

# ANATOMY AND PHYSIOLOGY FALL FINAL STUDY GUIDE 2009.10

## Unit I: LANGUAGE

The ability of an organism to sense changes that take place within the body is an example of :
The process that is not concerned with maintaining the life of an adult organism is
Homeostasis is defined as the:
Describe the body when it is placed in the anatomical position.
When body temperature rises, a center in the brain initiates physiological changes to decrease the body temperature. this is an example of:
Which body system picks up fluid leaked from blood vessels and returns it to blood; houses white blood cells involved with immunity?
Describe a normal response to excessive loss of body heat in a cold environment?
Which element of a control system detects change?
The structural and functional unit of life is:
The pancreas is part of which two systems
Homeostasis in the human is controlled by which two organ systems:
In describing the relationship of the lungs to the heart:
Negative feedback systems have what effect on the stimulus?
Which orientation and directional terms have the same meaning in humans:
Your body thermostat is located in a part of the brain called the hypothalamus. Which element of a control system does this area in the brain represent:
While anticipating an argument, our blood pressure increase as well as heart rate because:
The target organs for the hormones insulin and adrenaline are:
Use these choices for the following questions a. Median (midsagittal) plane                      c. Transverse Plane b. Frontal (coronal) plane                         d. Parasagittal plane Name the plane that gives unequal left and right parts. Name the cut that gives the greatest viewing surface. Name the cut that splits the arm into superior and inferior parts. Name the plane that divides the body into equal left and right halves. Divides the body into ventral and dorsal planes.  Be able to identify on diagrams as well

Use the following terms for orientation and directional questions.

- |                       |             |
|-----------------------|-------------|
| a. Superior           | f. Lateral  |
| b. Inferior           | g. cephalic |
| c. Anterior (ventral) | h. Proximal |
| d. Posterior (dorsal) | i. Distal   |
| e. Medial             | j. caudal   |

Farther from the point of attachment to the trunk.

Wrist with reference to the elbow.

Muscles with reference to the skin.

The navel with reference to the lumbar region.

Be able to identify on diagrams as well

Match the correct cavity to the following questions:

- |             |                   |
|-------------|-------------------|
| a. Cranial  | f. Abdominopelvic |
| b. Spinal   | g. Pleural        |
| c. Ventral  | h. Mediastinum    |
| d. Dorsal   | i. Pericardial    |
| e. Thoracic |                   |

The diaphragm separates which cavity into separate divisions.

The superior portion of the dorsal body cavity

The inferior portion of the dorsal cavity.

The region that contains the heart and no other organs

The region in the middle of the thorax which contains the heart and other thoracic organs.

Be able to name the regions of the body on a diagram like the one in your coloring book.

Be able to identify the major organs on a diagram and a cat

## Unit II Tissues, Skin and Forensics

Functions of epithelia include:

The tissue through which gases are exchanged between the blood and the air in the lungs is

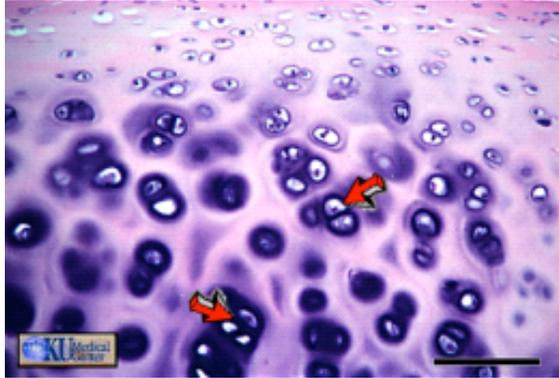
The tissue that forms the inner lining of the respiratory tract is:

The shaft of the hair is considered class evidence in a trial.

Hair is composed of a protein called cellulose.

The cortex may contain pigment granules.

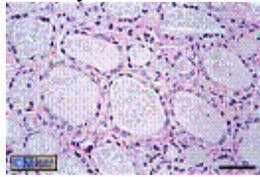
Cutaneous membranes are dry and include such structures as the skin.



