FALL FINAL PART 1 ANSWERS

Unit I: LANGUAGE

The ability of an organism to sense changes that take place within the body is an example of : responsiveness
The process that is not concerned with maintaining the life of an adult organism is reproduction
Homeostasis is defined as the: tendency of the body to maintain a stable environment,
Describe the body when it is placed in the anatomical position. Stand straight up, face forward with chin parallel to the floor, arms straight down to the sides, palms face outward not to the side so your little finger is touching the leg
When body temperature rises, a center in the brain initiates physiological changes to decrease the body temperature. this is an example of: negative feedback
Which body system picks up fluid leaked from blood vessels and returns it to blood; houses white blood cells involved with immunity? Lymphatic
Which is a normal response to excessive loss of body heat in a cold environment? Dermal blood vessels become restricted. Skeletal muscles contract involuntarily. Sweat glands become inactive.
Which element of a control system detects change? effector
The structural and functional unit of life is: A cell
The pancreas is part of which two systems digestive and endocrine
Homeostasis in the human is controlled by which two organ systems: nervous and endocrine
In describing the relationship of the lungs to the heart: the lungs are lateral to the heart.
Negative feedback systems operate in such a way that the initial stimulus is shutoff or reduced
Which orientation and directional terms have the same meaning in humans: anterior and ventral
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: control center
While anticipating an argument, our blood pressure increase as well as heart rate because:

Adrenaline levels are increasing

The target organs for the hormones insulin and adrenaline are as follows:
body cells, cardiac muscles

Use these choices for the following questions

a.	Median (midsagittal) plane	c.	Transverse Plane
b.	Frontal (coronal) plane	d.	Parasagittal plane

d Name the plant that gives unequal left and right parts.
b Name the cut that gives the greatest viewing surface.
c Name the cut that splits the arm into superior and inferior parts.
a Name the plane that divides the body into equal left and right halves.
b Divides the body into ventral and dorsal planes.

B 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

i Farther from the point of attachment to the trunk.
b Wrist with reference to the elbow.
j Muscles with reference tothe skin.
c The navel with refernce 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		

c The diaphragm separates which cavity into separate divisions.
a The superior portion of the dorsal body cavity
b The inferior portion of the dorsal cavity.
i The region that contains the heart and no other organs
h 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:
providing physical protection; producing specialized secretions; controlling permeability; providing sensations

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

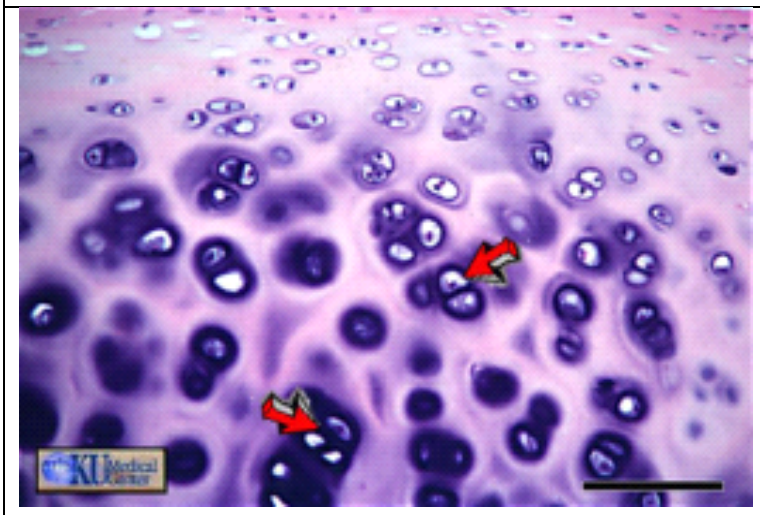
The tissue that forms the inner lining of the respiratory tract is:
pseudostratified; mucus secreting; ciliated

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

Hair is composed of a protein called cellulose.
False

The cortex may contain pigment granules.
True

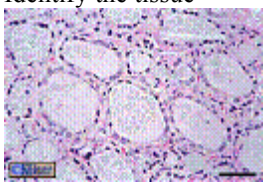
Cutaneous membranes are dry and include such structures as the skin.
True



Name the type of tissue. Location and functions
Hyaline cartilage, joints, nose, decrease friction and absorb shock

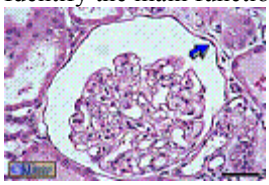
Cartilage tissues are likely to be slow in healing following an injury because:
they are avascular

Identify the tissue



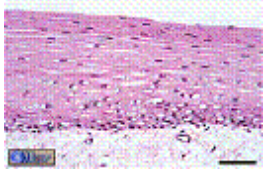
simple cuboidal: found in glands that secrete enzymes and hormones

Identify the main function of the following tissue



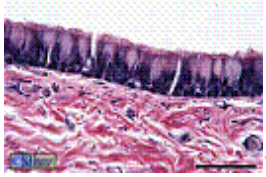
filtration/exchange: lines the kidneys, capillaries, lungs

Identify the tissue below:



stratified squamous: found in the skin for protection

Identify the location and function of the following tissue:



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secretion, movement, trachea

The hair shaft is composed of the cuticle, cortex, and medulla

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

Human hair has which type of cuticle?

