A&P Chapter 11 The Cardiovascular System

1. Summarize the functions of the circulatory system.
---major function is **transportation**
---using blood as transport vehicle, the system carries **oxygen, nutrients, cell wastes, hormones, and many other substances** vital for homeostasis to and from cells
---force to move blood around the body is provided by beating heart
2. State the location of the heart.
---heart is located within bony thorax and flanked on each side by the lungs
--more pointed apex is pointed toward left hip and rests on the diaphragm (level of 5th intercostal space)
--heart's broader posterosuperior aspect, or base from which great vessels of body merge, points toward right shoulder and lies beneath the second rib
3. Describe the coverings of the heart.
---heart enclosed by double sac of serous membrane (pericardium)
---thin **visceral pericardium (epicardium)** hugs external surface of heart and is part of heart wall
---epicardium is continuous at heart base with loosely applied **parietal pericardium**
---serous fluid (slippery lubricating) produced by serous pericardial membranes
--allows heart to beat easily in almost frictionless environment as pericardial layers slide smoothly across each other
4. Describe the walls of the heart.
---heart walls composed of three layers: **epicardium, myocardium, and endocardium**
---**epicardium is thin visceral pericardium (#3 above)**
---**myocardium** is middle layer of wall and is composed of thick bundles of cardiac muscle twisted and whorled into ringlike arrangement
--it is the **myocardium** that actually contracts
---**endocardium** (innermost) is thin, glistening sheet of endothelium that lines heart chambers
--is continuous with lining of blood vessels entering and leaving heart
5. Describe the chambers of the heart.
---heart has four hollow chambers or cavities
---two atria and two ventricles
---each chamber lined with endocardium
---superior atria are primarily **receiving chambers**