

# STRUCTURE OF THE HEART

## PART A

Match the terms in column A with the descriptions in column B. Place the letter of your choice in the space provided.

Column A	Column B
a. Aorta	_____ 1. Upper chamber of heart
b. Atrium	_____ 2. Structure from which chordae tendineae originate
c. Bicuspid valve	_____ 3. Prevents blood movement from right ventricle to right atrium
d. Cardiac vein	_____ 4. Double-layered membrane around heart
e. Coronary artery	_____ 5. Prevents blood movement from left ventricle to left atrium
f. Coronary sinus	_____ 6. Gives rise to left and right pulmonary arteries
g. Endocardium	_____ 7. Drains blood from myocardium into right atrium
h. Myocardium	_____ 8. Inner lining of heart chamber
i. Papillary muscle	_____ 9. Layer largely composed of cardiac muscle tissue
j. Pericardial cavity	_____ 10. Space containing serous fluid
k. Pericardial sac	_____ 11. Drains blood from myocardial capillaries
l. Pulmonary trunk	_____ 12. Supplies blood to heart muscle
m. Tricuspid valve	_____ 13. Distributes blood to body organs (systemic circuit) except lungs

## PART B

Complete the following:

1. Compare the structure of the tricuspid valve with that of the pulmonary valve. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. Describe the action of the tricuspid valve when you squeezed the water-filled right ventricle. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. Describe the function of the chordae tendineae and the papillary muscles. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. What is the significance of the difference in thickness between the wall of the aorta and the wall of the pulmonary trunk? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. List in order the major blood vessels, chambers, and valves through which blood must pass in traveling from a vena cava to the aorta. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

