

Name: _____

Date: _____

Period: _____

Circulatory System Practice Worksheet

Instructions: Answer the following questions about the circulatory system. For multiple choice, circle the correct letter. For short answer, write your response in the space provided. For labeling, use the terms in the word bank (if given) to identify the numbered structures.

1. **Multiple Choice:** Which chamber of the heart receives oxygenated blood from the lungs?

- a) Right atrium
- b) Right ventricle
- c) Left atrium
- d) Left ventricle

2. **Short Answer:** What is the function of the pulmonary arteries? Where do they carry blood?

3. **Labeling:** Identify the numbered structures on the diagram of the heart below. Use the word bank:
aorta, superior vena cava, right atrium, left ventricle, pulmonary artery, pulmonary vein, mitral valve, aortic valve.



- | | | |
|----------|----------|----------|
| 1) _____ | 2. _____ | 3. _____ |
| 4. _____ | 5. _____ | 6. _____ |
| 7. _____ | 8. _____ | |

4. **Multiple Choice:** Which blood vessels have the thinnest walls, allowing for gas and nutrient exchange?

- a) Arteries
- b) Arterioles
- c) Capillaries
- d) Veins

5. **Short Answer:** Describe the path of a red blood cell from the superior vena cava to the aorta. Name the chambers and valves it passes through.

6. **Multiple Choice:** What is the main function of red blood cells?

- a) Fighting infection
- b) Carrying oxygen
- c) Clotting blood
- d) Transporting nutrients

7. **Short Answer:** Explain the difference between systole and diastole in the cardiac cycle.

8. **Multiple Choice:** Which of the following is the correct order of blood flow through the heart?

- a) Right atrium → right ventricle → lungs → left atrium → left ventricle → body
- b) Right atrium → left atrium → lungs → right ventricle → left ventricle → body
- c) Left atrium → left ventricle → lungs → right atrium → right ventricle → body
- d) Right ventricle → right atrium → lungs → left ventricle → left atrium → body

9. **Short Answer:** What is the role of the sinoatrial (SA) node in the heart?

10. **Labeling:** Identify the following blood vessels as either an artery or a vein, and state whether they carry oxygenated or deoxygenated blood.

Blood Vessel	Artery or Vein?	Oxygenated or Deoxygenated?
Aorta		
Pulmonary artery		
Pulmonary vein		
Superior vena cava		

Answer Key

1. **Answer: c) Left atrium**

The left atrium receives oxygenated blood from the lungs via the pulmonary veins.

2. **Answer:** The pulmonary arteries carry deoxygenated blood from the right ventricle to the lungs for gas exchange (oxygenation).

3. **Answer:** (Labeling based on typical heart diagram)

- 1) Superior vena cava
- 2) Right atrium
- 3) Pulmonary artery
- 4) Aorta
- 5) Pulmonary vein
- 6) Mitral valve
- 7) Aortic valve
- 8) Left ventricle

4. **Answer: c) Capillaries**

Capillaries are one cell thick to allow diffusion of gases and nutrients.

5. **Answer:** Superior vena cava → right atrium → tricuspid valve → right ventricle → pulmonary valve → pulmonary artery → lungs → pulmonary vein → left atrium → mitral valve → left ventricle → aortic valve → aorta.

6. **Answer: b) Carrying oxygen**

Red blood cells contain hemoglobin, which binds oxygen in the lungs and releases it to tissues.

7. **Answer:** Systole is the contraction phase of the cardiac cycle, when the heart pumps blood out. Diastole is the relaxation phase, when the heart fills with blood.

8. **Answer: a) Right atrium → right ventricle → lungs → left atrium → left ventricle → body**

9. **Answer:** The SA node is the natural pacemaker of the heart. It generates electrical impulses that initiate each heartbeat and set the heart rate.

10. **Answer:**

Blood Vessel	Artery or Vein?	Oxygenated or Deoxygenated?
Aorta	Artery	Oxygenated
Pulmonary artery	Artery	Deoxygenated
Pulmonary vein	Vein	Oxygenated
Superior vena cava	Vein	Deoxygenated