

## Chapter 1: Introduction to Human Anatomy and Physiology

### I. Introduction

- A. The interests of our earliest ancestors most likely concerned \_\_\_\_\_  
\_\_\_\_\_
- B. Primitive people certainly suffered from \_\_\_\_\_
- C. Before agriculture, infectious diseases did not spread easily because \_\_\_\_\_  
\_\_\_\_\_
- D. With agriculture, humans became susceptible to worm diseases because \_\_\_\_\_  
\_\_\_\_\_
- E. With urbanization, humans became more susceptible to \_\_\_\_\_  
and \_\_\_\_\_
- F. Tooth decay was lowest among \_\_\_\_\_  
and highest among \_\_\_\_\_
- G. Preserved bones from children can reflect malnutrition because \_\_\_\_\_  
\_\_\_\_\_
- H. At first healers had to rely on \_\_\_\_\_  
\_\_\_\_\_
- I. The forerunners of modern drugs were \_\_\_\_\_
- J. Early medical providers developed the language of anatomy and physiology from \_\_\_\_\_  
\_\_\_\_\_

### II. Anatomy and Physiology

- A. Difference between Anatomy and Physiology.
1. Anatomy is \_\_\_\_\_
  2. Physiology is \_\_\_\_\_
  3. Anatomists rely on \_\_\_\_\_
  4. Physiologists rely on \_\_\_\_\_
- B. Relatedness of Anatomy and Physiology
1. Anatomy and Physiology are difficult to separate because \_\_\_\_\_  
\_\_\_\_\_

2. The anatomy of the hand, which is \_\_\_\_\_  
\_\_\_\_\_, allows it to grasp objects.
3. The structure of the heart includes \_\_\_\_\_  
which allows it to propel blood into blood vessels.
4. The heart valves ensure \_\_\_\_\_
5. The shape of the mouth allows it \_\_\_\_\_
6. Teeth can function to break solid foods because \_\_\_\_\_

C. Old and New Fields

1. A recent anatomical discovery is \_\_\_\_\_
2. A recent physiological discovery is \_\_\_\_\_
3. Researchers have recently sequenced \_\_\_\_\_  
which will help explain anatomy and physiology at the \_\_\_\_\_  
and \_\_\_\_\_ levels.

**III. Levels of Organization**

- A. All materials are made of \_\_\_\_\_
- B. Chemicals consist of tiny particles called \_\_\_\_\_
- C. Examples of atoms are \_\_\_\_\_
- D. When atoms chemically bond together they form \_\_\_\_\_
- E. Examples of molecules are \_\_\_\_\_
- F. When small molecules chemically combine they form \_\_\_\_\_
- G. Examples of macromolecules are \_\_\_\_\_
- H. Within humans, the basic unit of structure is \_\_\_\_\_
- I. Cells are made of small structures called \_\_\_\_\_
- J. Organelles are made of \_\_\_\_\_
- K. Examples of organelles are \_\_\_\_\_
- L. Examples of cells are \_\_\_\_\_
- M. Tissues are formed from \_\_\_\_\_
- N. Examples of tissues are \_\_\_\_\_
- O. Organs are formed from \_\_\_\_\_
- P. Examples of organs are \_\_\_\_\_
- Q. Organ systems are formed from \_\_\_\_\_

- R. Examples of organ systems include \_\_\_\_\_
- S. Organisms are formed from \_\_\_\_\_
- T. The organism studied in this class is the \_\_\_\_\_

#### IV. Characteristics of Life

- A. Movement is \_\_\_\_\_
- B. Responsiveness is \_\_\_\_\_
- C. Growth is \_\_\_\_\_
- D. Reproduction is \_\_\_\_\_
- E. Respiration is \_\_\_\_\_
- F. Digestion is \_\_\_\_\_
- G. Absorption is \_\_\_\_\_
- H. Circulation is \_\_\_\_\_
- I. Assimilation is \_\_\_\_\_
- J. Excretion is \_\_\_\_\_
- K. Metabolism is \_\_\_\_\_

#### V. Maintenance of Life

##### A. Requirements of Organisms

1. The five requirements of life are \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_
2. The most abundant substance in the body is \_\_\_\_\_
3. Four major uses of water by the body are \_\_\_\_\_  
\_\_\_\_\_
4. Substances that provide organisms with nutrients are called \_\_\_\_\_
5. Nutrients supply \_\_\_\_\_
6. One-fifth of air is \_\_\_\_\_
7. The body uses oxygen \_\_\_\_\_
8. A form of energy used by the body is \_\_\_\_\_
9. Heat helps to regulate \_\_\_\_\_
10. The application of force on an object is \_\_\_\_\_
11. Atmospheric pressure is \_\_\_\_\_
12. For humans, atmospheric pressure plays an important role in \_\_\_\_\_

