

## **Study guide for chapter 9**

**Pages: (239)**

### **Unifying Concepts of Animal Circulation:**

- What is role of the circulatory system in animal body? and what its components?
- What is difference between the open circulatory system and the closed circulatory system?
- What is difference between the single circulation system and the double circulatory system?
- Discuss the pulmonary circuit and the systemic circuit in human?

### **The human cardiovascular system**

- List the major parts of the human cardiovascular system?
- Explain blood flow through human heart chambers?
- What is the cardiac cycle? What is role of the pacemaker?

### **Blood Vessels**

- What are types of blood vessels and their structures?
- Explain how chemical exchange between the blood and tissue cells?
- What does it mean that Blood pressure =120/80?

### **Blood**

- What is the main function of three cellular components of human blood?
- Give example for disorders related to blood components?  
(Anemia, Hemophilia and Leukemia)

### **Donating Blood Components**

- Differentiate between types of blood donation procedures?

### **Cardiovascular Disease**

- What is the result of developing plaque in the inner walls of arteries?

### **Unifying Concepts of Animal Respiration**

- What is the main function of the respiratory system?
- What are the characteristics of respiratory surfaces?
- “There is diversity of respiratory organs in animals” Explain?
- What are the three phases of gas exchange in the human respiratory system?
- **The Path of Air in human respiratory system**
- What are the main organs of the respiratory system?
- Follow the air through the human respiratory system.

### **Information Flow: The Brain’s Control over Breathing**

- What is the difference between inhalation and exhalation?
- **The Role of Hemoglobin in Gas Transport**
- What is the role of Hemoglobin in gas transport?
- Explain how gas transport and exchange in human body?

### **Smoking Damages the Structure and Function of the Lungs**

- How does smoking damage the human lungs? (chronic obstructive pulmonary disease)