Chapter 5 - Study Guide

Student: __________________________

1. _______ tissues are important in assisting the cardiovascular system by collecting excess tissue fluid and eventually returning it to the cardiovascular system.
   
   A. Pulmonary  
   B. Vascular  
   C. Lymphatic  
   D. Gastric  
   E. Urinary

2. The innermost layer of an artery is known as the ____.  
   
   A. mesothelium  
   B. endothelium  
   C. exothelium  
   D. hyperthelium  
   E. hypothelium

3. Which of the following blood vessels are the only ones small, thin, and porous enough to exchange substances at the tissue level of organization?  
   
   A. arterioles  
   B. capillaries  
   C. venules  
   D. small arteries  
   E. none of the above

4. When dissecting a specimen, Barry noticed that the arteries are thicker and more elastic than the veins. Why are the arteries different from the veins?  
   
   A. Veins have to return blood to the heart against gravity  
   B. Arteries are thicker because they contain a greater volume of blood  
   C. Veins have valves  
   D. Arteries are under greater pressure  
   E. None of the above

5. Choose the most correct statement concerning capillaries.  
   
   A. Networks of capillaries are called capillary nets.  
   B. Almost all capillaries are open at the same time.  
   C. The only site of nutrient, gas exchange, and waste exchange is the capillaries.  
   D. Pre-capillary sphincters contract to increase capillary flow.  
   E. None of the choices are correct.
6. What is the function of valves in the veins?
   A. increase the rate of blood flow
   B. prevent the backward flow of blood
   C. regulation of blood pressure
   D. oxygenate the blood
   E. None of the above

7. The ______ is a thick, membranous sac that surrounds and protects the heart.
   A. mesothelium
   B. endothelium
   C. pericardium
   D. myocardium
   E. epicardium

8. The upper chambers of the heart are known as the:
   A. atria
   B. auricles
   C. AV valves
   D. ventricles
   E. septa

9. Choose the correct statement concerning the heart.
   A. The heart is cone-shaped.
   B. The heart is about the size of human fist.
   C. The heart is normally tilted toward the left.
   D. The heart is between the lungs.
   E. All of the choices are correct.

10. The __________ are known as the "strings of the heart".
    A. cingulated pectorale
    B. chordae tendinae
    C. corpus albicans
    D. corpus callosum
    E. choroid plexus

11. The two lower pumping chambers of the heart are known as the _____.
    A. atria
    B. chordae tendinae
    C. septa
    D. ventricles
    E. myocardia
12. The heart muscle is known as the ______________.
   A. epicardium  
   B. mesocardium  
   C. pericardium  
   D. myocardium  
   E. none of the above

13. The coronary arteries:
   A. have a small diameter  
   B. serve to provide blood to the heart  
   C. lie on the exterior surface of the heart  
   D. tend to become clogged  
   E. all of the above

14. The venae cavae carry low-oxygen blood to the ______ of the heart.
   A. right ventricle  
   B. right atrium  
   C. left ventricle  
   D. left atrium  
   E. chordae tendinae

15. Follow the blood flow through the heart. Choose the correct statement concerning cardiac blood flow.
   A. The vena cavae contain oxygenated blood.  
   B. The left atrium receives oxygenated blood from the pulmonary vein.  
   C. The right atrium sends blood through the bicuspid valve.  
   D. Pulmonary veins carry deoxygenated blood.  
   E. none of the above

16. Follow the blood flow through the heart. Choose the correct statement concerning cardiac blood flow.
   A. The vena cava contains deoxygenated blood.  
   B. The semilunar valves prevent backflow into the atria.  
   C. The left atrium sends blood through the tricuspid valve.  
   D. Pulmonary arteries carry oxygenated blood.

17. The cardiac control center is located in the _____________.
   A. Purkinje fibers  
   B. atrioventricular node  
   C. sinoatrial node  
   D. medulla oblongata  
   E. cerebrum
18. The cardiologist recommended performing another ECG on Mr. Kirk in order to:

A. identify personal ECG patterns  
B. audibly detect heart murmurs  
C. detect cardiac abnormalities  
D. keep a personal record of the ECG on file  
E. audibly detect heart murmurs and detect cardiac abnormalities

19. ______ pressure occurs when the ventricles are relaxing and ______ occurs when the heart ejects blood.

A. Systolic, diastolic  
B. Diastolic, systolic  
C. Pulmonary, ventricular  
D. Ventricular, pulmonary  
E. none of the above

20. The largest artery in the systemic circuit is the ______.

A. anterior vena cava  
B. pulmonary vein  
C. aorta  
D. femoral artery  
E. carotid artery

21. The ______ system drains blood from the capillary beds of the digestive tract to a capillary bed in the liver.

A. cephalic  
B. hepatic portal  
C. coronary  
D. celiac  
E. lymphatic

22. The physician explained that Sonny suffered from a ballooning or bulging of a blood vessel or ______.

A. embolus  
B. aneurysm  
C. thrombus  
D. myocardial infarction  
E. stroke
23. Mr. Everett suffered from a thrombus. If the thrombus dislodges and enters the bloodstream it becomes a/an ___.

