

MAP Final Review Unit

Nervous System

What are the two major divisions of the nervous system?

- 1)
- 2)

Matching: Neuroglial Cells and Functions

___ Ependymal cells	A. Maintenance of the blood brain barrier.
___ Astrocytes	B. Phagocytosis of pathogens and debris in the brain.
___ Oligodendrocytes	C. Production of CSF.
___ Microglia	D. Production of myelin.

A blocked or ruptured blood vessel in the brain can cause a CVA. What is a CVA?

What is a hemorrhagic stroke?

What are the three primary components of the brain?

What are the three parts of the brain stem?

What is the function of the cerebellum?

Matching: Lobes of the Cerebrum and Their Functions

___ Frontal lobe	A. Vision
___ Temporal lobe	B. Movement and intelligence
___ Occipital lobe	C. General sensations and perception
___ Parietal lobe	D. Hearing and memory

Special Senses

What part of the eye is responsible for controlling the size of the pupil?

What disorder is characterized by increased pressure in the eye?

What structure of the eye contains rods and cones?

What is another name of the nervous tunic of the eye?

What portion of the ear captures and directs sounds waves to the auditory canal?

What portion of the ear converts sound vibration into electrical impulses?

What is the medical term for a ringing or buzzing in the ears?

Digestive System

What are the folds in the stomach called?

What is another term for chewing?

What is the term for wave-like muscle contractions of the alimentary canal?

List the parts of the large intestine in order, beginning with the cecum and ending with the anus.

- | | | |
|----------|----------|----------|
| 1) _____ | 2) _____ | 3) _____ |
| 4) _____ | 5) _____ | 6) _____ |
| 7) _____ | 8) _____ | |

What are the three parts of the small intestine?

Where is bile stored?

Name two accessory organs of the digestive system.

- | | |
|----------|----------|
| 1) _____ | 2) _____ |
|----------|----------|

What is the term for the finger-like projections of the small intestine?

What is the name of the enzyme responsible for carbohydrate digestion in the mouth?

Respiratory System

What is the primary stimulus for breathing?

What is the name of the serous membrane that surrounds the lungs?

Where does gas exchange occur between air and blood?

What is the name of the disease that is common among heavy smokers?

What disease is characterized by the lungs filling with pus, fluids and mucus?

What is gas exchange between blood and body cells called?

List structures of the respiratory system in order, beginning with the larynx and ending with the alveoli.

- | | | |
|----------|----------|----------|
| 1) _____ | 2) _____ | 3) _____ |
| 4) _____ | 5) _____ | |

Reproductive Systems

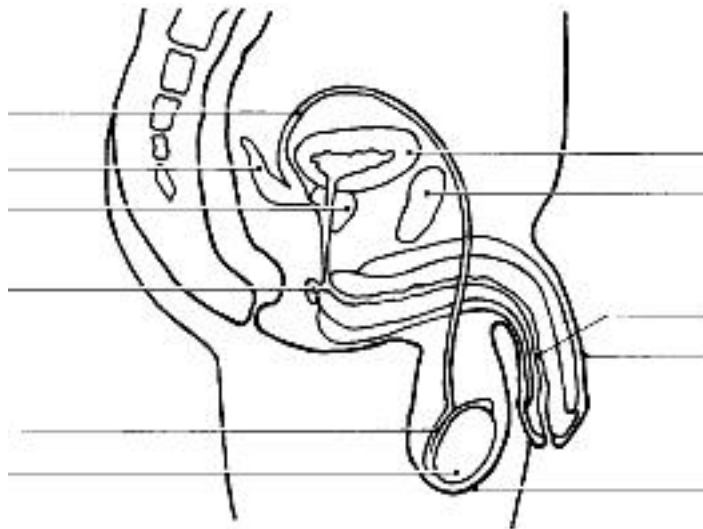
Matching: Sexually Transmitted Diseases

- ___ HPV
- ___ Chlamydia
- ___ Gonorrhea
- ___ Syphilis

- A. Caused by bacteria and is characterized by symptoms such as urethritis, thick discharge and pain.
- B. The most common STI transmitted by bacteria.
- C. Caused by a virus and attacks the uterine cervix, which may lead to cervical cancer.
- D. Caused by bacteria and results in a lesion at the site of entry, followed by rash and brain infection.

