

Unit 8 Circulatory System

Name: _____ Date: _____ Score: _____/48

1. Thick walls, elastic tissue, and smooth muscle are characteristics of:
 - a. Veins
 - b. Arteries
 - c. Arterioles
 - d. Capillaries
2. Blood vessels that allow diffusion through their thin walls are the:
 - a. Arteries
 - b. Venules
 - c. Arterioles
 - d. Capillaries
3. The blood vessels that transports blood out of a capillary bed is a(n):
 - a. Vein
 - b. Artery
 - c. Venule
 - d. Arteriole
4. Which type of blood vessel has thick walls that can withstand high pressure?
 - a. Vein
 - b. Artery
 - c. Arteriole
 - d. Capillary
5. Which of the following has the greatest total cross-sectional area of blood vessels?
 - a. Capillaries
 - b. Venous system
 - c. Arterial system
 - d. Pulmonary system

6. Which of the following statements is true?
 - a. Arteries have thinner walls than veins
 - b. Veins have greater elasticity than arteries
 - c. Arteries have one-way valves and veins do not
 - d. Veins have a larger internal diameter than arteries
7. Which of the following are characteristics of the blood vessel that carries blood from the arterioles to the venules?
 - a. Thin walls with valves
 - b. Thin walls, one cell layer thick
 - c. Thick walls to withstand pressure
 - d. A thick middle layer of elastic tissue
8. Where is blood velocity the slowest?
 - a. In a vein
 - b. In a venule
 - c. In an artery
 - d. In a capillary
9. Blockages in which of the following blood vessels will reduce blood flow to the heart muscle?
 - a. Dorsal aorta
 - b. Carotid artery
 - c. Coronary artery
 - d. Pulmonary artery
10. Blood leaves the liver by way of the:
 - a. Iliac vein
 - b. Renal vein
 - c. Hepatic vein
 - d. Hepatic portal vein

11. A red blood cell leaves the aorta, makes a circuit through the body, and arrives back in the capillaries of the alveoli. The correct sequence of organs through which the cell may have travelled is:
- Lungs, heart, small intestine, liver
 - Small intestine, heart, liver, lungs
 - Liver, lungs, small intestine, heart
 - Small intestine, liver, heart, lungs
12. A blood vessel that carries blood from the lungs to the heart is the:
- Coronary vein
 - Coronary artery
 - Pulmonary vein
 - Pulmonary artery
13. A red blood cell is located in an artery in your right arm. How many capillary beds must this cell pass through before it is returned to the left ventricle?
- One
 - Two
 - Three
 - Four
14. The blood vessels that carry blood to and from the head are the:
- Iliac arteries and veins
 - Subclavian arteries and veins
 - Carotid arteries and jugular veins
 - Anterior and posterior vena cava
15. The coronary arteries carry:
- Blood to the aorta
 - Nutrients to the heart cells
 - Oxygenated blood to the head
 - Deoxygenated blood to the lungs

16. The pulmonary artery is classified as an artery because it:
- Has thin walls
 - Carries blood away from the heart
 - Contains blood that has high levels of oxygen
 - Has one-way valves that prevent blood from flowing back to the heart
17. In which of the following vessels would blood plasma be the most hypertonic to distilled water?
- Renal vein
 - Carotid artery
 - Subclavian artery
 - Hepatic portal vein
18. A blood clot forms in the hepatic vein but breaks off and lodges in the next capillary bed it encounters. Where would it be found?
- Liver
 - Brain
 - Lungs
 - Small intestine
19. What two vessels carry blood to the anterior vena cava?
- The jugular vein and the iliac vein
 - The jugular vein and the subclavian vein
 - The hepatic portal vein and the renal vein
 - The coronary vein and the pulmonary vein
20. What blood vessel supplies blood directly to the heart muscle?
- The aorta
 - The carotid artery
 - The coronary artery
 - The pulmonary artery
21. Which circulatory pathway carries blood to the lungs?
- Renal
 - Hepatic
 - Systemic
 - Pulmonary

