**Outline for the Mid Term 2016/2017**

**Chapter 1: The Human Body: An Orientation**

Full Body Diagrams using Regional Terms:

Acromial

Antebrachial

Antecubital

Axillary

Brachial

Buccal

Carpal

Cervical

Coxal

Crural

Deltoid

Femoral

Frontal

Inguinal

Mental

Orbital

Patellar

Sternal

Tarsal

Calcaneal

Femoral

Gluteal

Lumbar

Occipital

Olecranal

Popliteal

Plantar

Sacral

Scapular

Sural

Vertebral

* Anatomy vs. Physiology
* Levels of Organization of the Human Body
* Basic Functions of the Body Systems
* Homeostatic Control System
  + Positive vs. Negative Feedback Mechanisms
* 5 Survival Needs of Humans
* 8 Necessary Life Function
* Anatomical Orientation and Directional Terms
  + Superior, Cranial, Cephalad
  + Inferior, Caudal
  + Ventral, Anterior
  + Dorsal, Posterior
  + Medial
  + Lateral
  + Intermediate
  + Proximal
  + Distal
  + Superficial, External
  + Deep, Internal
* Body Planes and Section
  + Sagittal
  + Median, Midsagittal
  + Frontal, Coronal
  + Transverse, Cross

**Chapter 3: Tissues**

Know the description (pictures will help too), function, and location of the following:

* 9 Types of Epithelial Tissue
  + Simple Squamous Transitional
  + Simple Cuboidal Stratified Cuboidal
  + Simple Columnar Stratified Columnar
  + Pseudostratified Glandular
  + Stratified Squamous
* 9 Types of Connective Tissue
  + Bone Areolar
  + Hyanline Adipose
  + Elastic Cartilage Reticular
  + Fibrocartilage Blood
  + Dense Fibrous
* 3 Types of Muscle Tissue
  + Smooth
  + Cardiac
  + Skeletal
* Nervous Tissue

**Chapter 4: Skin and Body Membranes**

* 4 Types of Body Membranes (Epithelial vs. Connective)
  + Epithelial
    - Cutaneous
    - Mucous
    - Serous (Peritoneum, Pleura, Pericardium)
  + Connective
    - Synovial
* Functions of the Integumentary System
* Layers of Skin
  + Epidermis
    - Stratum basale

Other Terms to Know:

Keratin

Hypodermis

Keratinocytes

Melanin

Melanocytes:

Carotene

* + - Stratum spinosum
    - Stratum granulosum
    - Stratum lucidum
    - Stratum corneum
  + Dermis
    - Papillary layer
      * Dermal papillae
    - Reticular layer
* Types of Glands
  + Exocrine
  + Sebaceous
  + Sudoriferous
  + Eccrine
  + Apocrine
* Homeostatic Imbalances
  + Cyanosis
  + Jaundice
  + 3 Types of Burns (Rule of Nines)
    - First, Second, and Third Degree
  + 6 Types of Infections and Allergies
    - Athletes Foot, Boils and Carbuncles, Cold Sores, Contact Dermatitis, Impetigo, Psoriasis
  + 3 Types of Skin Cancer (ABCD Rule)
    - Basal Cell Carcinoma, Squamous Cell Carcinoma, Malignant Melanoma

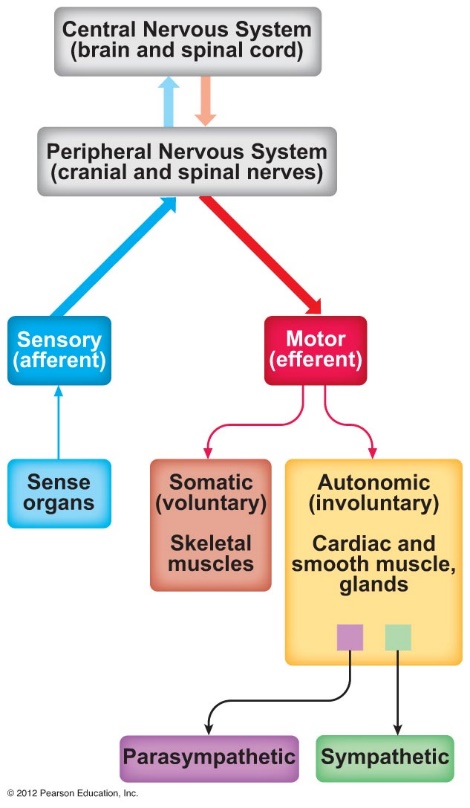
**Chapter 5: Skeletal System**

* Axial vs. Appendicular
* 5 Functions of the Bones
* Classification of Bones
  + Compact Short
  + Spongy Flat
  + Long Irregular
* Gross Anatomy
  + Diaphysis
  + Epiphyses
    - Epiphyseal line, Epiphyseal Plate, medullary cavity
    - Yellow vs. Red bone marrow
* Microscopic Anatomy
  + Osteocytes Central Canals Perforating Canals
  + Lacunae Osteon
  + Lamella Canaliculi
* Homeostatic Imbalances
  + Rickets Pannus
  + Osteoarthritis Gout
  + Bursitis Bone Spurs
* Bone Formation, Growth, and Remodeling
  + Ossification
  + Osteoblasts vs. Osteoclasts
* Classification of Joints
  + Functional
    - Synarthroses, amphiarthroses, diarthroses
  + Structural
    - Fibrous, Cartilaginous, Synovial

Skull Diagram, Full Body Diagram, Vertebral Column Diagram, Individual Bone Diagrams