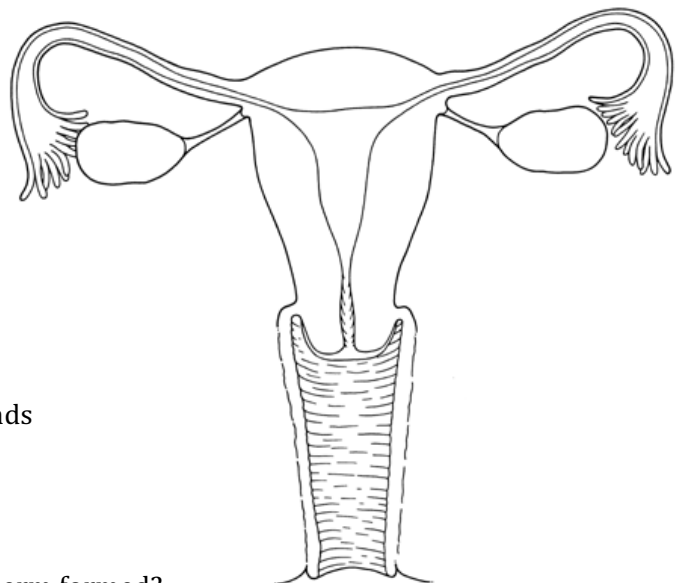
Label and color the following on the illustration to the right.

- Vas deferens
- Prostate gland
- Seminal vesicle
- Testis
- Penis



Label and color the following on the illustration to the right.

- Ovary
- Uterus
- Uterine (fallopian) tube
- Cervix
- Vagina



What is the lower portion of the uterus that extends into the vagina called?

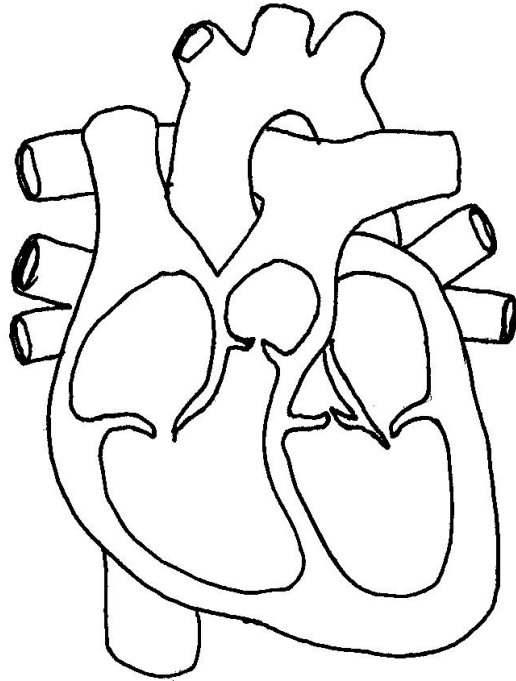
What is the inner lining of the uterus called?

During which type of cell division are eggs and sperm formed?

Cardiovascular System

Label and **Color** the four chambers of the heart.

Right atrium
Left atrium
Right ventricle
Left ventricle
Superior vena cava
Aorta



What is the cardiac cycle term for contraction of the ventricles?

What is the cardiac cycle terms for relaxation of the ventricles?

What is the name of the valve between the right atrium and right ventricle?

What is the name of the valve between the left atrium and left ventricle?

What is the name of the pacemaker of the heart?

What is the name of the secondary or backup pacemaker of the heart?

Write down medical terms for the components of blood on the lines provided.

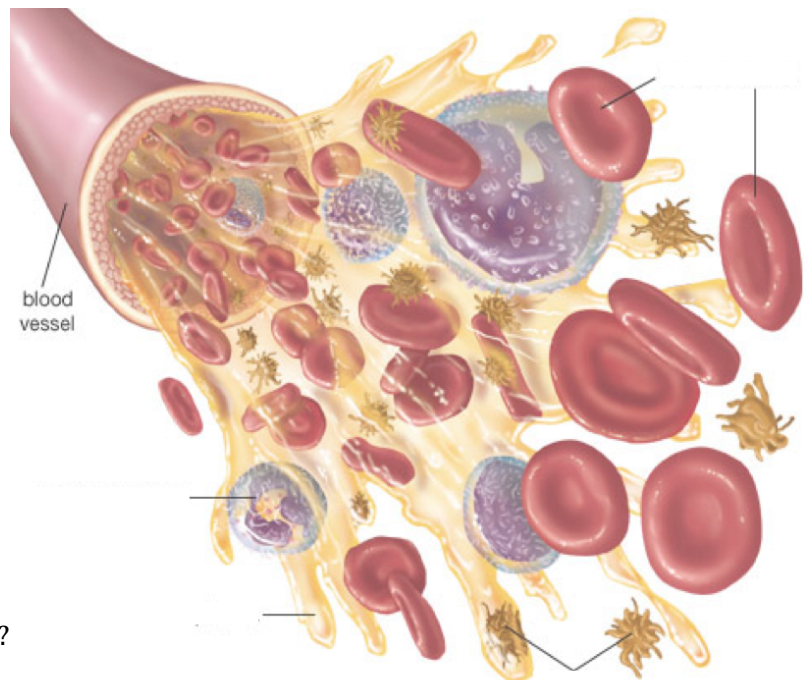
Red blood cells: (label)