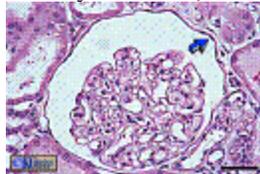
Name the type of tissue. Location and functions

Cartilage tissues are likely to be slow in healing following an injury because:

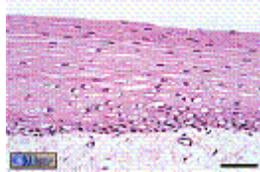
Identify the tissue, function and locations



Identify the tissue, main function and locations of the following tissue



Identify the tissue, main function and locations of the following tissue



Identify the tissue, main function and locations of the following tissue



The hair shaft is composed of:

Which factors are used to calculate the medullary index of the hair?

Human hair has which type of cuticle?

- a. imbricate
- b. spinous
- c. coronal
- d. pigmented

Neutron activation analysis can check hair for the presence of

- a. silver
- b. DNA
- c. water content
- d. hair dye

Which parts of the hair can be analyzed for DNA?

- a. root
- b. cuticle
- c. medulla
- d. cortex

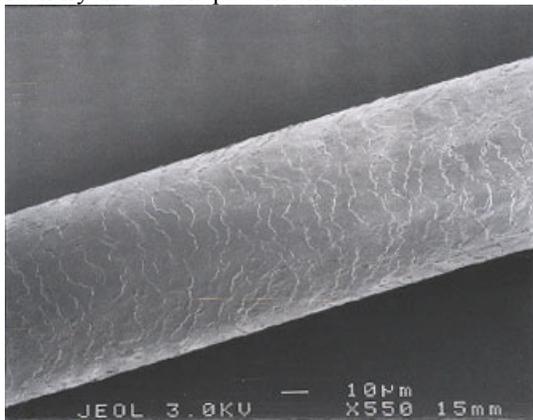
The cuticle scales of the hair always point toward the

**Be able to identify cuticle patterns and which organism is the source**

Which organism is the source of this hair?



Identify the cuticle pattern on this hair



Identify the cuticle pattern of this sample:



As cells are pushed from the deeper portion of the epidermis towards the surface:

The layer of the epidermis that contains cells undergoing division is the :

Describe the subcutaneous layer

Accessory structures of the skin include

The layer of skin that protects against bacteria, physical and chemical damage is the (be specific):

The fibrous protein that is responsible for the water resistance of skin is

When the arrector pili muscles contract:

When smooth muscles in the walls of the blood vessels contract

Describe a normal response to excessive heat loss in a cold environment?

Shafts of hair are composed of

Meissner's corpuscles and Pacinian corpuscles function in:

Which of the following is not a function of the skin

- |    |                                 |    |                                   |
|----|---------------------------------|----|-----------------------------------|
| a. | maintenance of body temperature | c. | reception of stimuli              |
| b. | production of Vitamin C         | d. | protection from Ultraviolet light |

Describe the function(s) of Melanocytes

Describe the relationship between UV light and skin coloration:

In which portion of the skin do you find dermal papillae?

If you pricked your fingertip with a needle, the first layer of the epidermis that it would penetrate is the

A person with albinism has a defect in the production of

When you cut your hair, scissors are cutting through the hair

Which tissue type is the main type found in the inner region of the dermis?

What is the response by effectors when the body temperature is elevated?

Is this hair from an animal other than a human? Show your work for the medullary index.



Crime-scene investigators collected hair from a dead person's body. One of the first things that needs to be established is if the hair is human or animal. Describe two ways that animal hair differs from human hair. Use vocabulary if you want full credit.

The body of a woman was found in the woods. Some hair fibers found on the body were sent to the crime lab for analysis. The ends of the hair attached to the body were gray, but the tips of the hair showed that it had been dyed. The distance from the root of the hair to the beginning of the dyed area measured 8 mm. Investigators determined that the victim's hair had last been dyed on August 1, 2004. Assuming the hair grows at the rate of 0.44 mm per day, on approximately what date did the woman die? Show your work and explain your answer.

Discuss the primary concern a physician has for a burn victim in the intensive care unit. Discuss the different degrees of burns and critical classification of burns which would lead to a decision about whether or not to put a patient in the ICU.

List 3 characteristics of a growth that might be considered cancerous and should be checked by a physician.