13. Hydrostatic pressure is \_\_\_\_\_

14. A type of hydrostatic pressure in the human is \_\_\_\_\_

#### B. Homeostasis

1. The internal environment of the body consists of \_\_\_\_\_

2. Homeostasis is \_\_\_\_\_

3. Homeostatic mechanisms are \_\_\_\_\_

4. The three components of a homeostatic mechanism are \_\_\_\_\_

5. Receptors provide \_\_\_\_\_

6. Control centers function to \_\_\_\_\_

7. Effectors cause \_\_\_\_\_

8. In a negative feedback mechanism, a deviation from the set point is \_\_\_\_\_  
and the correction \_\_\_\_\_

### VI. Organization of the Human Body

#### A. Body Cavities

1. The human body can be divided into an \_\_\_\_\_  
portion and an \_\_\_\_\_ portion.

2. The axial portion includes \_\_\_\_\_

3. The appendicular portion includes \_\_\_\_\_

4. Within the axial portion, the two major cavities are \_\_\_\_\_

5. Viscera are \_\_\_\_\_

6. The two parts of the dorsal cavity are \_\_\_\_\_

7. The cranial cavity houses \_\_\_\_\_

8. The vertebral canal houses the \_\_\_\_\_

9. The two divisions of the ventral cavity are \_\_\_\_\_

10. The thoracic cavity is divided from the abdominopelvic cavity by the \_\_\_\_\_

11. The thoracic cavity contains the following organs: \_\_\_\_\_

12. The region between the lungs is the \_\_\_\_\_

13. Organs located in the mediastinum are \_\_\_\_\_

14. The two portions of the abdominopelvic cavity are \_\_\_\_\_

15. The organs of the abdominal cavity are \_\_\_\_\_

16. Organs of the pelvic cavity are \_\_\_\_\_

17. The four types of smaller cavities in the head are \_\_\_\_\_

#### B. Thoracic and Abdominopelvic Membranes

1. Serous membranes are located \_\_\_\_\_

2. The serous membrane that lines the thoracic cavity is the \_\_\_\_\_

3. The serous membrane that covers the lungs is the \_\_\_\_\_

4. The pleural cavity is \_\_\_\_\_

5. The serous membrane that covers the heart's surface is the \_\_\_\_\_

6. The visceral pericardium is separated by serous fluid from the \_\_\_\_\_

7. The space between the pericardial membranes is the \_\_\_\_\_

8. The serous membrane that lines the abdominopelvic wall is the \_\_\_\_\_

9. The serous membrane that covers each abdominal organ is the \_\_\_\_\_

10. The peritoneal cavity is \_\_\_\_\_

#### C. Organ Systems

##### 1. Introduction

a. The eleven organ systems of the human body are \_\_\_\_\_

b. Each organ system includes a set of \_\_\_\_\_

2. Body Covering

- a. The organs of the integumentary system are \_\_\_\_\_
  - b. The major functions of the integumentary system are \_\_\_\_\_
- 

3. Support and Movement

- a. The organs of the skeletal system are \_\_\_\_\_
  - b. The major functions of the skeletal system are \_\_\_\_\_
- 
- c. The organs of the muscular system are \_\_\_\_\_
  - d. The major functions of the muscular system are \_\_\_\_\_
- 

4. Integration and Coordination

- a. The organs of the nervous system are \_\_\_\_\_
  - b. The major functions of the nervous system are \_\_\_\_\_
- 
- c. The organs of the endocrine system are \_\_\_\_\_
  - d. The major functions of the endocrine system are \_\_\_\_\_
- 

5. Transport

- a. The organs of the cardiovascular system are \_\_\_\_\_
  - b. The major functions of the cardiovascular system are \_\_\_\_\_
- 
- c. The organs of the lymphatic system are \_\_\_\_\_
  - d. The major functions of the lymphatic system are \_\_\_\_\_
- 

6. Absorption and Excretion

- a. The organs of the digestive system are \_\_\_\_\_
  - b. The major functions of the digestive system are \_\_\_\_\_
- 
- c. The organs of the respiratory system are \_\_\_\_\_

