

Anatomy and Physiology (0-1) Homework A—Orientation to the Class: The Structure of Anatomy and Physiology

1. State the relationship between anatomy (morphology) and physiology (function):

Give an example at the—

Cell level: _____

Tissue level: _____

Organ level: _____

Organ system level: _____

2. What is the concept that will help us organize most of our thinking for this course? _____

How will this concept be helpful? _____

3. What are the three major goals that characterize the interaction of a biological organism with its environment?
(a) _____
(b) _____
(c) _____

4. Once we know the three major goals that characterize the interaction of a biological organism with its environment, what question do we ask about these goals that help us further organize our thinking? _____

5. List the two major body functions that accomplish the goal of acquiring energy and biomaterials.
(a) _____
(b) _____

6. List the five major body functions that accomplish the goal of maintaining a stable internal environment.
(a) _____
(b) _____
(c) _____
(d) _____
(e) _____

7. List the two major body functions that accomplish the goal of persisting in the environment as an individual and as a species.
(a) _____
(b) _____

8. Match the two following terms with the correct corresponding process:

Anabolism Breaking down of biological macromolecules

Catabolism Building up of biological macromolecules

9. Systems that maintain balance within the body of a biological organism are called _____.

10. Describe the three basic steps in the functioning of a homeostatic control mechanism.

(a) _____

(b) _____

(c) _____

11. Match the following types of feedback with the correct corresponding result of the feedback:

Positive Feedback Acts to increase a change in the internal environment

Negative Feedback Acts to decrease a change in the internal environment

12. Give an example of positive feedback: _____

Of negative feedback: _____

13. List the body systems associated with the major functions listed in questions 5, 6, and 7.

Functions

Body System(s)

(a) Digestion

(b) Metabolism

(a) Maintaining Boundaries	
(b) Responsiveness	
(c) Movement	
(d) Distribution of Biomaterials	
(e) Excretion	
(a) Growth and Development	
(b) Reproduction	

Total Points: 56