



# Practice Worksheet on Heart Anatomy and Physiology

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Subject: Cardiology

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## Long Answer Questions

1. Describe the location of the human heart.
2. Explain the three phases of the heartbeat.
3. Differentiate between the major and minor circulations of blood in the human body.
4. Explain the electrical conduction system of the heart.
5. What are the significances of chest pain in cardiology?
6. What is ischemic chest pain, what causes it and what are its main characteristics?

7. Differentiate between orthopnea and paroxysmal nocturnal dyspnea.

8. What is edema and how does it appear in cardiac cases?

## Multiple Choice Questions

1. In which ribs is the heart located?

- a) Between the 1st and 3rd ribs
- b) Between the 2nd and 6th ribs
- c) Between the 3rd and 7th ribs
- d) Between the 4th and 8th ribs

2. Which of these is the primary pacemaker of the heart?

- a) Left atrium
- b) Right atrium
- c) Sinoatrial node
- d) Atrioventricular node

3. What kind of blood does the aorta carry?

- a) Oxygen-poor
- b) Oxygen-rich
- c) Mixed
- d) Carbon-dioxide rich

4. Which vessel carries oxygenated blood to the left atrium?

- a) Pulmonary artery
- b) Vena cava
- c) Pulmonary vein
- d) Aorta

5. Which of the following is a common symptom of coronary artery disease?

- a) Angina
- b) Pericarditis
- c) Myocarditis
- d) Pneumonia

6. What happens to the blood return when a patient is in orthopnea?

- a) Increases
- b) Remains the same
- c) Decreases
- d) Fluctuates unpredictably

7. What is the characteristic of pulse in case of bradycardia?

- a) Fast
- b) Slow
- c) Irregular
- d) Absent

8. Which of the following is a possible complication of severe heart failure?

- a) Pulmonary edema
- b) Pleural effusion
- c) Both a and b
- d) Neither a nor b

# Answer Key

## Long Answer Questions - Expected Responses

1. Describe the location of the human heart.

Expected Answer: The heart's position is in the left hemithorax, between the 2nd and 6th ribs, and over the vertebrae T5 to T8.

2. Explain the three phases of the heartbeat.

Expected Answer: The three phases are atrial systole, ventricular systole, and diastole.

3. Differentiate between the major and minor circulations of blood in the human body.

Expected Answer: The major circulation is oxygen-rich blood from the left ventricle to the body cells and back to the heart. The minor circulation is deoxygenated blood from the right ventricle to the lungs and back to the heart.

4. Explain the electrical conduction system of the heart.

Expected Answer: The SA node initiates the heartbeat, which is transmitted to the atria and ventricles through specialized pathways.

5. What are the significances of chest pain in cardiology?

Expected Answer: Chest pain is a common symptom of cardiac issues but is not always indicative of a heart problem.

6. What is ischemic chest pain, what causes it and what are its main characteristics?

Expected Answer: Angina is a symptom caused by a mismatch between the heart's oxygen demand and supply.

7. Differentiate between orthopnea and paroxysmal nocturnal dyspnea.

Expected Answer: Orthopnea is shortness of breath when lying down, and paroxysmal nocturnal dyspnea is shortness of breath that occurs suddenly at night.

8. What is edema and how does it appear in cardiac cases?

Expected Answer: Edema is fluid accumulation in the interstitial space, with cardiac edema being most common in the lower extremities.

## Multiple Choice Questions – Correct Answers

1. In which ribs is the heart located?

Correct Answer: Between the 2nd and 6th ribs

2. Which of these is the primary pacemaker of the heart?

Correct Answer: Sinoatrial node

3. What kind of blood does the aorta carry?

Correct Answer: Oxygen-rich

4. Which vessel carries oxygenated blood to the left atrium?

Correct Answer: Pulmonary vein

5. Which of the following is a common symptom of coronary artery disease?

Correct Answer: Angina

6. What happens to the blood return when a patient is in orthopnea?

Correct Answer: Decreases

7. What is the characteristic of pulse in case of bradycardia?

Correct Answer: Slow

8. Which of the following is a possible complication of severe heart failure?

Correct Answer: Both a and b