White blood cells: (label)

Platelets: (label)

Liquid component of blood: (label)

What type of blood cell transports oxygen?



What is the medical term for a traveling or mobile clot called?

What is the medical term for a stationary clot?

What is the name of the genetic condition where blood fails to clot?

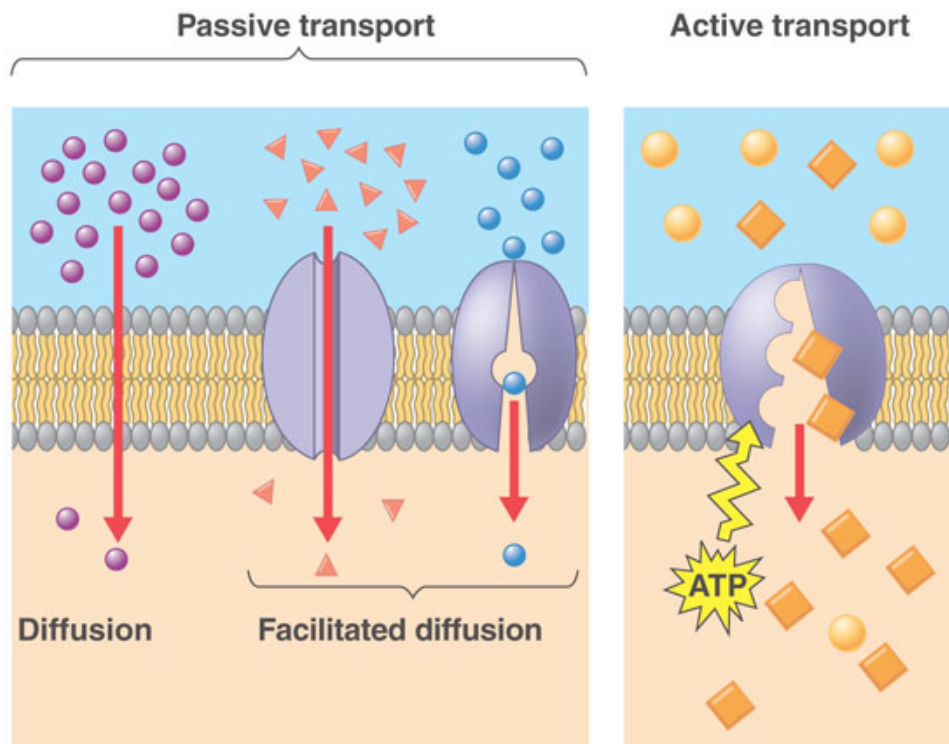
What is the weakening of an arterial wall that may result in rupture of the vessel?

Cells

What is the term for a foreign substance that can trigger an immune response?

What is the general role of B-cells in the immune system?