   A. angina
   B. aneurysm
   C. polyp
   D. embolus
   E. infarction

24. A stent is:

   A. a cylinder of expandable metal mesh that is positioned inside a coronary artery
   B. a time spent in recovery after coronary bypass surgery
   C. used to treat phlebitis
   D. used to wrap the heart in to prevent congestive heart failure
   E. none of the above
Chapter 5 - Study Guide Key

1. ________ tissues are important in assisting the cardiovascular system by collecting excess tissue fluid and eventually returning it to the cardiovascular system.

   A. Pulmonary  
   B. Vascular  
   C. Lymphatic  
   D. Gastric  
   E. Urinary

   Lymphatic tissues are important in assisting the cardiovascular system by collecting excess tissue fluid and eventually returning it to the cardiovascular system.

   Chapter reference: 5  
   Figure/section reference: 5.1  
   Level of difficulty: Remember/Understand  
   Mader - Chapter 05 #1  
   Question type: missing word sentence  
   Topic Area: Cardiovascular System: Heart and Blood Vessels

2. The innermost layer of an artery is known as the _____.

   A. mesothelium  
   B. endothelium  
   C. exothelium  
   D. hyperthelium  
   E. hypothelium

   The innermost layer of an artery is known as the endothelium.

   Chapter reference: 5  
   Figure/section reference: 5.2  
   Level of difficulty: Remember/Understand  
   Mader - Chapter 05 #2  
   Question type: missing word sentence  
   Topic Area: Cardiovascular System: Heart and Blood Vessels
3. Which of the following blood vessels are the only ones small, thin, and porous enough to exchange substances at the tissue level of organization?

A. arterioles  
B. capillaries  
C. venules  
D. small arteries  
E. none of the above

Capillaries are narrow, microscopic tubes that are porous enough to allow for the exchange of substances at the tissue level of organization.

4. When dissecting a specimen, Barry noticed that the arteries are thicker and more elastic than the veins. Why are the arteries different from the veins?

A. Veins have to return blood to the heart against gravity  
B. Arteries are thicker because the contain a greater volume of blood  
C. Veins have valves  
D. Arteries are under greater pressure  
E. None of the above

Arteries are thicker and more elastic than veins because they are under greater pressure.
5. Choose the most correct statement concerning capillaries.

A. Networks of capillaries are called capillary nets.
B. Almost all capillaries are open at the same time.
C. The only site of nutrient, gas exchange, and waste exchange is the capillaries.
D. Pre-capillary sphincters contract to increase capillary flow.
E. None of the choices are correct.

The only site of nutrient, gas exchange, and waste exchange is the capillaries.

Chapter reference: 5
Figure/section reference: 5.2
Level of difficulty: Remember/Understand
Mader - Chapter 05 #6
Question type: multiple choice
Topic Area: Cardiovascular System: Heart and Blood Vessels

6. What is the function of valves in the veins?

A. increase the rate of blood flow
B. prevent the backward flow of blood
C. regulation of blood pressure
D. oxygenate the blood
E. None of the above

In the lower extremities, valves prevent the backflow of blood from occurring.

Chapter reference: 5
Figure/section reference: 5.2
Level of difficulty: Remember/Understand
Mader - Chapter 05 #7
Question type: multiple choice
Topic Area: Cardiovascular System: Heart and Blood Vessels

7. The _____ is a thick, membranous sac that surrounds and protects the heart.

A. mesothelium
B. endothelium
C. pericardium
D. myocardium
E. epicardium

The pericardium is a thick, membranous sac that surrounds and protects the heart.

Chapter reference: 5
Figure/section reference: 5.3
Level of difficulty: Remember/Understand
Mader - Chapter 05 #10
Question type: missing word sentence
Topic Area: Cardiovascular System: Heart and Blood Vessels
8. The upper chambers of the heart are known as the:

A. atria
B. auricles
C. AV valves
D. ventricles
E. septa

The atria are the upper collecting chambers of the heart.

9. Choose the correct statement concerning the heart.

A. The heart is cone-shaped.
B. The heart is about the size of a human fist.
C. The heart is normally tilted toward the left.
D. The heart is between the lungs.
E. All of the choices are correct.

The heart is a cone shaped organ located between the lungs. The heart is about the size of a human fist and normally oriented towards the left.

10. The ____________ are known as the "strings of the heart".

A. cingulated pectorale
B. chordae tendinae
C. corpus albicans
D. corpus callosum
E. choroid plexus

The chordae tendinae are strong fibrous strings that serve to anchor the valves of the heart.
11. The two lower pumping chambers of the heart are known as the _____.

A. atria  
B. chordae tendinae  
C. septa  
D. ventricles  
E. myocardia

The two lower pumping chambers of the heart are known as the ventricles.

