# Chapter 1: The Human Organism

## I. Anatomy and Physiology

A. Anatomy - study of structure

1. Studying structural changes from conception to adulthood is called:

   _____

2. Embryology is the study of _____

   _____

3. The study of cellular structure is referred to as _____
4. A histologist studies the anatomical structure of _____
5. Gross anatomy refers to _____

   _____

6. Studying one body system at a time is _____
7. Studying all structures contained in the arm is _____
8. Surface Anatomy refers to _____

   _____

9. Creating pictures of internal body structures is _____

B. Physiology - study of function

1. A cell physiologist would study _____

   _____

2. Studying how the mouth, esophagus, stomach, and intestines function together to digest food would be an example of _____

## II. Structural and Functional Organization

A. Chemical Level

1. Basic components are _____
2. The basic components are joined together to form _____

B. Cell Level

1. Basic unit of _____
2. Made up of small structures called _____



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C. Tissue Level
   1. Composed of: _____
      _____
   2. Four basic types: _____, _____
      _____, and _____
D. Organ Level
   1. Composed of: _____
      _____
E. Organ System Level
   1. Composed of: _____
      _____
F. Organism Level
   1. In humans a _____
      _____

## III. The Human Organism - Characteristics of Life

A. Organization
   1. Large _____ are organized into _____ which in turn form _____
B. Metabolism
   1. Consists of _____
C. Responsiveness
   1. Sense _____ and _____ to the changes
D. Growth
   1. Due to cells increasing in _____ or _____
E. Development = _____
   1. A primitive cell becoming specialized for vision is _____
   2. Body changes that occur at puberty are _____


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F. Reproduction
   1. Involves formation of _____ or _____

## IV. Homeostasis

A. Homeostasis is _____
   _____
   1. Body conditions that change over time are known as _____
   2. The normal value for a body condition is referred to as _____
   3. Body conditions are not constant but vary within a _____
B. Negative Feedback
   1. Negative means that _____
   2. Negative feedback maintaining homeostasis involves:
      a. Deviation from the set point called a _____
      b. The deviation being detected by a _____
      c. The deviation being analyzed by the _____
      d. The _____ moving the variable back toward the set point.
C. Positive Feedback
   1. Positive means that a deviation from set point causes _____
      _____

## V. Terminology and the Body Plan

A. Body Positions
   1. Describe "anatomic position": _____
      _____
      _____
   2. If you lay down on your back you are _____
   3. If you lay down on your stomach you are _____
B. Directional Terms
   1. The proper anatomical term for up is _____
   2. The proper anatomical term for down is _____


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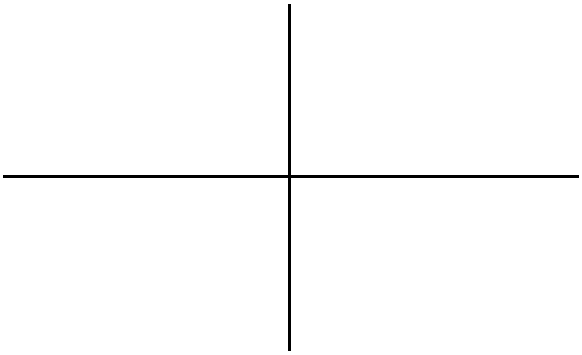
3. The proper anatomical term for front is _____
4. The proper anatomical term for back is _____
5. The term "cephalic" is synonymous with _____
6. The term "caudal" is synonymous with _____
7. In humans the term "ventral surface" refers to the _____
8. In humans the term "dorsal surface" refers to the _____
9. The end of a structure nearer the point of origin is _____
10. The end of a structure farther from the point of origin is _____
11. A structure closer to the midline of the body is said to be _____
12. A structure farther from the midline of the body is _____
13. Structures near the body surface are referred to as _____
14. Structures that are in the interior of the body are said to be _____

C. Body Parts and Regions

1. The body from the shoulder to the elbow is properly called _____
2. The body from the elbow to the wrist is properly called _____
3. The body from the hip to the knee is properly called _____
4. The body from the knee to the ankle is properly called _____
5. Label the four quadrants of the abdomen on the diagram below:

Right Left





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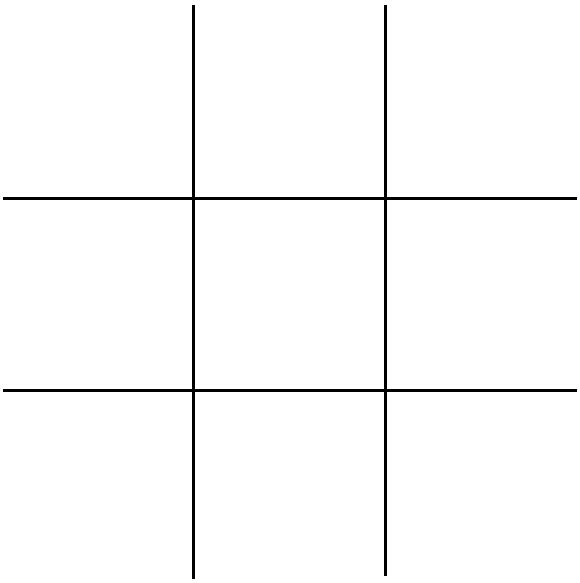
6. Label the nine regions of the abdomen on the diagram below:

Right Left



D. Planes

1. What vertical plane divides the body into right and left portions?

   _____

2. What vertical plane divides the body into equal right and left halves?

   _____

3. What plane divides the body into superior and inferior portions?

   _____

4. What vertical plane divides the body into anterior and posterior portions?

   _____

5. Cutting through the long axis of an organ creates a _____
6. Cutting at right angles to the long axis of an organ creates a _____
7. An oblique section is created by _____

E. Body Cavities

1. Thoracic Cavity
   a. Located: _____
   b. Median portion, which is known as the _____



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c. On either side of the median portion are found the _____

2. Abdominal Cavity
   a. Enclosed by _____
   b. Contains the _____
3. Pelvic Cavity
   a. Enclosed by _____
   b. Contains the _____
4. Term "abdominopelvic cavity" refers to _____

F. Serous Membranes
1. Found _____ and _____
2. Visceral serous membrane will be found _____
3. Parietal serous membrane will be found _____
4. Between serous membranes is _____ which _____ _____
5. The pericardial cavity is found _____
6. The pleural cavity is found _____
7. The peritoneal cavity is found _____
8. Mesenteries
   a. Composed of _____
   b. Connect what to what? _____ _____
   c. Functionally mesenteries _____ and _____
   d. Organs that are directly attached to the body wall and covered only with a parietal peritoneum are referred to as being _____



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