

CHECK YOUR LEARNING

Suggested Answers

1. The function of the circulatory system is to transport substances to different parts of the body.
2. Four substances carried by the circulatory system are blood, oxygen, nutrients, and carbon dioxide.
3. The circulatory system obtains nutrients from the small intestine in the digestive system and transports it throughout the body to cells.
4. In an angiogram, a fluorescent dye is injected so blockages show up in X-ray images. An ordinary X-ray does not include the dye.
5. (a) The artery has thick walls to withstand the high pressure of arterial blood flow.
 (b) A capillary's small diameter allows more efficient exchange of oxygen and nutrients for carbon dioxide and wastes.
 (c) A vein has thin walls because blood flowing through it is under low pressure.

6.

Blood	connective tissue
Blood vessels	epithelial tissue, smooth muscle tissue, connective tissue
Heart	cardiac muscle tissue, nerve tissue, epithelial tissue, connective tissue

7. (a) Circle graph should show: 45 % red blood cells, 55 % plasma, <1 % white blood cells, <1 % platelets
 (b) I had to figure out the correct fraction or angle measure for each wedge of the chart.
8. Cardiac muscle goes through rhythmic contractions even without nerve input. Smooth muscle cells, such as those in the digestive tract, contract only with nerve input.
9. Coronary artery disease is a buildup of plaque in arteries that supply the heart with blood. If blockage becomes severe, a heart attack can result. Blood clot disorders occur when blood clots too easily so it blocks blood vessels, or when blood does not clot easily and excess bleeding occurs.

