Bio11 Lab Test 2 – Study Guide

Lab 5 – Heart dissection
- Be able to answer the questions on the heart dissection handout (attached)

Lab 6 - Nutrition
- Omit, you’ve already been tested on this material,

Lab 7 - Urinalysis
- Be able to identify kidney, ureter, urinary bladder, urethra
- What is the function of the kidney? Nephron?
- How is urine formed? Know roles of filtration, reabsorption and secretion.
- What is specific gravity?
- Know the normal and abnormal constituents of urine
- Review the answers to questions #4-9

Lab 8 – Senses
- Hearing: How do we hear?  Know the roles of the outer, middle and inner ear.
  What are the functions of the cochlea and semicircular canals?
- What types of sense receptors are found in skin? Be able to give some examples of sensory adaptation.
- Vision: know the structures of the eye shown in the Powerpoint slide.
- What causes astigmatism? Why do we have a blind spot?

Lab 9 – DNA isolation, genetics
- Is DNA water-soluble or fat-soluble? Why did you add alcohol?
- Is the amount of DNA the same in every cell in your body?
- Be familiar with these terms: gene, allele, dominant, recessive, codominant, genotype, phenotype
- Be able to distinguish the genotypes of gametes and body cells.
- How are the ABO blood types determined? Why are the genes for type A and B called codominant? Why is it important to know your blood type?
- No genetics problems on the lab test; do the take-home problems.

Lab 10 – Biotechnology
- There will be a couple questions on the final exam.
Heart Dissection

1. Why are sheep hearts used to study the anatomy of the human heart?

2. What is the advantage in having 4 chambers in the mammalian heart? Some other organisms have only one or two chambers.

3. Which chambers are the pumping chambers of the heart?

4. Which chambers are the receiving chambers of the heart?

5. How do the walls of the atria compare with the walls of the ventricles and why are they different?

6. What is the purpose of heart valves?

7. Vessels that carry blood away from the heart are called __________, while __________ carry blood toward the heart.

8. Which artery is the largest and why?

9. What is the purpose of the coronary artery and what happens if there is blockage in this vessel?

10. Use the diagram of the heart in your lab manual to trace blood flow through the heart.