Anatomy & Physiology Review Sheet for Midterm/Final

**Unit 1: Intro to HAP**

Terms:

* Anatomy
* Physiology
* Homeostasis
* Positive feedback
* Negative feedback
* Anatomical position
* Superior
* Inferior
* Ventral
* Dorsal
* Anterior Posterior
* Medial
* Lateral
* Proximal
* Distal
* Superficial
* Deep
* Axial Appendicular
* Sagittal plane
* Frontal plane (coronal)
* Transverse plane
* Oblique section
* Serosa

Concepts:

* Levels of organization (chemical 🡪 organism)
* Necessary life functions for humans (STERNGRR)
* Survival needs
* Overview of organ systems
* Body regions (cephalic, popliteal, ocular, etc.)

**Unit 2: Human Chemistry**

Terms:

* Matter
* Energy
  + Kinetic
  + Potential
  + Chemical
  + Electrical
  + Mechanical
  + Radiant
* Elements
* Matter
* Atoms
* Electrons/Protons/Neutrons
* Mixture
* Compound
  + Ionic
  + Covalent

Concepts:

* First law of thermodynamics (energy is not created or destroyed)
* Electrolytes and their importance
* Acids/bases/buffers
* Organic compounds (lipids, proteins, nucleic acids, carbs)
  + Monomer, function, properties
* ATP to energy
* Identifying macromolecules with tests (Benedicts, Brown Paper bag, etc.)
* Enzyme activity (lactase)

**Unit 3: Cells**

Identify functions/location:

* Plasma membrane
* Cytoplasm
* Nucleus
* Cytosol
* Organelles
  + Membranous
  + Nonmembranous
* Nuclear envelope
* Rough/Smooth ER
* Golgi apparatus
* Secretory vesicles
* Lysosomes
* Nucleus
* Chromatin
* Histones
* Phospholipid
* Hydrophobic
* Cholesterol
* Peripheral/Integral proteins
* Ribosomes
* Centrioles
* Vesicles
* Lysosomes
* Peroxisomes
* Extracellular matrix

Concepts:

* Membrane transport
* Permeability
* Passive Transport
* Diffusion
* Osmosis
* Sodium potassium pump
* Tonicity
* Endocytosis/Exocytosis
* Pinocytosis/Phagocytosis
* Mitosis/Meiosis
* Cell Cycle
* Protein Synthesis
* Mutation in DNA/protein synthesis

**Unit 4: Tissues**

Identify functions/locations/slides of:

* Epithelial tissue
  + Simple vs. stratified
  + Squamous/cuboidal/columnar
  + Pseudostratified
  + Transitional
* Connective tissue
  + Loose vs. dense
  + Cartilage
  + Bone
  + Blood
* Muscular tissue
  + Smooth
  + Skeletal
  + Cardiac
* Nervous tissue

Concepts:

* Tissue repair

**Unit 5: Integumentary System**

Terms:

* Keratinocytes
* Melanocytes
* Collagen
* Ubiquitous ulcer
* Pressure/touch receptors (Pacinian & Meissner)
* Cuticle
* Hair follicle
* Hair shaft
* Hair root
* Carotene
* Hemoglobin
* Cyanosis
* Jaundice

Identify locations and functions:

* Epidermis
* Dermis
* Hypodermis
* Blood vessels
* Sebaceous gland
* Reticular layer
* Papillary layer
* Hair follicle
* Eccrine gland
* Order of epidermis layers
* Arrector pili

Concepts:

* Types of skin cancer
* Identifying skin cancer
* Rule of nines
* Degree of burns
* Skin grafts
* Aging of the skin

**Unit 6: Skeletal System**

Bones to know:

* Skull (DO NOT NEED TO KNOW SPECIFIC ONES)
* Mandible
* Vertebrae (cervical, thoracic, lumbar, sacrum, coccyx)
* Pelvis
* Sternum
* Clavicle
* Scapula
* Humerus
* Radius
* Ulna
* Carpals, metacarpals
* Tarsals, metatarsals
* Phalanges
* Femur
* Tibia
* Fibula
* Patella

Concepts:

* Functions of skeleton
* Classification of bones (long, short, etc.)
* Bone development (epiphyseal plate)
* Hormone control of bone growth
* Bone cells (osteoblasts vs. osteoclasts)
* Bone fractures
* Fontanelles and fetal skull
* Functions of joints
  + Bursa, meniscus
* Synovial, cartilaginous, and fibrous joint examples
* Types of synovial joints
* Calcium & osteoporosis