

Review Sheet for Exam Four (chpts 26-29)

Chapter 26 The Integumentary, Skeletal, and Muscular Systems

what are the 2 main body cavities? what are the subdivisions of each? examples of organs in each cavity
what are the 11 systems of the body? Know organs and functions of each
Know 4 types of tissues, characteristics and functions of each
Epithelial Tissue – examples, locations and functions of: simple & stratified squamous, simple cuboidal, simple columnar, pseudostratified ciliated columnar
differences between exocrine and endocrine glands, examples of each
Connective Tissue: know characteristics, examples, functions of loose (areolar), dense regular, dense irregular, cartilage (hyaline, fibrous, elastic) blood, fat, bone
what type of cells are associated with connective tissue? what is their function?
Muscular: 3 types of muscle, which are striated, voluntary?
where would each be found?
What cells are associated with nervous tissue?

Integumentary System

functions, epidermis & dermis, type of tissue in each layer
what type of tissue forms the epidermis?
are epidermal cells alive or dead at the surface?
what is keratin? What are melanocytes?
how does the blood flow to the dermis help with heat regulation?
what type of tissue forms the dermis?
what is the function of hair?
what is the hair follicle?
what are sebaceous glands? What do they make? Why?
what is the function of sweat glands?

Skeletal System

what are the 5 functions of the skeleton?
components of bone (what makes the organic part? What forms the inorganic part?
what are the diaphysis, epiphysis and periosteum?
what is the marrow cavity? What is in it?
what is the name of the cartilage that lines the ends of bone? what type of cartilage is it?
functions of osteoblast, osteoclast, osteocyte
characteristics of cancellous vs. compact bone
what is a joint? what is the function of ligaments? and tendons?
Know the bones listed on the handout – you will have to identify them using the skeleton photo from your text (you will be given a word bank).

Muscular System

What are the three types of muscle tissue?
what is a sarcomere?
what are the two muscle proteins? Which is the thick one? Which is the thin one?
know the muscles listed on your outline. You will have a muscle diagram to identify. It is posted on the Blackboard site.

Chapter 27 The Nervous & Endocrine Systems

Nervous System

functions and organization of the nervous system: CNS, PNS: autonomic etc
what is the flow of information through nervous system
what structures are innervated by the somatic nervous system and autonomic?
neuroglial cells: functions & characteristics, what is myelin? what color is it? what does it do?
gray matter consists of? and white matter?
neurons: functions, characteristics, 3 parts of a neuron, what are Nissl bodies?
know the structural and functional classifications of neurons
what is a nerve? how many cranial nerves? how many spinal nerves?
what is the resting membrane potential of a neuron?

which ion is more numerous within the neuron: Na or K
what are the 3 steps necessary to form a nerve impulse?
what is meant by threshold?
definitions of action potential, all or none principle, depolarization, repolarization
Synapse: presynaptic, postsynaptic neurons, synaptic cleft, chemicals are released at a synapse? recognize the names of neurotransmitters, which is important in Parkinson's disease?
Which for depression?
functions of spinal cord, the inner "H" shape consists of:
what is found in the dorsal root ganglion? and in the ventral root?
reflex arc & stretch, withdrawal reflexes: what happens?
Autonomic: sympathetic, parasympathetic, what do they do to HR, BP?
CNS: parts/functions of brain (cerebrum, cerebellum, thalamus, hypothalamus, pons, medulla oblongata, corpus callosum)
what protects the brain and spinal cord? the order of the meninges (which closest to the brain)

Special Senses

what are the five senses?
what type of stimuli are detected by touch?
special sense organs: type of receptor involved
Taste: taste is also termed gustation, what are the 4 tastes, what is necessary to taste food?
if one can't smell can they taste?
Smell: where receptors are located, chemicals must dissolve in? what is adaptation?
Vision: anatomy of the eye, differences b/w rods & cones
definition of near-sighted? And far-sighted?
Ear: 2 senses here, anatomy of the ear? 2 types of balance, which part of the ear is responsible for hearing? for balance?

Endocrine system

types of hormones, what is negative feedback? and positive feedback?
know the following glands, hormones released, and actions of the hormones:
anterior pituitary, posterior pituitary, thyroid, & pancreas, adrenal cortex, testes, ovaries, pineal gland

Chapter 28 The Immune System

functions of lymphatic system
definitions/differences between nonspecific and specific immunity
seven types of nonspecific defenses: how do they defend the body?
specific defense: T & B lymphocytes: how do each work? know the steps
for a B cell to become sensitized and the functions of the plasma and memory cells
what is active immunity? and passive immunity? examples of each
what are the main lymphatic organs? what do each do?
what are the 4 types of T cells? what are some functions of the helper T cells?
what is an autoimmune disease?

Chapter 29 The Cardiovascular & Respiratory Systems

Cardiovascular System

blood consists of two things, what are they?
what are the formed elements? know the functions of each, what is hemoglobin?
plasma is 90%? know the 4 types of proteins found in plasma and functions of each.
the liver makes clotting proteins: fibrinogen and prothrombin
know characteristics of arteries, arterioles, capillaries, venules and veins: which is under the highest blood pressure? and the lowest blood pressure?, which is the smallest?
What is normal blood pressure?
What is the largest artery in the body? and the largest veins?
heart: location, size, myocardium composed of what type of tissue?
How many ventricles? How many atria?
Be able to list the complete flow of blood through heart/body
what is the function of the valves in the heart? What is a heart murmur?
Definition of pulmonary circulation? And systemic circulation?

What is hydrostatic pressure? What does it do at a capillary bed?

What is osmotic pressure? What does it do at a capillary bed?

Respiratory System

4 components of respiration and definitions of each

functions of respiratory organs & characteristics of lungs & alveoli

what is the passageway of air (nose - alveoli)

what is surfactant?

external respiration: gas exchange b/w air in alveoli & blood: O₂ diffuses which direction and CO₂?

how is oxygen carried in blood?

internal respiration: what is it?

When the diaphragm contracts air moves? When the diaphragm relaxes air moves?

Your exam will have 3 diagrams to label (skeleton, muscles, ADAM Dissection photos for nervous, endocrine, immune, cardiovascular and respiratory systems), in addition to the usual multiple choice, matching, and essay questions.