22. Blood enters the iliac artery from which of the following vessels?
- The aorta
 - The renal artery
 - The carotid artery
 - The coronary artery
23. Capillary beds are equipped with sphincter muscles that:
- Prevent the backflow of blood
 - Expand and recoil with each heartbeat
 - Divert blood toward areas of increased metabolic activity
 - Hold blood in the beds until nutrient and waste exchange is complete
24. When comparing the arteriole end of the capillary bed with the venule end, we see that at the arteriole end, more fluid:
- Enters the capillary due to blood pressure
 - Leaves the capillary due to blood pressure
 - Enters the capillary due to osmotic pressure
 - Leaves the capillary due to osmotic pressure
25. One factor that can cause edema, an abnormal accumulation of fluid within the tissues, is a decrease in:
- Blood pressure
 - The secretion of ADH
 - Concentration of blood proteins
 - Water reabsorption by the kidneys
26. Which of the following describes the net movement of water at the arterial end of a capillary bed?
- Net movement of water into the tissues because blood pressure is less than the osmotic pressure of the blood
 - Net movement of water into the tissues because blood pressure is greater than the osmotic pressure of the blood
 - Net movement of water into the capillaries because blood pressure is less than the osmotic pressure of the blood
 - Net movement of water into the capillaries because blood pressure is greater than the osmotic pressure of the blood

27. The function of lymph nodes is to:

- a. Form platelets
- b. Filter bacteria from fluid
- c. Remove urea from blood
- d. Exchange gases with tissues

28. Which of the following is not found in the lymphatic system?

- a. Veins
- b. Nodes
- c. Arteries
- d. Capillaries

29. Rapid production of lymphocytes in the lymph nodes would indicate the presence of:

- a. An infection
- b. Hypotension
- c. Hypertension
- d. Capillary fluid exchange

30. A foreign substance entering the circulatory system is called a(n):

- a. Platelet
- b. Antigen
- c. Antibody
- d. Hormone

31. What occurs when an antigen enters the body?

- a. Increased platelet production
- b. Red blood cells phagocytize the antigen
- c. Antibodies change shape to fit the antigen
- d. Specific antibodies are produced and released

32. What would result if a blockage occurred in a lymph vein?

- a. More lymph would enter the subclavian vein
- b. The tissue served by this lymph vein would fill with fluid
- c. The lymph capillaries attached to this lymph vein would dry up
- d. All lymph veins in this part of the body would fill with blood

33. The lymphatic system consists of:
- Vessels and valves
 - AV and semilunar valves
 - The pulmonary artery and the arterial duct
 - The umbilical artery and the pulmonary vein
34. What is produced by white blood cells to deactivate bacteria and viruses?
- Antigens
 - Platelets
 - Antibodies
 - Hemoglobin
35. Which are responsible for collecting excess tissue fluid from the body?
- The venules
 - The lymph nodes
 - The blood arterioles
 - The lymph capillaries
36. Where does lymphatic fluid enter the bloodstream?
- The aorta
 - The jugular vein
 - The subclavian vein
 - The pulmonary vein
37. What structure takes up the tissue fluids not absorbed by the blood capillaries?
- Lymph vessel
 - Subclavian artery
 - Hepatic portal vein
 - Posterior vena cava
38. How are veins and lymph vessels similar?
- Both contain valves
 - Both return blood to the heart
 - Both have large amounts of elastic tissue
 - Both carry blood with a low oxygen concentration

39. Which of the following structures in fetal circulation functions to deliver blood, which is high in waste, to the placenta?
- Venous duct
 - Umbilical vein
 - Pulmonary veins
 - Umbilical arteries
40. Blood with a high oxygen concentration can be found in both the:
- Renal artery and the pulmonary artery
 - Umbilical vein and the pulmonary vein
 - Pulmonary vein and the umbilical artery
 - Pulmonary artery and the umbilical artery
41. Which of the following would occur as a result of the oval opening in the heart remaining open after birth?
- Blood pressure in the lungs would increase
 - Impulses from the sinoatrial node would stop
 - Blood in the right atrium would mix with the blood in the left atrium
 - A greater amount of blood would flow into the pulmonary system
42. In fetal circulation, blood from the placenta enters the posterior vena cava by way of the:
- Umbilical artery
 - Venous duct
 - Oval opening
 - Arterial duct
43. Which two structures in the fetal circulatory system allow blood to bypass the lungs?
- Venous duct and oval opening
 - Oval opening and arterial duct
 - Pulmonary vein and arterial duct
 - Umbilical artery and pulmonary vein
44. Blood which lacks platelets would not be able to:
- Clot
 - Carry oxygen
 - Fight infections
 - Transport nutrients

45. Red blood cells originate in the:
- a. Liver
 - b. Lymph nodes
 - c. Bone marrow
 - d. Capillary beds
46. All of the following are components of plasma except:
- a. Salts
 - b. Water
 - c. Proteins
 - d. Platelets
47. Which of the following is a functional of red blood cells?
- a. Clot blood
 - b. Carry oxygen
 - c. Fight infection
 - d. Regulate osmotic pressure
48. Which of the following maintains the osmotic pressure of the blood?
- a. Urea
 - b. Protein
 - c. Glycogen
 - d. Phospholids