

## Cardiovascular and Circulatory Systems

Exercise 40 (Pg. 427-428) & Exercise 44 (pg.457-463, pp.468A-468F)

### I. Basic Heart Anatomy

Identify the following structures:

#### *External Structures*

R&L Atria  
R&L Ventricles  
Aorta  
Pulmonary Trunk  
Pulmonary Artery(-ies)  
Pulmonary veins  
Superior (cranial) vena cava  
Inferior (caudal) vena cava

#### *Internal Structures*

chambers (R&L Atria, R&L ventricles)  
valves: tricuspid, bicuspid (mitral),  
aortic semilunar valve  
pulmonary semilunar valve  
Chordae tendinae

\*\*\*\*Know the path of blood flow through the heart.

### II. Microscopy

A) Blood vessel anatomy (Pg 458): Prepared slide of the cross section of an artery and a vein. Be able to distinguish them and note the structural differences.

B) Blood composition (Pg. 427-228): Prepared slide of a blood smear. Be able to identify and know the function of red blood cells (erythrocytes) and white blood cells (leukocytes or lymphocytes).

### III) Blood pressure (Pg.460)---- know the following definitions:

Systolic Pressure  
Diastolic Pressure

### IV) Human (EKG) electrocardiogram (Pg 468A-468B)

know what the P-wave QRS-wave & T-wave represent

V). **Blood Typing:** Know the different blood types, and also, the antigen and antibodies produced by each type.

### VI) Breathing (Exercise 43, pages 449-452)

1. Understand the process of breathing and the muscles involved (diaphragm, intercostals).
2. Lung capacity: know what each volume (**tidal volume, expiratory reserve volume, inspiratory reserve, residual volume, vital capacity**) represents.

If provided with a spirometer recording: know where each of these volumes are located and be able to calculate volumes if given a scale. See the posted example outside of lab.

3. Review the prepared slide of lung tissue (note alveoli).