

## Biology II Unit 7 Study Guide

bio2u7sg

**Homeostasis:** *a relatively stable state of equilibrium or a tendency toward such a state between the different but interdependent elements or groups of elements of an organism, population, or group*

### Study Objectives: (things to learn)

1. Describe how the functions of individual organ systems are integrated to maintain a homeostatic balance in the body (907-910) – **Body System Activity**
  - a. Summarize the functions of the primary organ systems in the human body.
  - b. How does matter and energy flow through different levels of organization in living systems?
2. Describe the basic anatomy and physiology of the nervous system and sense organs (1010-1020)
  - a. Identify two main parts of central nervous system (CNS).
  - b. What are the functions of the major parts of the brain?
  - c. Describe the structure of a neuron.
  - d. List the stimulus to which each of the 5 types of sensory receptors respond.
3. Explain how the cardiovascular system functions to maintain homeostasis in the body when under stress (**lab**)
4. List the functions of the major endocrine glands and hormones (1034-1040)
  - a. List and describe the major endocrine glands of the body and their hormones.
  - b. Differentiate between endocrine and exocrine gland.
5. Explain the role of feedback mechanisms in maintaining homeostasis and describe several of those feedback mechanisms (1041-1042)
  - a. How do feedback mechanisms regulate hormone levels?
  - b. Describe positive and negative feedback systems and what those look like in a graph.

### Terminology to consider:

homeostasis    negative feedback    metabolism    thermoregulation    positive feedback  
endothymy    ectothymy    metabolic rate    sensor    effector    hormones    endocrine  
nervous    digestive    reproductive    muscular    skeletal    integumentary    respiratory  
circulatory    immune    excretory    hypothalamus    pituitary gland    thyroid gland    adrenal  
gland    gonad    pancreas

### To Do:

- Notebook: **10pts** /10
  - \_\_\_\_\_ “2000 Meter Row”
  - \_\_\_\_\_ Organ System Chart
  - \_\_\_\_\_ Notes on Learning Objectives (right side)
  - \_\_\_\_\_ Summaries/Reflections/Questions (left side)
  - \_\_\_\_\_ “Anatomy of a Neuron”
  - \_\_\_\_\_ Cmap of Terminology (using technology)
  - \_\_\_\_\_ “Tweaking the Human Circadian Clock with Light”
- Investigation: “Bodily Response to Exercise Stress” **10pts** \_\_\_\_\_
- Homeostasis Quiz1 **10pts**
- Homeostasis Quiz2 **10pts**
- Unit Exam **20pts**