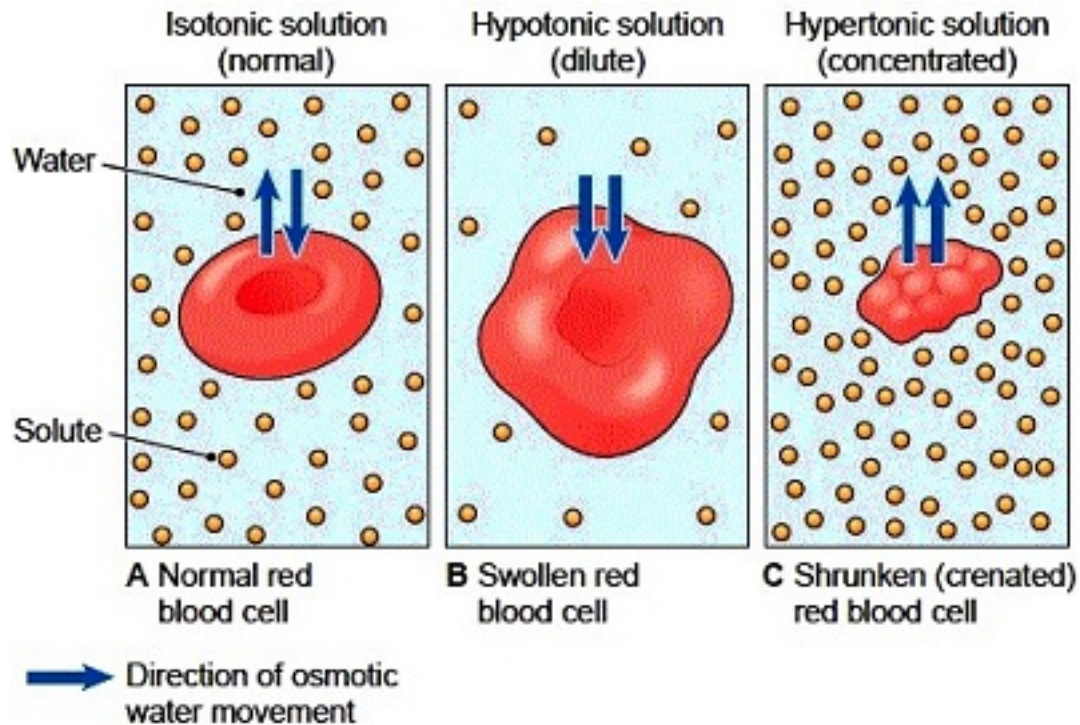
Cellular Transport



Refer to the illustration above to answer questions A – D below. **Color the illustration!**

- A. What is the passive movement of substance from high to low concentration?
- B. What is the passive movement of a substance from high to low concentration using a protein channel embedded in a cell membrane?
- C. Which type of transport requires energy in the form of ATP?
- D. What does ATP stand for?

Effects of Solutions of Cells



Refer to the illustration above to answer questions A – C below. **Color the illustration!**

- Which type of solution causes cells to swell and burst?
- Which type of solution causes cells to crenate or shrivel?
- What happens to cells placed in an isotonic solution?

Body Plan and Organization

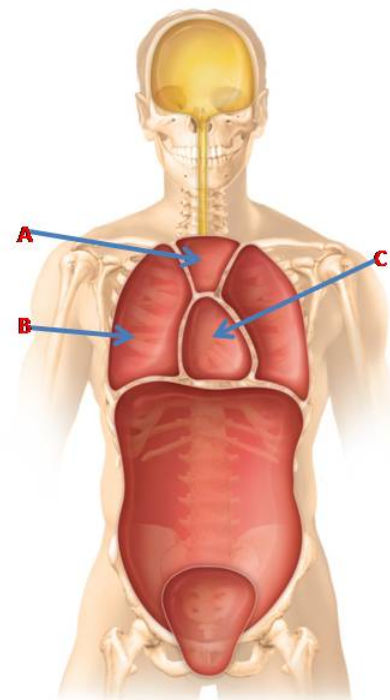
What is the name of the structure labeled "A"?

What organ is located in the cavity labeled "B"?

What organ is located in the cavity labeled "C"?

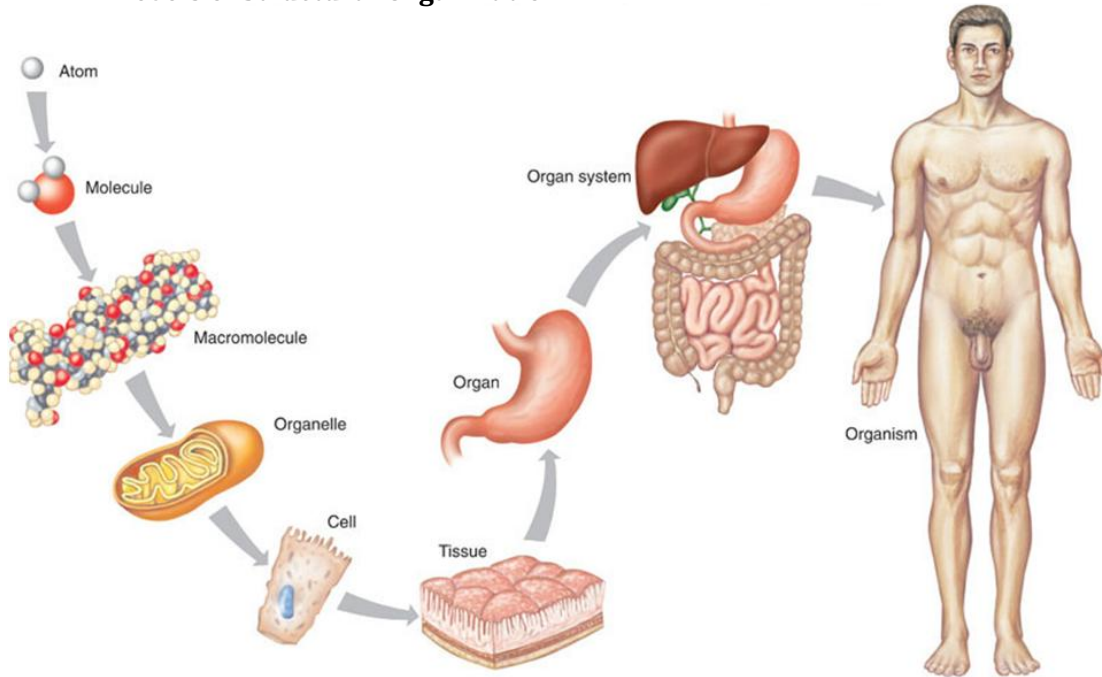
Draw arrows from the names of organs in the list to indicate their correct locations in the abdominal and pelvic cavities.

