1. The heart is located approximately between the second and fifth ribs and **posterior** to the vertebral column.

2. The pericardium is a double sac membrane in which the outer membrane is the **visceral** pericardium.

3. The major constituent of the heart is a layer of cardiac muscle known as the **endocardium**.

4. The two inferior chambers of the heart are known as the **atria**.

5. Blood returns from the body through the superior and inferior vena cava, which empty into the **left** atrium.

6. Blood returning from the heart muscle enters the **ventricular** sinus.
7. Blood moves toward the lungs after it leaves the right ventricle.

8. The aorta, the largest artery of the body, receives blood from the right ventricle.

9. The tricuspid valve lies between the left atrium and the left ventricle.

10. The valves found at the entrance to the pulmonary artery and aorta are known as semilunar.

11. The atrioventricular valves prevent blood from flowing backward into ventricles.

12. Dying cells in the heart muscle may form a blockage known as a coronary thrombosis.
• 13. Impulses for the contraction of the heart muscle are generated initially at the atrioventricular node.

• 14. Fibers known as Purkinje fibers spread out from the AV node and carry impulses to the ventricles.

• 15. Some nerve control over the heart can be exerted by fibers of the autonomic nervous system.

• 16. The condition in which the heart contracts rapidly and irregularly is known as arrhythmia.

• 17. The relaxation period between heart contractions is known as systole.

• 18. The heart beats approximately 70 - 75 times each second.
19. A heart murmur is generally due to unusual heart sounds arising from improper activity of the heart muscle.

20. The smallest heart vessels in the body are known as **venules**.

21. The narrowing of the lumen of the artery is known as **vasodilation**.

23. A pulse rate that is more rapid than normal reflects a condition called **tachycardia**.

24. The carotid bodies and aortic bodies contain neurons called **baroreceptors** that help regulate the blood flow.

25. The only artery that carries carbon dioxide–rich blood is the **pulmonary artery**.
1. What two cell types are involved in producing a coordinating heart contraction?

2. The heart is composed of 3 major cardiac muscles. What are they?

3. What causes the first heart sound (LUB)?

4. What causes the second sound (DUP)?

5. Can you name the Pacemakers (in order) inherent rhythm?

6. What are the pulmonary circuit and the systemic circuits?

7. What is an electrocardiogram?

8. What are the 3 electrical events associated with each cardiac cycle?
• 9. What does each wave represent?

• 10. There are several named intervals associated with each cardiac cycle. Can you name 3?

• 11. The SA node spreads to both atria in how many action potentials/minute?

• 12. What about the AV node – how many action potentials/min?

• 13. A blockage within the heart arteries caused by the death of heart muscle cells is known as _______.

• 14. The valves leading to the pulmonary trunk and aorta are referred to as the _____.

• 15. The pressure of the blood can be measured by an instrument known as ______.
• Answers true/false

• 1. anterior
• 2. parietal
• 3. myocardium
• 4. ventricles
• 5. right
• 6. coronary

• 7. true
• 8. left
• 9. bicuspid (mitral)
• 10. true
• 11. atria
• 12. myocardial infarction
• 13. sinoatrial
14. true
15. true
16. fibrillation
17. diastole
18. minute
19. valves
20. capillaries

21. vasoconstriction
23. true
24. chemoreceptors
25. true
• Answers Fill in the blank

• 1. cardiac autorhythmic cells & cardiac contractile cells.
• 2. atrial muscle, ventricular muscle, & specialized excitatory and conductive muscle fibers.
• 3. It caused by the shutting of atrioventricular valves at the onset of the ventricular systole.

• 4. It is caused by the shutting of semilunar valves at the onset of ventricular diastole.
• 5. Sino- atrial (SA) node, atrio- ventricular (AV) node, Bundle of His, bundle branches, and Purkinje fibers.
• 6. Pulmonary circuit oxygen poor blood is pumped from the right side the heart to the lungs. Systemic circuit – the left side of the heart pumps oxygen rich blood out to the body’s tissues and organs.
7. Tracing of the heart’s electrical activity as impulses are conducted through the myocardium.
8. P wave, QRS complex, and T wave
9. P wave represents atrial depolarization. Contraction of the atria immediately follows the P wave.
10. QRS complex represents ventricular depolarization. It is immediately followed by contraction of the ventricles.

T wave represents ventricular repolarization. It is immediately followed by ventricular relaxation.
10. PR interval – from the beginning of the P wave to the beginning of the QRS complex.
QT interval – extends from the beginning of the QRS complex to the end of the T wave.
ST wave segment – runs from the end of the S wave to the beginning of the T wave. The ventricles are completely depolarized by this time.
- 11. 90 -100
- 12. 40 -50
- 13. an infarct
- 14. semilunar valves
- 15. sphygmomanometer