I. Overview of circulation  Fig 20.1
   A. The heart is a **double** pump

   **pulmonary** circuit                     **systemic** circuit
   -- sends $O_2$ poor blood to lungs       -- sends $O_2$ rich blood to tissues

   - Right heart
     ↓
   - Lungs
     ↗

   - Left heart
     ↓
   - aorta
     ↓
   - body organs
     ↘

B. The heart is located in the mediastinum  (Fig. 20.2)

II. Pericardium & heart wall -- Fig. 20.4
   A. Structure - Triple layer bag (although your text says “double”)
      pericardium = pericardial sac + epicardium (visceral serous pericardium)
      ↦ = fibrous pericardium + parietal serous pericardium

   -- insert sketch--
B. Heart wall itself has 3 layers, one of which is the inner layer of the pericardium -- from outer to inner: 

epicardium

myocardium

endocardium

C. Function – Why a triple layer bag?
1. reduces friction from the heart beating
2. protects
3.
4.

III. Chambers and external anatomy  
Fig. 20.3 -- KNOW! “front & back; top to bottom” -- practice sketching

- apex-
- base-
- coronary (atrioventricular) sulcus –
- coronary sinus –
- anterior & posterior interventricular sulci

R. atrium
- auricle
- superior & inferior vena cava

R. ventricle
- pulmonary trunk
- L. & R. pulmonary arteries

L. atrium
- auricle
- L. & R. pulmonary veins

L. ventricle
- ascending aorta
- aortic arch
- ligamentum arteriosum
- descending aorta

IV. Internal anatomy and path of blood flow: KNOW  FIG. 20.7! & 20.10

A. Right atrium
1. pectinate muscles -
2. interatrial septum =
   - fossa ovalis -
3. receives blood from
   -
   -
   -

↓
4. outflow through the tricuspid valve (right atrioventricular [AV])

B. Right ventricle
   1. trabeculae carnae
      “beams”     “fleshy”
   2. 
   3. 
   4. Blood pumped out to pulmonary trunk, then L. & R. pulmonary arteries through pulmonary semilunar valve

C. Left atrium
   1. same internally as the right
   2. receives blood from
      -
      -
   3. outflow through the mitral or left atrioventricular [AV] valve

D. Left ventricle
   1. thicker walls than the right
   2. pumps blood out to the body through the aortic semilunar valve into the ascending aorta

E. Fibrous skeleton (Fig. 20.8)
   - dense c.t. rings around and between 4 valves
      -
      -
V. **Blood supply: coronary (cardiac) circulation**
   Fig. 20.11, but will get details in lab

   L. & R. coronary arteries from base of ascending aorta
   ↓
   multiple anastomoses (collateral circulation)
   ↓
   capillaries
   ↓
   cardiac veins
   ↓
   coronary sinus
   ↓
   R. atrium

   -- insert sketch--

VI. **Conduction system**
   - specialized, non-contractile cardiac muscle fibers that form **pacemaker** and **rapid conduction** fibers throughout the heart