

**Anatomy and Physiology Take Home Final Exam**

**You may type or hand-write this exam. You are responsible to make sure that it is legible. Since this is a take-home exam, I expect complete and thorough answers in complete sentences and reasonable grammar and punctuation. You are on the honor system not to copy from the text or the internet. Use your notes. (I will check!!)**

**Define/Describe the following terms as completely as you can:**

**1. Inflammation**

**2. Antigen**

**3. Amylase**

**4. Peristalsis**

**5. Nephron**

**6. Placenta**

**7. Rh factor**

**8. Select ONE of the following questions about the Lymphatic and Immune System and answer it as completely as you can:**

- a. List the three functions of the Lymphatic System and describe each in detail. Give a complete explanation of how each function works with other body systems and how each contributes to homeostasis. Be sure to identify and describe all related organs and structures.
  
- b. List and describe the three levels of organization in the immune system. Give examples of the kinds of structures, organs, molecules and cells that are activated in each type of immune response. Compare and contrast the specific and non-specific immune responses.

**9. Select ONE of the following questions about the Digestive System and answer it as completely as you can:**

- a. Identify each of the organs/structures of the digestive system and discuss how the function of each one contributes to the digestive process
  
- b. Identify all the enzymes and secretions of the various digestive system organs discussed in class that are involved in the digestive process. Describe the functions and sources of each one, how it gets to where it functions and how it contributes the digestion and absorption of nutrients.

**10. Select ONE of the following questions about the Urinary System and answer it as completely as you can:**

- a. Describe and diagram the structure of a nephron. Be sure to label all the functional parts.
  
- b. Describe the processes of urine formation and describe where in the nephron each step occurs.

**11. Select ONE of the following questions about the Reproductive System and answer it as completely as you can:**

- a. Describe the processes of oogenesis and ovulation and the hormonal control of these events. Be sure to list and describe the roles of all organs, cells and structures involved.
  
- b. Describe the processes of spermatogenesis and fertilization and the hormonal control of these events. Be sure to list and describe the roles of all organs, cells and structures involved.

**12. Select ONE of the following questions about STD and Parasites and answer it as completely as you can:**

- a. Describe in detail the infectious cycle of HIV, how it infects humans, gets into cells, reproduces, how it affects the immune system, what kinds of cells it affects and what kinds of symptoms and opportunistic infections are associated with AIDS and what kinds of treatments are available.
  
- b. Describe in detail the life cycle of *Plasmodium falciparum*, how it infects humans, gets into cells, reproduces, how it affects health, what kinds of cells it affects, what kinds of symptoms, who gets it and who has genetic immunity and what kinds of treatments are available.