Liver
Spleen
Left ovary
Appendix
Left Kidney
Urinary bladder



What is the term for the body's attempt to maintain a stable internal environment?

Levels of Structural Organization



Refer to the illustration above to answer questions A – C below. **Color the illustration!**

- A. What structure is composed of two or more tissues with a recognizable shape?
- B. What structure is composed of several organ systems working together?
- C. What structure is composed of different organs that function together to accomplish a task?

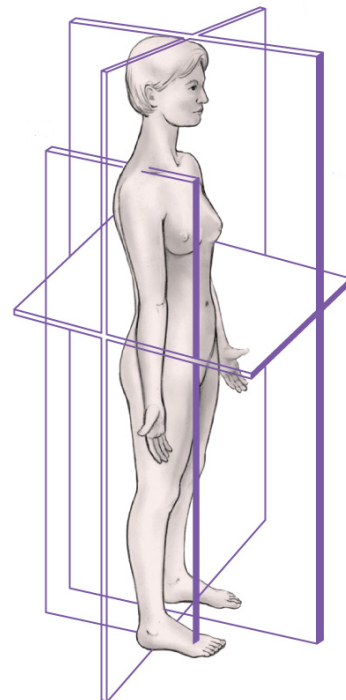
Body Planes (color and label the illustration)

What body plane divides the body into superior and inferior sections?

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

What body plane divides the body into right and left sections?

What body plane divides the body into anterior and posterior sections?



Feedback Mechanisms

Write the examples of homeostatic mechanisms listed below in their correct columns.

- 1) Blood Pressure
- 2) Water Balance
- 3) Uterine Contractions
During Labor
- 4) Breast Feeding
- 5) Blood Glucose
- 6) Body Temperature
- 7) Blood Clotting

Examples of Negative Feedback Mechanisms	Examples of Positive Feedback Mechanisms

Endocrine System

What is the name of the master endocrine gland (this gland is attached to the brain and releases hormones that effect other glands of the body?)

What endocrine gland controls metabolic rate?

What are the chemical messengers secreted by endocrine glands called?

What endocrine condition results from excessive growth hormone secretion during **adulthood**?

What endocrine condition results from excessive growth hormone secretion during **childhood** or before puberty?

What are glands located on each kidney called?

Skeletal System

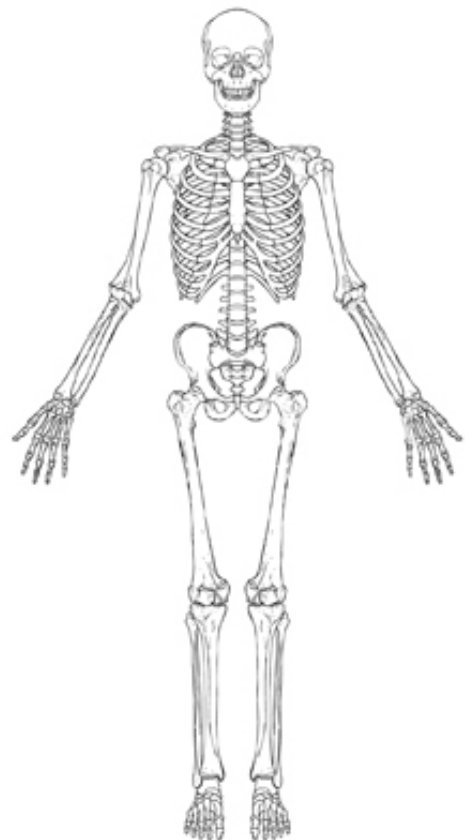
Axial vs. Appendicular Skeletons

Using two different colors:

Color the bones of the axial skeleton.

