

 Electrocardiography Chapters 1–3 Assignment

Chapter 1 – The Electrocardiograph

Multiple Choice:

1. The instrument that records the electrical activity of the heart is called a(n):
 - a. Defibrillator
 - b. Electrocardiograph
 - c. Pacemaker
 - d. Holter monitor
2. The ECG tracing produced by the electrocardiograph is called a(n):
 - a. Electrode
 - b. Electrolyte
 - c. Electrocardiogram
 - d. Echocardiogram
3. Which of the following is *not* a responsibility of an ECG technician?
 - a. Patient preparation
 - b. Analyzing ECGs for diagnosis
 - c. Applying electrodes
 - d. Operating ECG equipment

True or False:

4. _____ Electrodes detect the heart's electrical activity and transmit it to the ECG machine.
5. _____ The electrocardiograph amplifies and records the heart's electrical impulses.

Fill in the Blank:

6. The ECG technician must always verify the patient's _____ before starting the procedure.
7. The paper used in ECG machines is heat-sensitive and moves at a standard speed of _____ mm per second.

Chapter 2 – The Cardiovascular System

Multiple Choice:

8. The heart is located in the:
 - a. Abdominal cavity
 - b. Thoracic cavity
 - c. Pleural cavity
 - d. Cranial cavity
9. The chamber that pumps blood to the lungs is the:
 - a. Left atrium
 - b. Right atrium
 - c. Left ventricle
 - d. Right ventricle
10. The valve between the left atrium and left ventricle is the:
 - a. Pulmonic valve
 - b. Mitral (bicuspid) valve
 - c. Tricuspid valve
 - d. Aortic valve

True or False:

11. ____ The myocardium is the middle, muscular layer of the heart.
12. ____ The septum divides the heart into left and right sides.

Fill in the Blank:

13. The tip or lower portion of the heart is called the _____.
14. The major artery that carries oxygenated blood from the heart to the body is the _____.

Short Answer:

15. Explain the main function of the cardiovascular system.
16. Describe the pathway of blood flow through the heart starting from the right atrium.

Chapter 3 – Electrical Activity of the Heart

Multiple Choice:

17. The heart's natural pacemaker is the:
 - a. Atrioventricular (AV) node
 - b. Purkinje fibers
 - c. Sinoatrial (SA) node
 - d. Bundle of His
18. The AV node's main function is to:
 - a. Initiate the heartbeat
 - b. Delay the impulse between the atria and ventricles
 - c. Contract the ventricles
 - d. Record the electrical impulse
19. The Purkinje fibers cause:
 - a. Atrial contraction
 - b. Ventricular contraction
 - c. Relaxation of the heart
 - d. Atrial relaxation

True or False:

20. ____ Depolarization causes the heart muscle to contract.
21. ____ Repolarization is the heart's recovery phase.

Fill in the Blank:

22. The sequence of electrical conduction through the heart is: SA node → AV node → _____ → _____ → Purkinje fibers.
23. On the ECG, atrial depolarization is represented by the _____ wave.

Short Answer:

24. Why is the SA node called the “pacemaker” of the heart?
25. Describe the difference between depolarization and repolarization.