Test 1

(modules 1 &2)

1.What is the difference between anatomy and physiology? Anatomy is the study of the structure and shape of the body parts and their relationships to each other. Physiology is the study of how the body and its parts function. Anatomy is the structure of living things, while physiology is the study of how that structure functions.

2. How is the structure of the body organized? Living organisms are divided into atoms, molecules, cells, tissues, organs, organ systems, and organisms (in order of simplest to most complex).

3. What is homeostasis and how is it important to the human body? Homeostasis is a state of balance inside your body. The body systems work together to keep the body functioning normally.

4. What are some anatomical terms to describe various regions of the human body? Dorsal cavity, cranial cavity, ventral cavity, pelvic cavity, vertebral cavity, coronal plane, sagittal plane, transverse plane

5. What are the functions of the organs in each of the organ systems? On a separate sheet of paper you should describe what the organs do in each of the systems. For example, the digestive system is made up of the esophagus, stomach, liver, gall bladder, pancreas, small intestine, and large intestine. Choose an organ and describe its function.

6. How do each of the systems work together for the overall function of the human body? By helping to keep the body in balance and healthy.

Write the definitions.

Anatomy-the study of structure.

Physiology - the study of how a structure functions.

Cell - the basic unit of structure and function in all living things.

Organism -the highest level of organization, which is made up of the different organ systems.

Directional - terms describe the locations of structures in relation to other structures or locations in the body.

System -group of organs that work together to perform a particular function.

Cavities -spaces of the body contain the internal organs, or viscera.

Plane - flat surface divided with an imaginary line.

9. Name three body cavities and what is found in that cavity.

a. The thoracic cavity is the upper ventral cavity which contains the heart, lungs, trachea, esophagus, large blood vessels, and the nerves. The ribs surround the organs of the thoracic cavity.

b. The abdominal cavity contains most of the gastrointestinal tract, kidneys, and adrenal glands. The pelvic cavity contains the urogenital system and the rectum.

c.The pelvic cavity is smaller than the abdominal cavity and contains organs that are more posterior in the body.

10. What is the sagittal plane? Sagittal cuts divide the body into left and right parts.

11. What is the Transverse plane? Transverse or cross sections divide the body into top and bottom parts.

12. What is the coronal plane? divide the body into front and back parts.

13. When tissues combine together to complete a particular function, they make up an _organ_____. Two examples of ___organs_____ are the stomach and the liver.

14. Name the four types of tissues and give an example of each.

a. connective- supports as bone, cartilage, tendons and ligaments, protects as the bony cavities and as protective immune cells in the blood, and stores nutrients.

b. epithelial- found as the lining and covering of organs and body cavities, the secretory parts of organs and glands, the transport membranes of capillaries and alveolar sacs, and membranes which lubricate organs.

c. nervous- the tissue which carries information in the form of impulses throughout the body.

d. muscle- contracts to perform movements such as skeletal muscle movements, propulsion in the GI tract, and pumping blood in the heart.

15. Put the following list in order from simple to complex.

Molecule, organ, organ system, atom, tissue, cell, organism

_____atom_____, _molecule_____, ____cell_____, _____tissue_____, ___organ_____,

_____organ system_____, _____organsim_____.

16. List the nine organ systems we covered in module 1.

1. Respiratory	2. Cardiovascular	3. skeletal
4. endocrine	5. nervous	6. digestive
7. integumentary	8. reproductive	9. muscular

17. Read the following statements and tell whether they are true or false.

1. All cells contain a nucleus. true

2. Only animal cells have a cell membrane, which controls what enters and leaves the cell. false

3. Humans only have two types of tissues, epithelial and connective. false

4. DNA is located in the nucleus, which contains the genetic information of every living organism. true

5. Molecules only move inside the cell, not out of. false

18. Define the terms.

Cell - basic unit of structure and function of all living things

Organelle - part of a cell that performs a particular function

Transport - movement of molecules into and out of the cell

Histology - study of cells and tissues in living things

Muscle - a type of tissue that has the ability to contract

Cell Theory - cells are the basic unit of structure and function in all living organisms

Prokaryote - a cell without a nucleus

Eukaryote - a cell with a nucleus

Connective Tissue -supports as bone, cartilage, tendons and ligaments, protects as the bony cavities and as protective immune cells in the blood, and stores nutrients.

Epithelial Tissue - found as the lining and covering of organs and body cavities, the secretory parts of organs and glands, the transport membranes of capillaries and alveolar sacs, and membranes which lubricate organs

Nervous Tissue -the tissue which carries information in the form of impulses throughout the body

Muscular Tissue - contracts to perform movements such as skeletal muscle movements, propulsion in the GI tract, and pumping blood in the heart

Molecule - a group of two or more atoms held together by a covalent bond

Passive Transport - movement from high to low concentration without the use of energy

Active Transport - movement from low to high concentration; energy is required

Osmosis - a type of passive transport that deals with the movement of water

Diffusion - movement of molecules from high to low concentration

Hypertonic - when the concentration of dissolved substances is higher inside than outside

Hypotonic - when the concentration of dissolved substances is higher outside the cell than inside

Isotonic - when the concentration of dissolved substances is equal inside and outside the cell

Tissue - a group of cells that perform a particular function

19. Label the parts of the cell.

See Day 16 worksheet Answers