Color the bones of the appendicular skeleton.

Bone	Axial	Appendicular
Mandible	X	
Hip Bone		
Femur Bone		
Sternum		
Sacrum		
Humerus		
Tibia		



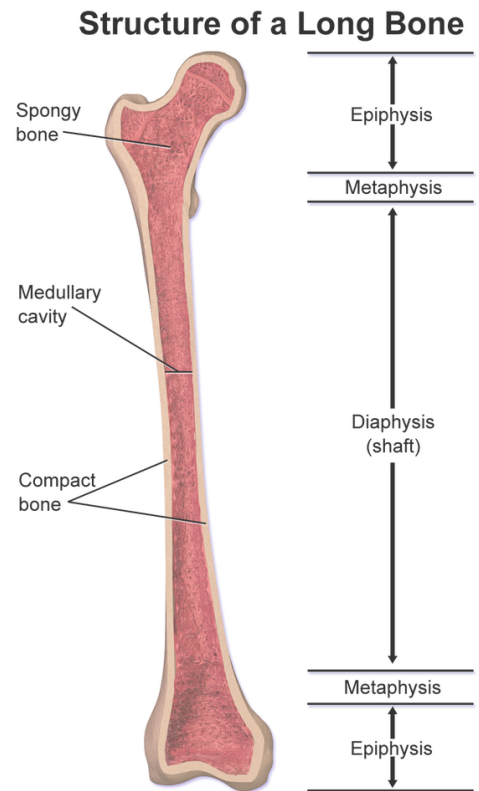
Parts of a Long Bone

What are the “caps” of a long bone called?

What is the “shaft” of a long bone called?

What is the term for the regions of a long bone where growth plates are located?

What is the name of the substance found in the medullary cavity of a long bone?



What is the name of the bone markings found only on the femur bone?

What structure connects bone to bone?

What cell breaks down existing bone matrix?

What are immovable joints of the skull called?

Bones of the Human Skeleton

Label and **Color** the following list of bones on the illustration of the human skeleton. **Label the separate bones as well.**

Ilium (part of the hip bone)

