of the blood are:

- (i) Transportation: blood helps in the transportation of oxygen, carbon dioxide, nutrients and waste products inside our body.
- (ii) Protection: The white blood cells help us to keep healthy by fighting germs and infections.
- (iii) Regulation: Blood helps regulate the temperature of our body.

d. Three ways by which we can keep our heart healthy are

- a. We must exercise daily for at least 30 minutes.
- b. We must eat a healthy and balanced diet.
- c. We must stay away from polluted surroundings.

e.



Schematic diagram of circulation of blood in our body

Please Note: For proper understanding of structure of human heart, blood vessels in our body and circulation of blood, refer to the relevant diagrams given on pages 17, 18 and 21 respectively.