# Cardiovascular System (Part II) Study Guide

1. Intrinsic Conduction System of the Heart (read pages 354-357)
   * Be able to label the intrinsic conduction system of the heart (Figure 11.5) with the following terms: SA node, AV node, AV bundle, Left and Right bundle branches, and Purkinje fibers.
   * The SA node sets your heart rate; it is the “pacemaker.”
   * The conduction system also maintains your heart’s proper rhythm, which means atria contract first and then the ventricles.
2. Electrocardiography (ECG/EKG) (read page 356)
   * Be able to draw and label the waves of a normal ECG.
   * Know what the waves represent:
     + P wave = Atria contracting
     + QRS complex = Ventricles contracting, Atria relaxing
     + T wave = Ventricles relaxing
3. Cardiac Cycle and Heart Sounds (read pages 357-358)
   * Know the difference between systole and diastole:
     + Systole: when the ventricles are contracting
     + Diastole: when the ventricles are relaxing
   * Know what makes the heart sounds you hear with a stethoscope:
     + “Lub” is closing of the AV valves.
     + “Dub” is closing of the aortic and pulmonic valves.
4. Cardiac Output (read page 358)
   * Know the equation for cardiac output:
     + Cardiac Output (ml/min) = Heart Rate (beats/min) x Stroke Volume (ml/beat)
     + Know the definition of stroke volume.
     + Be able to calculate a cardiac output.
5. Blood Pressure (read pages 372-374)
   * Know the equation for blood pressure:
     + Blood Pressure (BP) = Cardiac Output (CO) x Peripheral Resistance (PR)
     + Know the definition of peripheral resistance.
     + You will not be asked to calculate a blood pressure.
     + Be able to identify a normal blood pressure reading vs. a high blood pressure reading.
   * Understand that blood pressure changes throughout your cardiovascular system (Figure 11.17). Blood pressure is highest closest to your heart and gradually falls until it reaches the heart again.
     + Explain why blood pressure must change in order to have blood flow.
6. Blood vessels (read pages 360-362)
   * Know the different types of blood vessels: arteries, arterioles, capillaries, venules, veins (Figure 11.17).
   * Be able to list the structural differences between arteries, veins, and capillaries (Figure 11.8).
   * Understand the function of the muscular pump (Figure 11.9).