

## The Circulatory System - Review Questions

### Multiple Choice

- The heart is composed of what type of muscle?  
a) Cardiac muscle      b) Smooth Muscle      c) Skeletal Muscle      d) Nervous Muscle
- Which blood component plays a key role in the process of clotting?  
a) White blood cells      b) Red blood cells      c) Capillaries      d) Platelets
- Which statement best describes the function of the red blood cells?  
a) To carry oxygen to and from cells  
b) To carry oxygen and carbon dioxide to and from cells  
c) To engulf particles  
d) To play a role in the formation of antibodies
- What is the normal blood pressure measurement for a healthy teenager?  
a) 120/80      b) 85/125      c) 180/110      d) 105/70
- What is the condition where plaque builds up inside the arterial walls?  
a) Arrhythmia      b) Angioplasty      c) Atherosclerosis      d) Aneurysm
- Which blood disorder can occur when blood is lacking red blood cells?  
a) Arrhythmia      b) Anemia      c) Stroke      d) Hemophilia

### Short Answer

- Your nasal passage contains a dense network of capillaries to warm the air before it enters your body.  
a) How does this help to regulate the body temperature?  
b) How does it support the respiratory system?
- a) What happens to a cut after it bleeds for a while?  
b) This is an example of which main function of the circulatory system?
- What is each type of blood vessel called?  
a) Vessels that carry blood to the heart \_\_\_\_\_  
b) Thin smallest vessels throughout the body where diffusion occurs \_\_\_\_\_  
c) Vessels that carry blood away from the heart \_\_\_\_\_
- a) What is the systolic blood pressure?  
b) What is the diastolic blood pressure?
- Which component of blood is primarily responsible for each of the following event?  
a) Initiating blood clots \_\_\_\_\_  
b) Transporting wastes \_\_\_\_\_  
c) Transporting glucose \_\_\_\_\_  
d) Killing bacteria \_\_\_\_\_
- How does the amount of hemoglobin in the blood relate to the blood's ability to transport oxygen?
- A child falls down and scrapes her knee on the sidewalk. Bacteria from the sidewalk enter the cut.  
Explain how the components of the child's blood become involved to help repair tissue and prevent further damage.
- Why is blood considered a connective tissue?
- What is hypertension?
- What mechanism is used by blood to cope with excessive heat during exercises?

# The Circulatory System - Answers

## Multiple Choice

1. The heart is composed of what type of muscle?  
a) Cardiac muscle      **b) Smooth Muscle**      c) Skeletal Muscle      d) Nervous Muscle
2. Which blood component plays a key role in the process of clotting?  
a) White blood cells      b) Red blood cells      c) Capillaries      **d) Platelets**
3. Which statement best describes the function of the red blood cells?  
a) To carry oxygen to and from cells  
**b) To carry oxygen and carbon dioxide to and from cells**  
c) To engulf particles  
d) To play a role in the formation of antibodies
4. What is the normal blood pressure measurement for a healthy teenager?  
a) 120/80      b) 85/125      c) 180/110      **d) 105/70**
5. What is the condition where plaque builds up inside the arterial walls?  
a) Arrhythmia      b) Angioplasty      **c) Atherosclerosis**      d) Aneurysm
6. Which blood disorder can occur when blood is lacking red blood cells?  
a) Arrhythmia      **b) Anemia**      c) Stroke      d) Hemophilia

## Short Answer

1. Your nasal passage contains a dense network of capillaries to warm the air before it enters your body.  
a) How does this help to regulate the body temperature?  
**A: Capillaries have large surface area, so warm blood in the capillaries warms the air in the nasal passage before it enters the lungs.**  
b) How does it support the respiratory system?  
**A: It protects the delicate structures in the lower respiratory system from damage caused by cold air.**
2. a) What happens to a cut after it bleeds for a while?  
**A: A clot forms.**  
b) This is an example of which main function of the circulatory system?  
**A: Protection against blood loss and against disease entering the body.**
3. What is each type of blood vessel called?  
a) Vessels that carry blood to the heart **A: Vein**  
b) Thin smallest vessels throughout the body where diffusion occurs **A: Capillaries**  
c) Vessels that carry blood away from the heart **A: Artery**
4. a) What is the systolic blood pressure?  
**A: The pressure in the artery during a contraction.**  
b) What is the diastolic blood pressure?  
**A: The pressure in the artery between a contraction.**

5. Which component of blood is primarily responsible for each of the following event?

- a) Initiating blood clots **A: Platelets**
- b) Transporting wastes **A: Plasma**
- c) Transporting glucose **A: Plasma**
- d) Killing bacteria **A: White blood cells**

6. How does the amount of hemoglobin in the blood relate to the blood's ability to transport oxygen?

**A: Oxygen is transported bound to hemoglobin so the more hemoglobin there is, the more oxygen can be transported.**

7. A child falls down and scrapes her knee on the sidewalk. Bacteria from the sidewalk enter the cut.

Explain how the components of the child's blood become involved to help repair tissue and prevent further damage.

**A: Since blood vessels tear, platelets travel to the injury and produce a fibrous mesh of fibrin to stop the blood flow and eventually form a blood clot. Since the bacteria have entered the wound, white blood cells will surround, engulf and destroy the bacteria.**

8. Why is blood considered a connective tissue?

**A: Blood links all the cells and organs of the body.**

9. What is hypertension?

**A: Continuous high blood pressure.**

10. What mechanism is used by blood to cope with excessive heat during exercises?

**A: Sweating releases heat. Blood vessels dilate/widen to increase blood flow near the skin.**

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