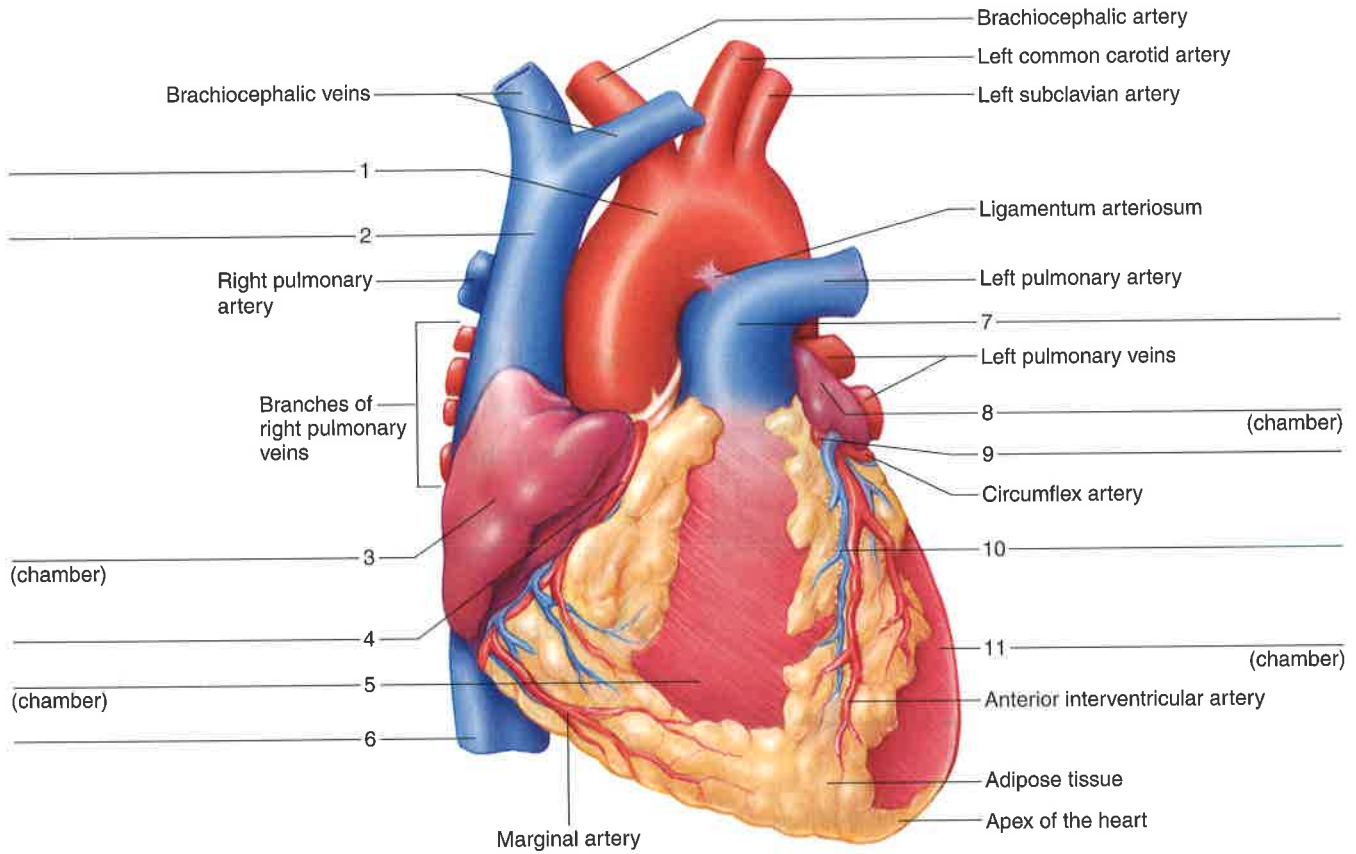


### **Critical Thinking Application**

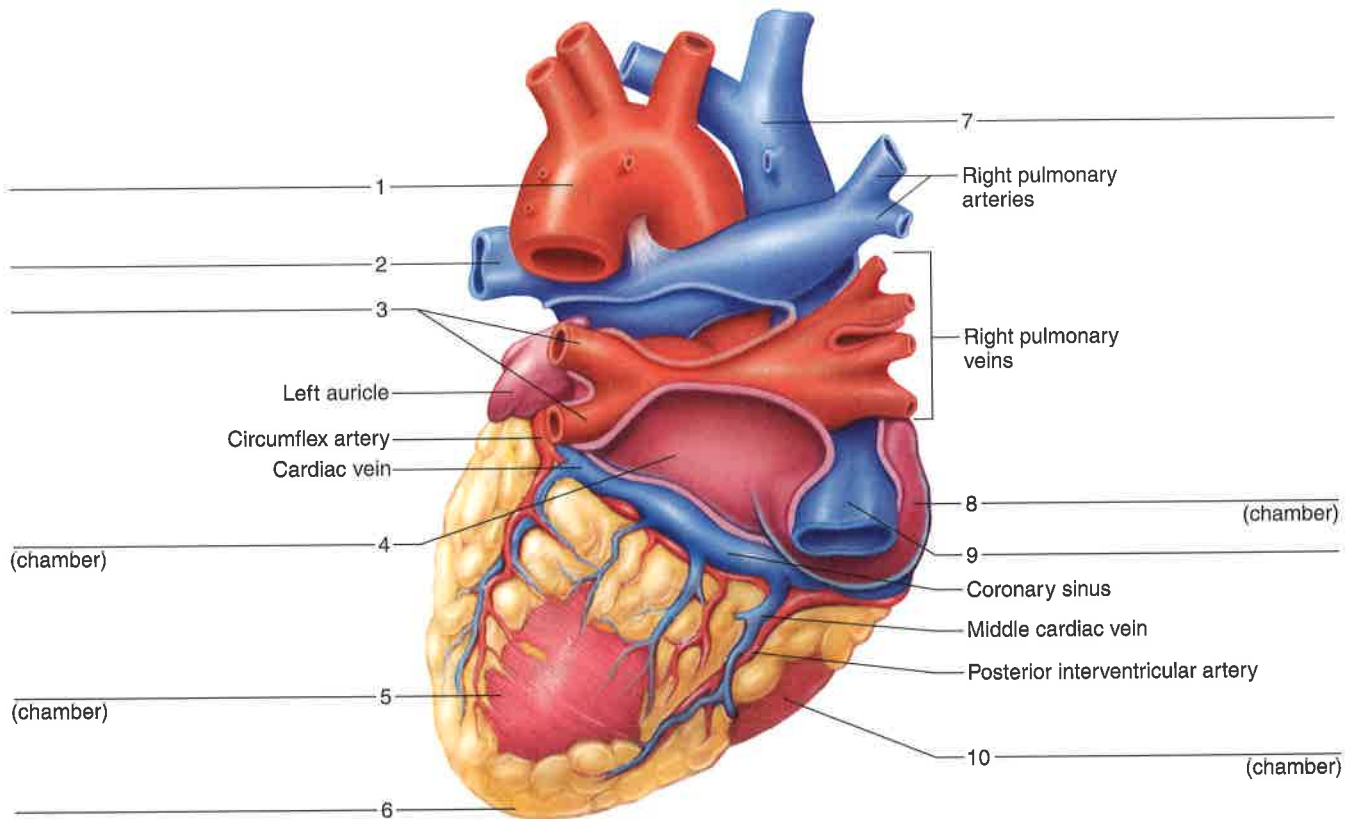
What is the significance of the difference in thickness of the ventricular walls?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

