

Bio 235 Essay Questions for Exam 3

1. Describe the events of the excitation contraction coupling process.
2. Describe three different uses for ATP during muscular activity.
3. Explain the differences in skeletal, cardiac and smooth muscle with specific discussion of myofibril structure, shape, use of calcium in the excitation contraction coupling events, control of the muscle and functional differences between the three types.
4. Explain the difference between isovolumetric ventricular contraction and isovolumetric ventricular relaxation. Include in your explanation relative volumes of blood, valve configurations (which ones closed to create either state), where in the cardiac cycle it is occurring and the heart sounds that are associated with the states, and the events that occur immediately after these phases.
5. Explain how hydrostatic forces and colloid osmotic pressures influence capillary exchange. Include in your discussion the result of these forces at the start, middle and end of a capillary and the net result of these events, and why the lymphatic system is intimately involved with this process.
6. Describe the events (that start) and the process of hemostasis. Include in your discussion the difference between the extrinsic and intrinsic pathways.
7. How are innate and adaptive immunity similar? Then explain briefly the components involved with each type of immunity and how they afford protection.