

## A Guided Study of the Circulatory System (Use Photos and Text to find Answers)

1. What is the function of the Sinoatrial Node?
  - a) It initiates the contraction of the heart
  - b) It pushes blood from the right atrium into the right ventricle
  - c) It sends impulses to the lungs
  - d) It sends information to the Purkinje fibers
2. What is the name of the heart's natural pacemaker?
  - a) The Pericardial Sac
  - b) The Purkinje Fibers
  - c) Right Atrium
  - d) SA Node
3. The wall of the heart is made up of three layers. The Epicardium, Ecocardium, and Endocardium. T/F  
Answer: False. Epicardium, Myocardium, Endocardium
4. The function of Myocardium is to pump blood into the heart and major arteries. T/F
5. When excess fluid builds within the pericardial space it is know as Cardiac Tamponade. T/F
6. What supplies blood to the Myocardium and other components of the heart?
  - a) Coronary Arteries
  - b) Coronary Veins
  - c) Pulmonary Arteries
  - d) Pulmonary Veins
7. Lack of bloodflow or sudden blockage to a region of the heart is know as Myocardial Infarction. T/F
8. What is the formal term for a Heart Attack?
  - a) Myocardial Infarction
  - b) Epicardial Attack
  - c) Both a and b
  - d) None of the above

9. What occurs when the buildup of plaque in artery walls obstructs blood flow and decreases flexibility or compliance of the blood vessels? Circle all that apply.

- a) Coronary Artery Disease
- b) Atherosclerosis
- c) Heart Murmur
- d) Heart Attack

10. What is the leading cause of death worldwide?

- a) Heart Attack
- b) Cancer
- c) Coronary Artery Disease
- d) Respiratory Failure

11. The four chambers of the heart are the Right Aorta, Left Aorta, Right Ventricle, and Left Ventricle. T/F

Answer: False. Right Atrium, Left Atrium, Right Ventricle, Left Ventricle

12. What is the left atrioventricular valve more commonly known as?

- a) Mitral Valve
- b) Bicuspid Valve
- c) a & b
- d) None above

13. What is the right atrioventricular valve more commonly known as?

- a) Tricuspid Valve
- b) Bicuspid Valve
- c) a & b
- d) None above

14. To what area of the heart does the superior and inferior vena cava return blood?

- a) The Right Atrium
- b) The Aortic Arch
- c) The Left Atrium
- d) The Right Ventricle

15. Name the artery that does not originate from the Arch of Aorta.

- a) Brachiocephalic Trunk
- b) Left Common Carotid Artery
- c) Right Subclavian Artery
- d) Left Subclavian Artery

16. The Arch of Aorta supplies blood to the head, neck, shoulders, and arms. T/F

17. Pulmonary veins are high in oxygen. T/F

18. The Superior Mesenteric Vein is rich in oxygen and low in nutrients. T/F

Answer: False. It is low in oxygen and high in nutrients.

19. These vessels surround cells and tissues, feeding oxygen and nutrients into them.

- a) Arteries
- b) Veins
- c) Capillaries
- d) None of the above

## A Guided Study of the Respiratory System (Reference text and photos for answers)

1. Humans need which two elements to connect in order to produce energy?
  - a) Oxygen, Carbon
  - b) Oxygen, Sodium
  - c) Sodium, Potassium
  - d) Sodium, Carbon
2. Which part of the respiratory system removes debris and pathogens from incoming air?
  - a) The Conducting Zone
  - b) Lower Respiratory System
  - c) Respiratory Centers of the Brain
  - d) None of the above
3. The major entrance and exit of the respiratory system is the mouth. T/F  
Answer: False. Nose.
4. The sinuses located in the upper airway are the frontal, maxillary, sphenoid, and ethmoid. T/F
5. The pharynx is part of the throat located directly behind the nasal cavity and mouth and directly below the esophagus. T/F  
Answer: False. Above the Esophagus
6. Name the three major divisions of the pharynx.
  - a) Nasopharynx, Oropharynx, Laryngopharynx
  - b) Epiglottis, Larynx, Oropharynx
  - c) Larynx, Nasopharynx, Laryngopharynx
  - d) Tonsils, Esophagus, Trachea
7. What connects the pharynx to the trachea?
  - a) Epiglottis
  - b) Laryngopharynx
  - c) Larynx

- d) Oropharynx
8. The thyroid cartilage, epiglottis, and cricoid cartilage are pieces that form what?
- a) Trachea
  - b) Larynx**
  - c) Pharynx
  - d) Esophagus
9. The epiglottis is a very flexible piece of elastic cartilage that covers the opening of the trachea. **T/F**
10. The trachea is the bridge between the upper and lower respiratory zones. **T/F**
11. The trachea is also known as the esophagus. **T/F**  
**Answer: False. Windpipe.**
12. The trachea is formed by pieces of what type of cartilage?
- a) Fibrocartilage
  - b) Hyaline Cartilage**
  - c) Elastic Cartilage
  - d) All of the above
13. There are more than \_\_\_\_\_ terminal bronchioles in each lung.
- a) 10
  - b) 100
  - c) 1,000**
  - d) 10,000
14. The Upper Respiratory System is directly involved in gas exchange. **T/F**  
**Answer: False. Lower Respiratory System**
15. The diaphragm is a muscle and is key to the physical process of breathing. **T/F**
16. What group helps maintain a constant breathing rhythm by stimulating the diaphragm and intercostal muscles to contract, resulting in inspiration?
- a) Dorsal Respiratory Group**
  - b) Ventral Respiratory Group
  - c) Apneustic Center
  - d) Pneumotaxic Center
17. The Dorsal Respiratory Group (DRG) is located in medulla oblongata and the pons.

T/F

Answer: False. Only in the Medulla Oblongata

18. The Ventral Respiratory Group (VRG) is involved in forced breathing. T/F

19. The second respiratory center of the brain found in the pons is the Ventral Respiratory Group (VRG). T/F

Answer: False. Pontine Respiratory Group (PRG) of Cells