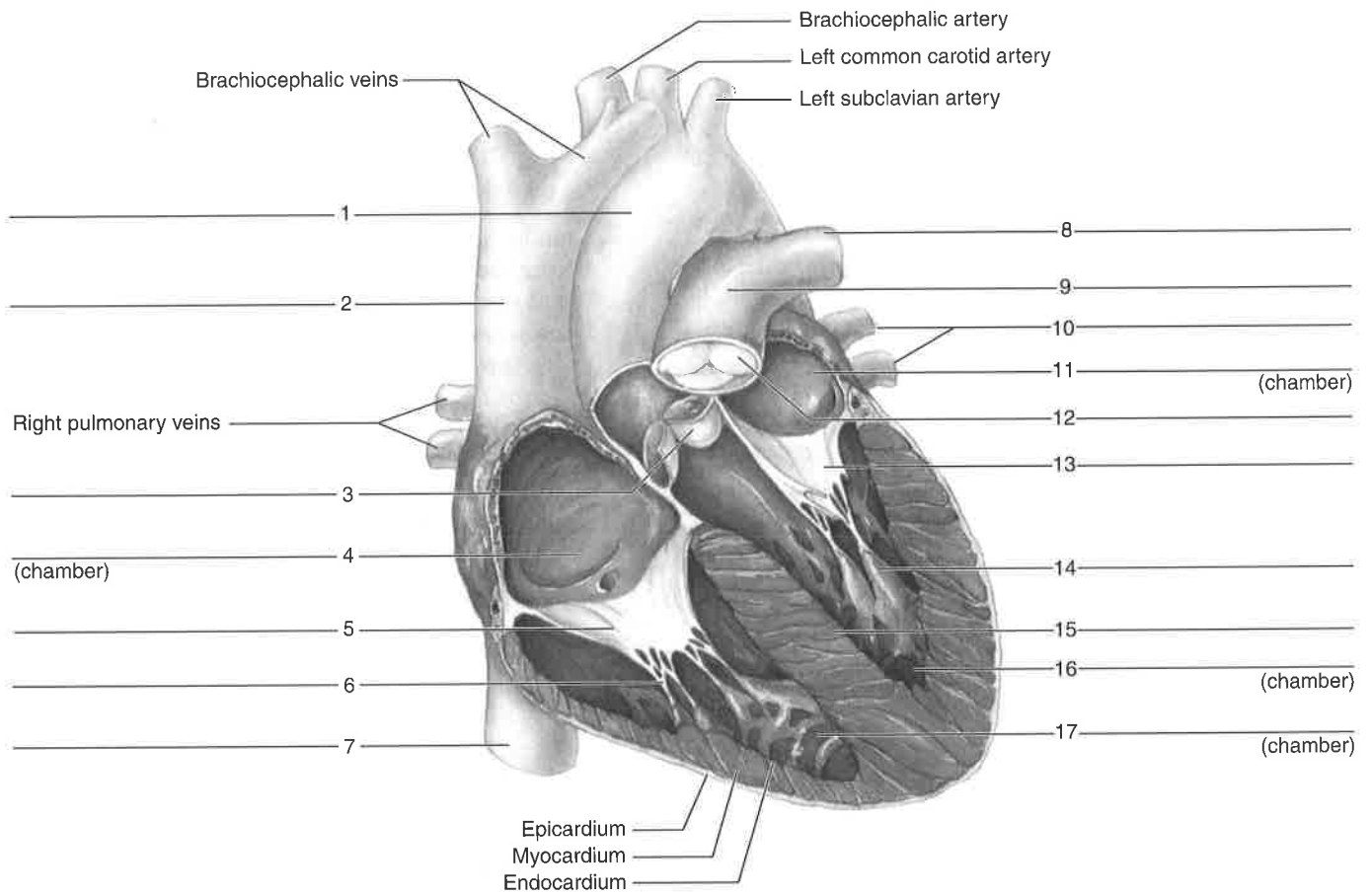
**Figure 35.1** Label this anterior view of the human heart.



**Figure 35.2** Label this posterior view of the human heart.



**Figure 35.3** Label this coronal section of the human heart.



**atrioventricular valves (A-V valves)**

- tricuspid valve
- bicuspid (mitral) valve

**chordae tendineae**

- papillary muscles
- superior vena cava
- inferior vena cava
- pulmonary trunk
- pulmonary arteries
- pulmonary veins
- aorta

**semilunar valves**

- pulmonary valve
- aortic valve

**left coronary artery**

**right coronary artery**

**cardiac (coronary) veins**

**coronary sinus**

**OPTIONAL ACTIVITY**

**U**se red and blue colored pencils to color the blood vessels in figure 35.3. Use red to illustrate a blood vessel high in oxygen, and use blue to illustrate a blood vessel low in oxygen. You can check your work by referring to the corresponding figures in the textbook, which are presented in full color.