***ANATOMY AND PHYSIOLOGY***

***FINAL EXAM VOCABULARY***

Anatomy serous membrane

Physiology mucous membrane

homeostasis synovial membrane

atoms epidermis

molecules dermis

cells subcutaneous layer

tissue melanin

axial portion hair follicle

appendicular portion sebaceous glands

dorsal cavity

ventral cavity melanocyte

thoracic cavity Stratum corneum

abdominopelvic cavity Stratum basale

mediastinum Stratum lucidum

superior Stratum granulosum

inferior Stratum spinosum

anterior

posterior articular cartilage

medial cartilaginous joint

lateral compact bone

proximal diaphysis

distal endochondral bone

superficial epiphyseal plate

sagittal epiphysis

transverse f

coronal hemopoiesis

simple squamous intramembranous bone

simple cuboidal medullary cavity

simple columnar osteoblast

stratified squamous osteoclast

stratified cuboidal osteocyte

goblet cell periosteum

transitional epithelium spongy bone

connective tissue axial skeleton

Fibroblast appendicular skeleton

loose CT Frontal bone

DENSE-REGULAR AND IRREGULAR Parietal bones

adipose Occipital bone

cartilage Temporal bone

Sphenoid bone

Ethmoid bone

Maxillae

palatine bones

zygomatic bones

lacrimal bones

nasal bones

Vomer bone

Inferior nasal conchae

Mandible

1. What are the 6 functions of Epithelium?

2. what are the types of epithelium?

3. what are the fuctions of each epithelium?

4. How can you classify Epithelium?

5. what are the 4 types of epithelium?

6. what are the characteristics of epithelium?

What do the pectoral girdles attach to?

What is the thoracic cage and what is it made of?

what is the purpose of the pectoral girdle?

what are the three parts of the sternum? 3 vertebrae?

identify characteristics of the 3 vertebrae types.

what is the pelvic girdle?

1) What is the name of the large, blunt projection only found on the femur?

2) What is the difference between a projection and a depression?

3) What is the keystone bone of the cranium?

4) Name the 4 sutures:

5) There are \_\_\_\_\_ cranial bones and \_\_\_\_\_ facial bones.

1. Label the abdominal region

|  |  |  |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |

2. Make a Sagittal cut

|  |
| --- |
|  |

3.Make a coronal cut

|  |
| --- |
|  |

4.Make a Transverse cut

https://email.mayfieldschools.org/owa/14.1.323.3/themes/resources/clear1x1.gif

5.Make an oblique cut

https://email.mayfieldschools.org/owa/14.1.323.3/themes/resources/clear1x1.gif

6. Circle the right word

Your pollex is lateral/medial to the body in the anatomical position

1.) Why are bones considered organs?

a. They are formed of organelles

b. They are formed of tissues to help body functions

c. They are inside of your body

d. Because Mr. Verdi told us so

2.) How do we know bones are living?

a. They grow and respond

b. They reproduce and maintain homeostasis

c. They are made of cells

d. All of the Above

3.)\_\_\_\_\_ help our body break down bone tissue.

a. Osteoblasts

b. Osteocytes

c. Osteoclasts

d. Osteogenic Cells

4.) The periosteal bud consists of what?

a. Arteries

b. Veins

c. Nerves

d. All of the Above

5.) What are the long shafts of bone called?

a. condyle

b. diaphysis

c. medullary cavity

d. epiphysis

Anatomy Review

Go to the following website: <http://www.wiley.com/college/apcentral/anatomydrill/>

And complete the following practice/drill exercises.

The anatomical position

Directional Terms

Both of the abdominopelvic regions and quadrants

Surfaces of epithelial cells and basement membranes

Layers of epidermis

Components of Integument System (yes I know we didn’t do all of them)