d. The major functions of the respiratory system are \_\_\_\_\_

e. The organs of the urinary system are \_\_\_\_\_

f. The major functions of the urinary system are \_\_\_\_\_

#### 7. Reproduction

a. The organs of the female reproductive system are \_\_\_\_\_

b. The organs of the male reproductive system are \_\_\_\_\_

c. The major functions of the reproductive system are \_\_\_\_\_

### VII. Life Span Changes

A. In the thirties, signs of aging include \_\_\_\_\_

B. In the forties and fifties, signs of aging include \_\_\_\_\_

C. In the sixties, signs of aging include \_\_\_\_\_

D. Wrinkles are produced because \_\_\_\_\_

E. Elderly people metabolize drugs at different rates than younger people because \_\_\_\_\_

F. Alzheimer disease may be caused by \_\_\_\_\_

### VIII. Anatomical Terminology

#### A. Relative Position

1. The position of the body in the anatomical position is \_\_\_\_\_

2. The anatomical term meaning above another body part is \_\_\_\_\_

3. The anatomical term meaning below another body part is \_\_\_\_\_

4. The anatomical term meaning toward the front is \_\_\_\_\_

5. The two anatomical terms meaning toward the back are \_\_\_\_\_  
and \_\_\_\_\_

6. The two anatomical terms meaning closer to the midline of the body are \_\_\_\_\_  
and \_\_\_\_\_

7. The anatomical term meaning closer to the sides of the body is \_\_\_\_\_

8. The anatomical term for the same side is \_\_\_\_\_

9. The anatomical term for the opposite side is \_\_\_\_\_
10. The anatomical term meaning closer to a specific point is \_\_\_\_\_
11. The anatomical term meaning farther away from a specific point is \_\_\_\_\_
12. The two anatomical terms meaning closer to the surface of the body are \_\_\_\_\_ and \_\_\_\_\_
13. The anatomical term meaning more internal is \_\_\_\_\_

**B. Body Sections**

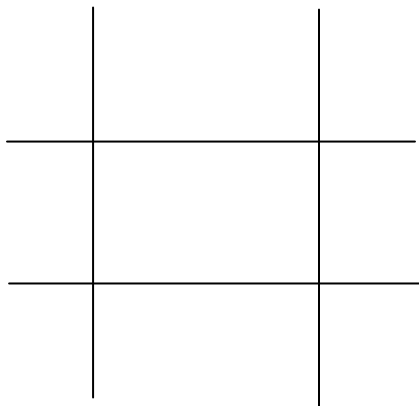
1. A lengthwise cut that divides the body into left and right portions is called \_\_\_\_\_
2. A cut that divides the body into superior and inferior portions is called \_\_\_\_\_
3. A section that divides the body into anterior and posterior portions is called \_\_\_\_\_
4. A cut across a cylindrical organ is called \_\_\_\_\_
5. An angular cut of a cylindrical organ is called \_\_\_\_\_
6. A lengthwise cut of a cylindrical organ is called \_\_\_\_\_

**C. Body Regions**

1. Label the nine abdominal regions on the diagram below:

Right

Left

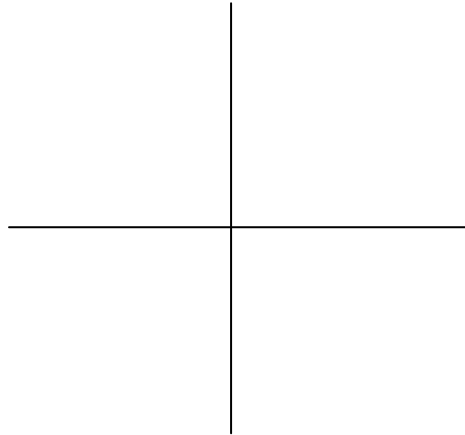




2. Label the four quadrants of the abdomen on the diagram below:

Right

Left



3. Give the correct anatomical term for the following body regions:

region between thorax and pelvis \_\_\_\_\_

point of the shoulder \_\_\_\_\_

forearm \_\_\_\_\_

space in front of the elbow \_\_\_\_\_

armpit \_\_\_\_\_

arm \_\_\_\_\_

cheek \_\_\_\_\_

wrist \_\_\_\_\_

abdomen \_\_\_\_\_

head \_\_\_\_\_

neck \_\_\_\_\_

ribs \_\_\_\_\_

hip \_\_\_\_\_

leg \_\_\_\_\_

elbow \_\_\_\_\_

finger \_\_\_\_\_

back \_\_\_\_\_

thigh \_\_\_\_\_  
forehead \_\_\_\_\_  
reproductive organs \_\_\_\_\_  
buttocks \_\_\_\_\_  
depressed area of the abdominal wall near the thigh \_\_\_\_\_  
lower back between ribs and pelvis \_\_\_\_\_  
breast \_\_\_\_\_  
chin \_\_\_\_\_  
nose \_\_\_\_\_  
lower posterior region of head \_\_\_\_\_  
mouth \_\_\_\_\_  
eye cavity \_\_\_\_\_  
ear \_\_\_\_\_  
palm of hand \_\_\_\_\_  
front of knee \_\_\_\_\_  
chest \_\_\_\_\_  
foot \_\_\_\_\_  
pelvis \_\_\_\_\_  
region between anus and external reproductive organs \_\_\_\_\_  
sole of the foot \_\_\_\_\_  
area behind the knee \_\_\_\_\_  
posterior region between the hipbones \_\_\_\_\_  
middle and anterior region of thorax \_\_\_\_\_  
instep of foot \_\_\_\_\_  
navel \_\_\_\_\_  
spinal column \_\_\_\_\_