Tibia

Radius

Femur bone

Sternum

Mandible

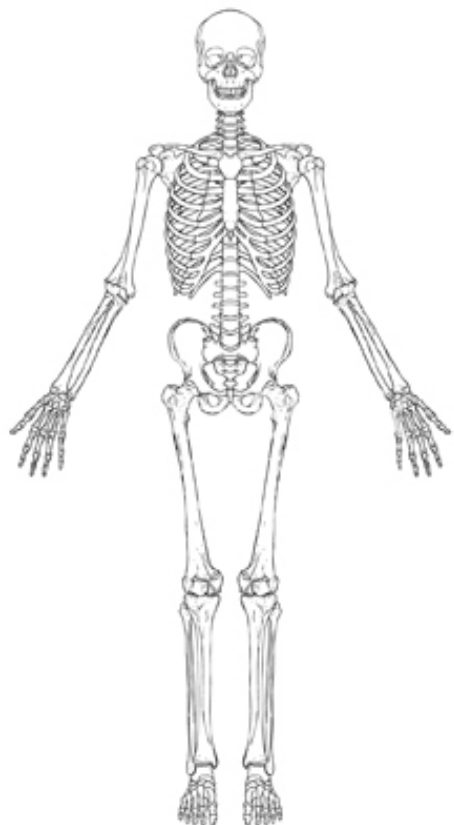
Humerus

Ulna

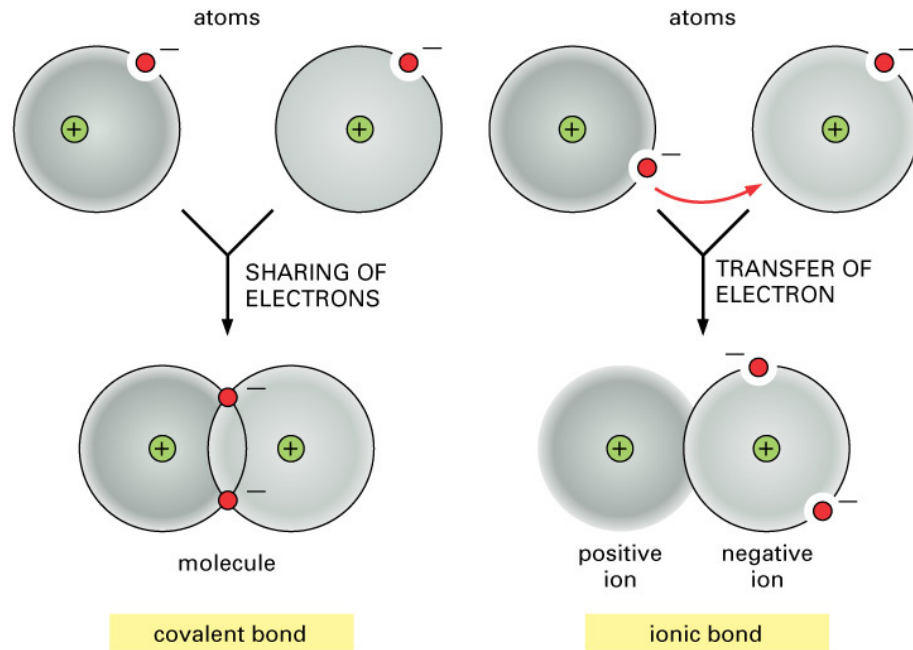
Patella

Sacrum

Clavicle



Chemistry



Refer to the illustration above to answer questions A – B below.

A. What type of chemical bond forms when one atom loses an electron and another atom gains an electron?

B. What type of chemical bond forms when atoms share electrons?

What is the normal pH range of blood?

What is the most common inorganic compound and solvent in the body?

Tissues

Color and **label** the illustration of the four types of tissue with the following:

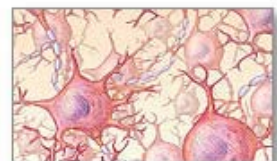
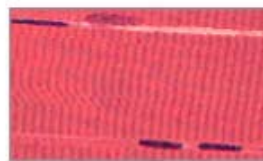
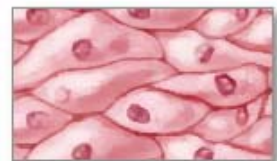
Muscle Tissue

Epithelial Tissue

Nervous Tissue

Connective Tissue

Four types of tissue



Matching: tissue types and their functions.

___ Muscle Tissue

___ Epithelial Tissue

___ Nervous Tissue

___ Connective Tissue

A. Functionally specialized for contraction.

B. Binds various parts of the body together, forms structural frameworks and is involved in the transport and exchange of nutrients and wastes.

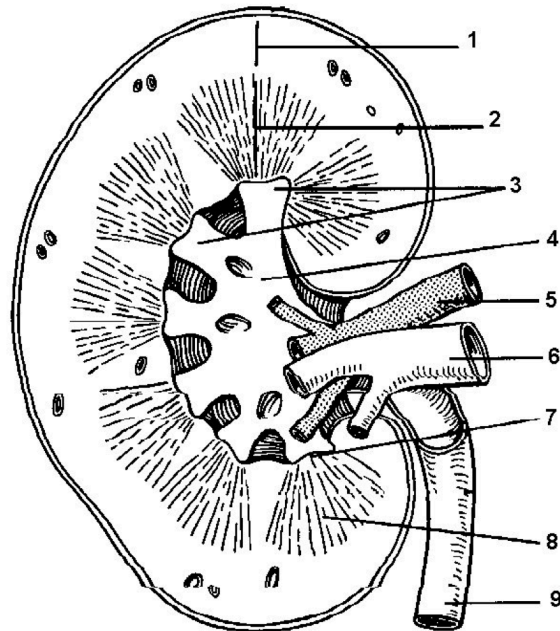
C. Covers the inner and outer surfaces of the body, and forms the secretory portions of glands.

D. Specialized for the conduction of electrical impulses.

Urinary System

Color the kidney illustration

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____
- 6) _____
- 7) _____
- 8) _____
- 9) _____



What is the functional unit of the kidney called?

What are the three steps of urine formation?

- 1) _____
- 2) _____
- 3) _____

What are three abnormal constituents of urine (They should not be found at high levels)?

- 1) _____
- 2) _____
- 3) _____

What does the term **micturition** mean?

Human Development

What is the developing human called from eight weeks to birth?

What is the developing human called from zygote (first diploid cell) to eight weeks?

What are the three stages of labor?

