

*Jonathan Clark*

## **Human Biology Study Guide - Exam IV**

*BIOLOGY OF HUMANS*, fifth edition  
Goodenough and McGuire

### **Chapter 10 – Learning Objectives**

- What is the function of the endocrine system?
- What is a hormone? What are two broad classes of hormones?
- Explain the relationship between hormones and receptors.
- What is negative feedback?
- Describe how the parathyroid and thyroid glands regulate calcium levels.
- Describe how the pituitary gland maintains homeostasis.
- Describe how the pancreas maintains homeostasis.
- What is diabetes, and what are the distinctions between Type I and Type II diabetes?
- Describe any endocrine disorders that were discussed in class: what are they, what causes them, and what is the significance of each?

**Pay special attention to Figures 2, 6, 11, 13, 18**

### **Chapter 17 – Learning Objectives**

- What is a gonad?
- What is the origin and significance of testosterone?
- Describe the structures of the male reproductive system and their functions.
- What is the composition of semen?
- Describe the structures of the female reproductive system and their functions.
- What is the menstrual cycle? The ovarian cycle? The uterine cycle?
- Explain the significance of FSH, LH, estrogen, and progesterone in the female reproductive system.
- Describe any disorders that were discussed in class: what are they, what causes them, and what is the significance of each?

**Pay special attention to Figures 1, 3, 6, 8, 9; Tables 1, 2, 3, 4, 5**

### **Chapter 18 – Learning Objectives**

- Describe the process of fertilization.
- Where does fertilization usually occur?
- What are defining features of the pre-embryo, embryo, and fetus?
- What is a blastocyst? Where does implantation usually occur?
- Describe any reproductive disorders that were discussed in class: what are they, what causes them, and what is the significance of each?

**Pay special attention to Figures 2, 3, 6, 9; Table 1**

### **Chapter 19 – Learning Objectives**

- What is the significance of DNA?
- What are genes? What are chromosomes?
- Describe differences between duplicated and unduplicated chromosomes.
- Contrast mitosis and meiosis.
- Describe any genetic disorders that were discussed in class: what are they, what causes them, and what is the significance of each?

**Pay special attention to Figures 1, 3, 4, 5, 7, 8, 10**

### **Chapter 20 – Learning Objectives**

- Distinguish the terms genotype and phenotype.
- How is the Punnett square used to predict inheritance?
- What is the difference between dominant and recessive traits?
- Explain the inheritance of X-linked traits.

**Pay special attention to Figures 1, 3, 4, 5, Table 1**