

NAME \_\_\_\_\_

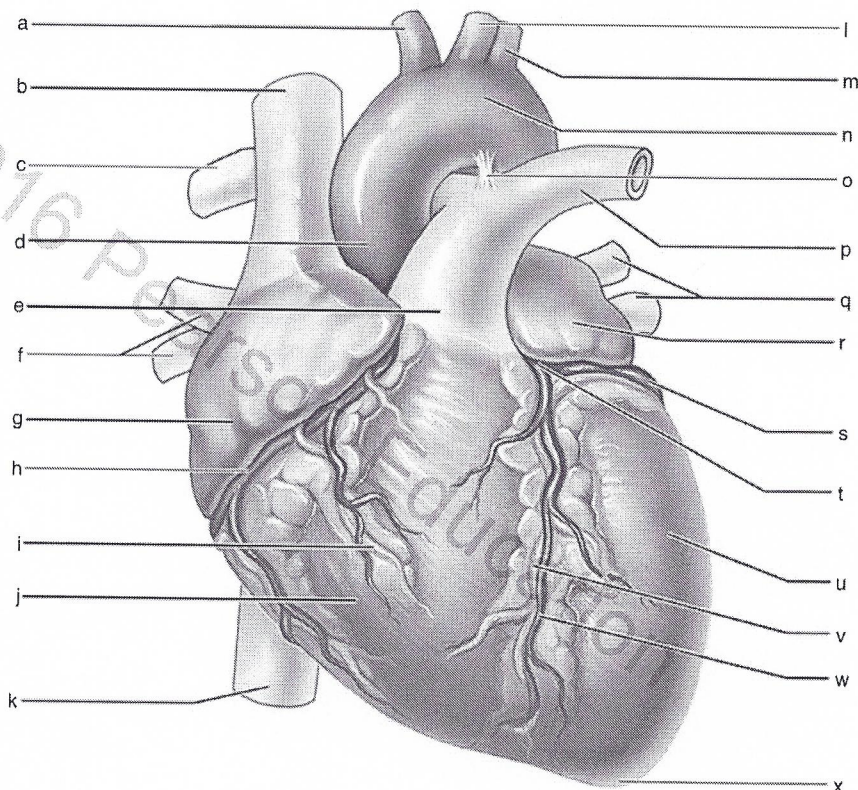
LAB TIME/DATE \_\_\_\_\_

# Anatomy of the Heart

## Gross Anatomy of the Human Heart

1. An anterior view of the heart is shown here. Match each structure listed on the left with the correct letter in the figure.

- \_\_\_\_\_ 1. right atrium
- \_\_\_\_\_ 2. right ventricle
- \_\_\_\_\_ 3. left atrium
- \_\_\_\_\_ 4. left ventricle
- \_\_\_\_\_ 5. superior vena cava
- \_\_\_\_\_ 6. inferior vena cava
- \_\_\_\_\_ 7. ascending aorta
- \_\_\_\_\_ 8. aortic arch
- \_\_\_\_\_ 9. brachiocephalic artery
- \_\_\_\_\_ 10. left common carotid artery
- \_\_\_\_\_ 11. left subclavian artery
- \_\_\_\_\_ 12. pulmonary trunk
- \_\_\_\_\_ 13. right pulmonary artery
- \_\_\_\_\_ 14. left pulmonary artery
- \_\_\_\_\_ 15. ligamentum arteriosum
- \_\_\_\_\_ 16. right pulmonary veins
- \_\_\_\_\_ 17. left pulmonary veins
- \_\_\_\_\_ 18. right coronary artery
- \_\_\_\_\_ 19. anterior cardiac vein



- \_\_\_\_\_ 20. left coronary artery
- \_\_\_\_\_ 21. circumflex artery
- \_\_\_\_\_ 22. anterior interventricular artery
- \_\_\_\_\_ 23. apex of heart
- \_\_\_\_\_ 24. great cardiac vein

2. What is the function of the fluid that fills the pericardial sac? \_\_\_\_\_

3. Match the terms in the key to the descriptions provided below.

Key:

