#### Slide 2: Introduction

### What is the heart?

- A muscular organ that pumps blood throughout the body.
- Vital for life, providing oxygen and nutrients to cells.

# • Brief overview of the circulatory system:

- Heart, blood vessels (arteries, veins, capillaries)
- Transportation of oxygen, nutrients, hormones, waste products

### Slide 3: Heart Structure

## • Image of the heart:

- o Label the four chambers: right atrium, right ventricle, left atrium, left ventricle
- Show the major blood vessels: aorta, pulmonary artery, pulmonary veins, vena cava

# • Key points:

- o Atria: Receive blood
- Ventricles: Pump blood out
- Valves: Prevent backflow of blood (tricuspid, pulmonary, mitral, aortic)

# Slide 4: Heart Layers

# • Image of a cross-section of the heart wall:

- o Label the three layers: epicardium, myocardium, endocardium
- Briefly explain the function of each layer

## Slide 5: The Cardiac Cycle

### • Image or diagram:

- Show the two phases: systole (contraction) and diastole (relaxation)
- Explain how blood flows through the heart during each phase

## Slide 6: Electrical Conduction System

## • Image or diagram:

- Show the sinoatrial (SA) node, atrioventricular (AV) node, Bundle of His, and Purkinje fibers
- Explain how electrical signals control the heartbeat

### Slide 7: The Role of Blood Vessels

- **Arteries:** Carry oxygenated blood away from the heart
- **Veins:** Carry deoxygenated blood back to the heart
- Capillaries: Tiny vessels where gas exchange occurs

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# **Slide 8: Coronary Circulation**

- Explain the importance of coronary arteries and veins:
  - Supply blood to the heart muscle itself

## Slide 9: Conclusion

- Summarize the key points about the heart's structure and function
- Emphasize the importance of a healthy heart

