**Class Activity #6 (Physiology)**

**1. Review Skeletal Muscle Physiology**

**Getting ready for Cardio material and Exam II**

*Read and use your textbook, lecture notes, slides or internet to* ***select*** *best answer. This is to provide preparation for the next exam and for the PhysioEx lab sessions.*

**1.** Trace a RBC from starting the LV all the way back to where it started.

**2.** Normally the right pulmonary artery has \_\_\_\_ O2 content and transports blood directly to the \_\_\_\_.

**a)** low: lungs **b)** high: heart **c)** low: heart **d)** high; lungs

**3.** Describe the valves of the heart and what their function is.

**4.** If a person has mitral valve stenosis, what feature might you expect to see and hear?

**5.** What are the two types of Myocardiocytes and how do they differ?

**6.** Sketch the action potentials of an **1)** Autorhythmic and **2)** a Contractile myocardiocyte.

**7.** The Resting Membrane Potential in the autorhythmic myocardiocytes of the heart is

**a)** -70 mV **b)** unstable, due to K+ efflux **c)** unstable, drifts from -60 mV

**d)** -90 mV **e)** stable at -40 mV

**8.** At the peak of the AP of contractile myocardiocytes, just before the plateau phase -

**a)** the Na+ channels open **b)** the Ca2+ channels close

**c)** the Na+ channels close, causing the membrane voltage to remain elevated

**d)** the K+ channels close causing the membrane voltage to fall slightly

**e)** opening of K+ channels, causes K+ efflux that drops the membrane voltage slightly

**9.** The absolute refractory period in contractile myocardiocytes:

**a)** is to prevent contractions in cardiac muscle

**b)** prevents temporal summation and therefore complete tetanus in cardiac muscle

**c)** is a time when no other stimulus can cause an action potential, regardless of the strength

**d)** b and c are correct **e)** a, b and c are correct

**10.** The influx of which ion accounts for the plateau phase?

**a)** sodium **b)** potassium **c)** chloride **d)** calcium

**11.** The AV Bundle (of His) is located:

**a)** in the AV valves **b)** in the bundle branches down the IV septum **c)** in the superior IV septum

**d)** in the superior posterior right atrium **e)** in the inferior medial right atrium

**12.** Which portion of the ECG corresponds to repolarization of the ventricles?

**a)** the P wave **b)** the T wave **c)** the QRS complex **d)** S-T segment **e)** P-R segment

**13.** Which component of the heart’s conduction system has the slowest spontaneous rate of firing?

**a)** atrioventricular node **b)** atrioventricular bundle

**c)** bundle branches **d)** Purkinje fibers **e)** sinoatrial node

**14.** During atrial systole:

**a)** the atria depolarize **b)** the atria contract **c)** the last 20% of blood fills the ventricles

**d)** blood is ejected from the heart **e)** b and c

**15.** In the cardiac cycle, what term describes when the ventricles are in systole and the pressure builds as volume stays the same?

**a)** systole **b)** diastole **c)** quiescent **d)** isovolumetric contraction **e)** isovolumetric relaxation