\_\_\_\_\_ 1. location of the heart in the thorax

a. atria

\_\_\_\_\_ 2. superior heart chambers

b. coronary arteries

\_\_\_\_\_ 3. inferior heart chambers

c. coronary sinus

\_\_\_\_\_ 4. visceral pericardium

d. endocardium

\_\_\_\_\_ 5. "anterooms" of the heart

e. epicardium

\_\_\_\_\_ 6. equals cardiac muscle

f. mediastinum

\_\_\_\_\_ 7. provide nutrient blood to the heart muscle

g. myocardium

\_\_\_\_\_ 8. lining of the heart chambers

h. ventricles

\_\_\_\_\_ 9. actual "pumps" of the heart

\_\_\_\_\_ 10. drains blood into the right atrium

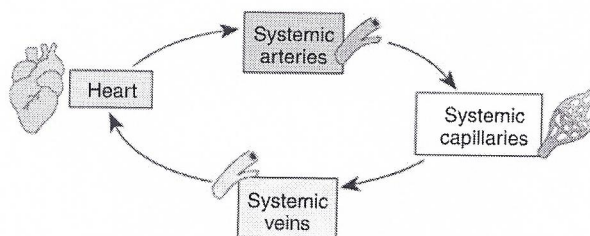
4. What is the function of the valves found in the heart? \_\_\_\_\_

5. What is the role of the chordae tendineae? \_\_\_\_\_

## Pulmonary, Systemic, and Cardiac Circulations

6. A simple schematic of general circulation is shown below. What part of the circulation is missing from this diagram?

\_\_\_\_\_ Add to the diagram as best you can to make it depict a complete systemic/pulmonary circulation. Label the systemic and pulmonary circulations.





7. Differentiate clearly between the roles of the pulmonary and systemic circulations. \_\_\_\_\_

8. Complete the following scheme of circulation of a red blood cell in the human body.

Right atrium through the tricuspid valve to the \_\_\_\_\_, through the \_\_\_\_\_ valve to the pulmonary trunk, to the \_\_\_\_\_, to the capillary beds of the lungs, to the \_\_\_\_\_, to the \_\_\_\_\_ of the heart, through the \_\_\_\_\_ valve to the \_\_\_\_\_, through the \_\_\_\_\_ valve to the \_\_\_\_\_, to the systemic arteries, to the \_\_\_\_\_ of the tissues, to the systemic veins, to the \_\_\_\_\_, and \_\_\_\_\_ entering the right atrium of the heart.

9. If the mitral valve does not close properly, which circulation is affected? \_\_\_\_\_

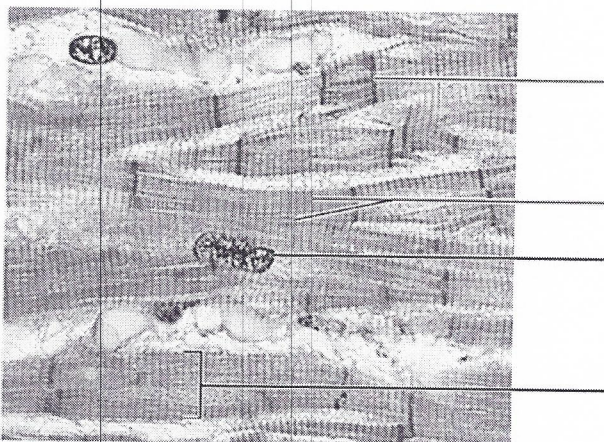
10. Why might a thrombus (blood clot) in the anterior descending branch of the left coronary artery cause sudden death? \_\_\_\_\_

## Microscopic Anatomy of Cardiac Muscle

11. How would you distinguish the structure of cardiac muscle from that of skeletal muscle? \_\_\_\_\_

12. Add the following terms to the photograph of cardiac muscle below.

- a. intercalated disc      b. nucleus of cardiac fiber      c. striations      d. cardiac muscle fiber



Describe the unique anatomical features of cardiac muscle. What role does the unique structure of cardiac muscle play in its function?

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