12. The heart muscle is known as the _____________.

A. epicardium  
B. mesocardium  
C. pericardium  
D. myocardium  
E. none of the above

The heart muscle is known as the myocardium.

13. The coronary arteries:

A. have a small diameter  
B. serve to provide blood to the heart  
C. lie on the exterior surface of the heart  
D. tend to become clogged  
E. all of the above

The coronary arteries lying on the exterior surface of the heart serve to provide the heart with blood. Since they are thin, they have a tendency to become clogged.
14. The venae cavae carry low-oxygen blood to the ______ of the heart.
   A. right ventricle
   **B.** right atrium
   C. left ventricle
   D. left atrium
   E. chordae tendinae

   The venae cavae carry low-oxygen blood to the right atrium of the heart.

Chapter reference: 5
Figure/section reference: 5.3
Level of difficulty: Remember/Understand
Mader - Chapter 05 #19
Question type: missing word sentence
Topic Area: Cardiovascular System: Heart and Blood Vessels

15. Follow the blood flow through the heart. Choose the correct statement concerning cardiac blood flow.
   A. The vena cavae contain oxygenated blood.
   **B.** The left atrium receives oxygenated blood from the pulmonary vein.
   C. The right atrium sends blood through the bicuspid valve.
   D. Pulmonary veins carry deoxygenated blood.
   E. none of the above

   In the heart, the left atrium receives oxygenated blood from the pulmonary vein.

Chapter reference: 5
Figure/section reference: 5.3
Level of difficulty: Remember/Understand
Mader - Chapter 05 #20
Question type: multiple choice
Topic Area: Cardiovascular System: Heart and Blood Vessels

16. Follow the blood flow through the heart. Choose the correct statement concerning cardiac blood flow.
   A. The vena cava contains deoxygenated blood.
   B. The semilunar valves prevent backflow into the atria.
   C. The left atrium sends blood through the tricuspid valve.
   D. Pulmonary arteries carry oxygenated blood.

   In the heart, the vena cava contains deoxygenated blood.

Chapter reference: 5
Figure/section reference: 5.3
Level of difficulty: Remember/Understand
Mader - Chapter 05 #21
Question type: multiple choice
Topic Area: Cardiovascular System: Heart and Blood Vessels
17. The cardiac control center is located in the ________________.

A. Purkinje fibers  
B. atrioventricular node  
C. sinoatrial node  
D. medulla oblongata  
E. cerebrum

The cardiac control center is located in the medulla oblongata of the brain.

18. The cardiologist recommended performing another ECG on Mr. Kirk in order to:

A. identify personal ECG patterns  
B. audibly detect heart murmurs  
C. detect cardiac abnormalities  
D. keep a personal record of the ECG on file  
E. audibly detect heart murmurs and detect cardiac abnormalities

The ECG is used to detect cardiac abnormalities.
19. _____ pressure occurs when the ventricles are relaxing and _____ occurs when the heart ejects blood.

A. Systolic, diastolic
B. Diastolic, systolic
C. Pulmonary, ventricular
D. Ventricular, pulmonary
E. none of the above

Diastolic pressure occurs when the ventricles are relaxing and systolic occurs when the heart ejects blood.

20. The largest artery in the systemic circuit is the _____.

A. anterior vena cava
B. pulmonary vein
C. aorta
D. femoral artery
E. carotid artery

The aorta is the largest artery in the systemic circuit.
21. The _____ system drains blood from the capillary beds of the digestive tract to a capillary bed in the liver.

A. cephalic
B. hepatic portal
C. coronary
D. celiac
E. lymphatic

The hepatic portal system drains blood from the capillary beds of the digestive tract to a capillary bed in the liver.

22. The physician explained that Sonny suffered from a ballooning or bulging of a blood vessel or ________.

A. embolus
B. aneurysm
C. thrombus
D. myocardial infarction
E. stroke

An aneurysm is another name for a ballooning or bulging of a blood vessel.
23. Mr. Everett suffered from a thrombus. If the thrombus dislodges and enters the bloodstream it becomes a/an ____.

A. angina
B. aneurysm
C. polyp
D. embolus
E. infarction

If the thrombus dislodges and enters the bloodstream it becomes an embolus.

Chapter reference: 5
Figure/section reference: 5.7
Level of difficulty: Apply/Analyze
Mader - Chapter 05 #44
Question type: missing word sentence
Topic Area: Cardiovascular System: Heart and Blood Vessels

24. A stent is:

A. a cylinder of expandable metal mesh that is positioned inside a coronary artery
B. a time spent in recovery after coronary bypass surgery
C. used to treat phlebitis
D. used to wrap the heart in to prevent congestive heart failure
E. none of the above

A stent is a cylinder of expandable metal mesh that is positioned inside a coronary artery.

Chapter reference: 5
Figure/section reference: 5.7
Level of difficulty: Remember/Understand
Mader - Chapter 05 #47
Question type: multiple choice
Topic Area: Cardiovascular System: Heart and Blood Vessels
### Chapter 5 - Study Guide Summary

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