1)

2)

3)

Muscular System

Role of Skeletal Muscles

___ Chiefly responsible for producing a particular movement.

A) Fixator

___ Opposes the action of the agonist.

B) Agonist (prime mover)

___ Assists the action of the prime mover.

C) Synergist

___ Reduces or prevents one or more actions of a given muscle. Can prevent unnecessary movement at a joint.

D) Antagonist

Matching: Three Types of Muscle Tissue

___ Cardiac

A. Also known as striated muscle. It is voluntarily controlled and permits movement.

___ Skeletal

B. Located in the muscle wall of the heart. Intercalated discs and gap junctions connect muscle cells.

___ Smooth

C. Located in the walls of internal organs. It is involuntary and controls the flow of fluids through hollow organs.

What protein are thin filaments of a muscle fiber primarily made of?

What protein are thick filaments of a muscle fiber primarily made of?

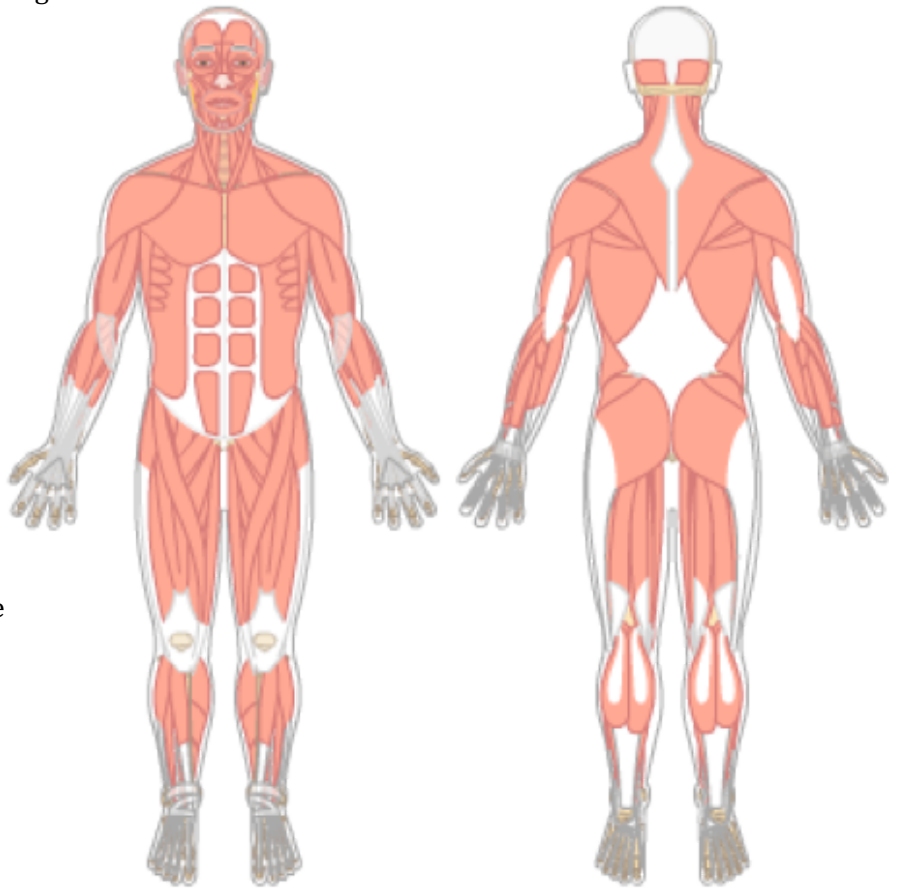
What genetic disorder is characterized by atrophy of skeletal muscle tissue, where muscle tissue is replaced by fat and fibrous tissue?

Which disorder causes symptoms of lockjaw and prolonged muscle contraction?

Identify Skeletal Muscles

Label and Color the following list of muscles on the illustration to the right.

Deltoideus m.
Gastrocnemius m.
Latissimus dorsi m.
Sartorius m.
Quadriceps femoris m.
Pectoralis major m.
Gluteus maximus m.
Rectus abdominis m.
Biceps brachii m.
Trapezius m.
Brachioradialis m.
Biceps femoris m.



Which muscle group extends the knee joint?

Integumentary System

What type of gland secretes chemicals into the blood stream?

Give three examples of endocrine glands.

1)

2)

3)

Which type of gland secretes chemicals into ducts?

Give two examples of exocrine glands.

1)

2)

What type of gland produces oily secretions like sebum?

What type of gland produces watery secretions like sweat?