* Cranium
  + Frontal, Parietal, Temporal, Occipital, Sphenoid, Ethmoid, Zygomatic, Maxilla, Mandible, Nasal, Lacrimal,
  + Coronal Suture, Lambdoid Suture, Squamous Suture
* Bones
  + Clavicle, Scapulae, Humerus, Radius, Ulna, Carpals, Metacarpals, Phalanges, Ossa Coxa (Coxal) Bone, Tibia, Fibula, Femur, Patella, Tarsals, Metatarsals, Calcaneus, Talus
* Vertebral Column
  + Cervical, Thoracic, Lumbar, Sacral, Coccyx
* Humerus
  + Olecranon Fossa, Coranoid Fossa, Medial Epicondyle
* Ulna (-Radius)
  + Olecranon, Trochlea, Caranoid Process
* Femur (-Tibia and Fibular)
  + Patellar Surface, Intercondylar Fossa
* Coxa
  + Ossa Illium, Ischium, Pubis, Acetabulum, Obturator Foramen
* Scapula (- Clavicle)
  + Acromion, Glenoid Cavity, Spine

**Chapter 7: Nervous System**

**Basics**

3 Functions of the Nervous System

Divisions of the Nervous System

Neuroglia – Functions and Types

Neuron Anatomy

Terms used for CNS vs. PNS

3 Types of Neurons

Irritability – Steps to Generating an Action Potential/ Impulse

Conductivity – Steps to Transmitting a Signal

Reflex and Reflex Arc

* 5 Elements
* Somatic vs. Autonomic and 2 Neuron vs. 3 Neuron Arc

**Brain**

\*Know Diagrams from workbook page 139 and 140

Regions

* Cerebrum/Cerebral Hemispheres
  + Gyri vs. Sulci vs. Fissure
  + Frontal, Parietal, Occipital, Temporal
    - KNOW AREAS FOR EACH (where functions are located – use diagram in notes for help)
  + Precentral and Postcentral Gyrus
  + Longitudinal Fissure
  + Parieto-occipital Sulcus
  + Lateral Sulcus
  + Cortex/Grey Mater, White Mater, Basal Nuclei
    - Corpus Collosum
* Diencephalon
  + Thalamus, Hypothalamus, Epithalamus
    - Know functions and relative location of each
* Midbrain
  + Midbrain, Pons, Medulla - Reticular Formation
    - Know functions and relative location of each
    - Cerebral Peduncles and Corpora Quadrigemina (in Midbrain)
* Cerebellum
  + Know function and relative location

Protection

* Skin and Scalp
* Skull and Vertebrae
* Meninges (Dura Mater, Arachnoid Mater, Pia Mater)
* Cerebral Spinal Fluid (Choroid Plexus)
  + CSF Pathway of Flow
    - Ventricles, Central Canal, Subarachnoid Space, Arachnoid Villi, Dural Venous Sinuses
* Blood-Brain Barrier

Brain Injuries

* Concussion
* Contusion
* Cerebral Edema
* CVA / Stroke
  + Hemiplegia, Aphasia, Transischemia
* Alzheimer’s Disease

**Spinal Cord**

* Extent (Foramen Magnum to 1st or 2nd Lumbar)
* 31 pairs
* Cauda Equina

**Chapter 8: Special Senses**

Accessory Structures of the Eye (Functions)

* Eyelids and Eyelashes (Tarsal and Ciliary Glands)
* Conjunctiva

Eye Disorders

* Astigmatism
* Cataracts
* Conjunctivitis
* Glaucoma
* Hyperopia
* Myopia
* Night blindness
* Strabismus
* Presbyopia
* Ophthalmia Neonatorum
* Lacrimal Apparatus and Lacrimal Gland
* Extrinsic Eye Muscles (Do not need to know individual names)

Layers of the Eye

* Fibrous
  + Sclera and Cornea
* Vascular
  + Choroid, Ciliary Body, Iris, and Pupil
* Sensory
  + Retina (Rods and Cones), Optic Disc, Fovea Centralis

Other structures of the Eye

* Lens
* Aqueous and Vitreous Humor

Eye Reflexes

* Photopupillary
* Accommodation Pupillary
* Convergence
* Ciliary Zonules

**Describe the Pathway of Light through the Eye**

* Including
  + Real Image
  + Optic Chiasma
  + Optic Tracts

External Ear

* Auricle (Pinna)
* External Acoustic Meatus (Auditory Canal)
* Tympanic Membrane

Middle Ear

* Pharyngotympanic (Auditory) Tube
* Malleus, Incus, Stapes, Oval Window

Inner Ear

* Perilymph and Endolymph
* Cochlea, Vestibule, Semicircular Canals
* Vestibular Apparatus

Static Equilibrium

* Maculae
  + Hair Cells, Otoliths

Dynamic Equilibrium

* Crista Ampullaris and Cupula
* Semicircular Canals

Organs of Hearing

* Organ of Corti, Cochlea, Hair Cells, Cochlear Nerve, Temporal Lobe

Mechanoreceptors

**Explain the Mechanism of Hearing**

Olfaction

* Olfactory Nerve

Taste

* Papillae
  + Filiform, Fungiform, Circumvallate
* Gustatory Cells

Structure of Taste Buds

* Facial, Glossopharyngeal, Vagus Nerves

Taste Sensations

* Sweet, Salty, Bitter, Sour, Umami

Chemoreceptors

**Possible Essay Questions**:

Describe the 8 necessary life functions and 5 survival needs.

Explain the elements of a homeostatic control system and give an example of how it works.

Explain the ABCD rule and how it helps detect cancerous lesions.

Differentiate among the three types of joints based on structural and functional classification. Provide examples of each type of joint.

Describe the events that occur using irritability and conductivity.

Explain how each system discussed (Integumentary, Skeletal, and Nervous) help maintain homeostasis.