Parts of Long Bone

Histology of Compact Bone

Try at least 3 of the different skull views

Try both vertebral columns

**Semester One Exam Review Guide**

1. Language of Anatomy = The different body planes and cavities; anterior, posterior, ventral, dorsal, inferior, superior, sagittal, transverse, oblique, proximal, and distal. Know all the terms in figure 1.7 p. 14 that refer to body regions.
2. Body Cavities = Thoracic cavity, abdominopelvic cavity, pleural cavity, pericardium cavity, and dorsal body cavity. Know where these regions are and important organs/structures that can be found in them. See fig. 1.9 1.10 p. 17.
3. Abdominopelvic regions p. 18 and fig. 1.11
4. Homeostasis Negative and Positive Feedback Mechanisms; homeostatic control system with function of receptor, control center, and effector. Efferent/Afferent pathways. If given an example recognize the different elements and if it demonstrates positive or negative feedback. pp. 9-12.
5. Body Systems = 12 Major Body systems and their general functions and major organs. If given a description, be able to identify the body system. pp. 6-7 fig. 1.3
6. Epithelium Tissue = Know its many functions and its special characteristic pp. 118-119.
7. Classification of epithelium = simple, stratified, squamous, cuboidal, and columnar are the basic terms, know their meanings and shapes.
8. Simple Squamous; Stratified Squamous, Simple Cuboidal, Simple Columnar, Pseudostratified Columnar, Transitional are the main types of epithelium studied. Know their general function(s), where they are found in the body, and their general appearance. Fig. 4.2 pp. 120-124
9. Connective Tissue = Know its many functions and general characteristics pp. 126-127
10. Structural Components of Connective Tissue = ground substance, fibers (collagen, elastic, and reticular), and cell types (fibroblast, chondroblast, osteoblast, and hematopoietic)
11. Main Types of Connective Tissue are areolar (loose) connective tissue, adipose (loose) connective tissue, reticular (loose) connective tissue, dense regular connective tissue, and dense irregular tissue. pp. 131-134
12. Cartilage = Three main types hyaline, elastic, and fibrocartilage. Know the general characteristics for each and where they are found in the body. Pp.135-137
13. Classification of Bones
    1. Axial vs Appendicular
    2. Long, Short, Flat, Irregular
    3. Functions of Bones (5 of them)
14. Bone Structure
    1. Bone markings
    2. Spongy vs Compact Bone
    3. Diaphysis and Epiphysis
    4. Epiphyseal Plate
    5. Periosteum and Endosteum
    6. Red marrow vs Yellow marrow (hematopoietic tissue)
15. Microscopic Anatomy
    1. Osteon or Haversian system
    2. Osteons
    3. Lamella and interstitial lamella
    4. Central/Haversian canal
    5. Volkmann’s canal
    6. Lacunae, canaliculi, and osteocytes
16. Bone Development
    1. Intramembranous vs. Endochondral Ossification
    2. Growth in length of long bone (epiphyseal plate)
17. Bone Fractures
    1. Types of fractures open/closed complete/incomplete displaced/nondisplaced etc. see Fig. 6-13 and Table 6-2
    2. Repair Process Stages in healing
18. All the cranial and facial bones of the skull. Be able to identify them on different views of the skull.
19. The four sutures for the cranial bones; coronal, sagittal, lamboid, and squamous.
20. The following structures, markings or openings in the skull

Occipital Condyle, Foramen magnum, Perpendicular Plate of the Ethmoid, Supraorbital notch, Supraorbital margin, Zygomatic process, Styloid process, Mastoid process, External Auditory Meatus, Jugular Foramen, Carotid Canal, Palatine Process of Maxilla, Mandibular Condyle, Coronoid Process, Mental Foramen, Mandiubular Foramen,

1. Know how to identify and locate all the five different regions of the vertebral column and their associated curves, their numbers and how they are numbered. Cervical, thoracic, lumbar, sacrum, and coccyx.
2. Know how to differentiate between the cervical, thoracic, and lumbar vertebrate.
3. What is an intervertebral disc (what type of cartilage) and why are they important?
4. What are the spinous and transverse processes and the superior and inferior articular processes
5. Atlas and Axis are important cervical vertebrae. Which ones are they and what do they do? Specifically which has the odontoid process and what does it allow you to do?
6. The parts of the sternum; manubrium, body, xiphoid process, jugular notch, and clavicular notch.

XXVII. True Ribs vs False ribs. Direct Attachment, indirect attachment, and floating ribs.

1. Costal cartilage know where it is and its function.
2. Transverse costal facets on thoracic vertebrate for attachment of ribs.
3. Vertebral foramen and transverse foramen

arachnoid mater

dura mater

meninges   
Na+/K+ pump

threshold potential

interneurons

motor neurons

sensory neurons actin pia mater

fascia CSF

insertion spinal cord

origin cerebrum

motor neuron diencephalon

myofibril cerebellum

Sliding Filament Theory brain stem

myosin corpus callosum

neurotransmitters convolutions/gyri

oxygen debt sulcus

sarcomere insula

threshold stimulus cranial nerves

Acetylcholine

troponin greater turercle

tropomyosin lesser tubercle

cardiac muscle anatomical neck

smooth muscle surgical neck

skeletal muscle Olecranon fossa

neurons deltoid tuberosity

nerve impulse

action potential

cell body

dendrites

axon

CNS

PNS

Microglial cells

Oligodendrocytes

Astrocytes

Ependymal cells

Schwann cells

myelin sheath

Nodes of Ranvier

bipolar neurons

unipolar neurons

multipolar neurons

Study Questions:

1. What determines skin color?
2. How do the systems we have studied thus far work together to maintain homeostasis?
3. Why are there no skin cancers that originate from the stratum corneum?
4. How does a skeletal muscle contract?
5. Why is the study of histology critical to our understanding of Anatomy and Physiology?
6. Describe how a nerve cell becomes depolarized?