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

Neutron activation analysis can check hair for the presence of

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

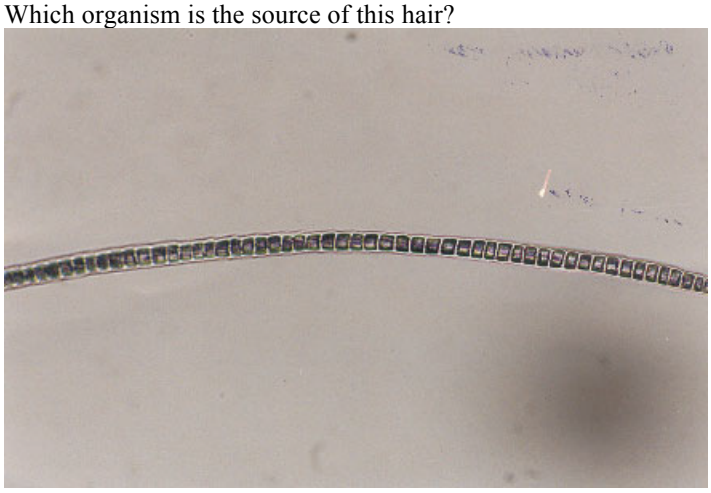
Which parts of the hair can be analyzed for DNA?

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

The cuticle scales of the hair always point toward the distal end of hair

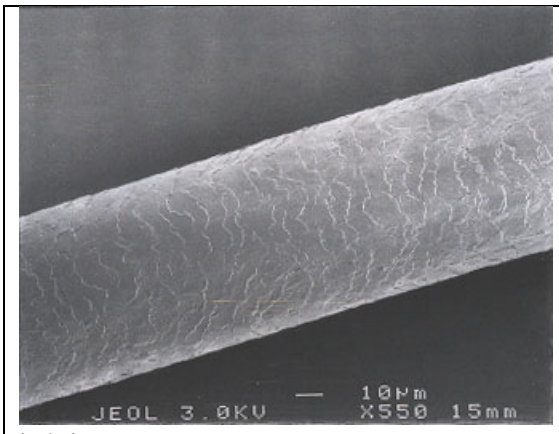
Be able to identify cuticle patterns and which organism is the source

Which organism is the source of this hair?



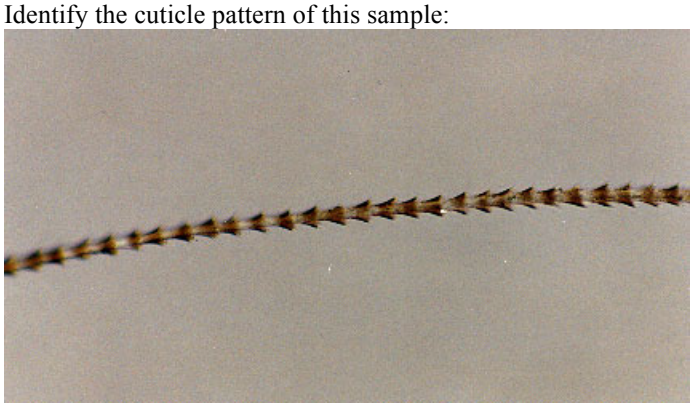
rabbit

Identify the cuticle pattern on this hair



imbricate

Identify the cuticle pattern of this sample:


coronal

As cells are pushed from the deeper portion of the epidermis towards the surface:
they tend to die

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

The subcutaneous layer
contains many blood vessels; contains a large amount of adipose tissue; contains nerves for superficial sensations

Accessory structures of the skin include
hair follicles; nails; sebaceous glands; sweat glands

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

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

When the arrector pili muscles contract:
goose bumps are formed

When smooth muscles in the walls of the blood vessels contract
body heat is conserved

What is a normal response to excessive heat loss in a cold environment?
Dermal blood vessels become constricted; Skeletal muscles contract involuntarily; Sweat glands become inactive

Shafts of hair are composed of
dead epidermal cells

Meissner's corpuscles and Pacinian corpuscles are:
involved in receiving stimuli

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

Melanocytes
determine skin color and protect against ultraviolet light

Skin coloration:
is stimulated by exposure to the sun

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

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

A person with albinism has a defect in the production of
melanin

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

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

What is the response by effectors when the body temperature is elevated?
sweat glands increase production of sweat

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

Dog index is over .5

Crime-scene investigators collected hair from a dead person's body. One of the first thnigs 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 vicitm 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.