

Anatomy & Physiology (Exam 3- part A)

Study Guide for Exam III- The more detail you use in your study guide, the better your study will be. Draw diagrams and create bulleted lists as much as possible to help you organize the material. If you run short on time, be sure to cover each section at least briefly, then go back over and study in more detail (especially the concepts you are struggling with).

Nervous System

1. Describe/define each of the following terms in as much detail as possible:

Neuron

Axon

Dendrite

Cell body

Synaptic bulb

Synaptic cleft/synapse

Neurotransmitters

Neuroglial cells

Schwann cells

Myelin

Resting potential

Action potential

Spinal cord

Central (CSF) canal

Cerebrospinal fluid

Meninges: dura mater, arachnoid mater, pia mater

Subarachnoid space

Epidural space

White matter

Grey matter

Nerve plexuses: cervical, brachial, lumbar, sacral

Ventricles

Choroids plexus

Blood brain barrier

Lobes

Sulci

Gyri

Fissures

Sensory cortex

Motor cortex

Auditory, olfactory & visual cortexes

2. Describe the functions of: medulla, basal ganglia, pons, reticular formation, hypothalamus, thalamus, midbrain, cerebellum, corpus callosum, substantia nigra and limbic system.

3. Describe an action potential from beginning to end in as much detail as possible.

4. Be able to identify the structures listed in the supplement page 120-121

Special Senses

1. Describe/define each of the following terms in as much detail as possible:

Exteroreceptors

Enteroreceptors

Proprioreceptors

Mechanoreceptors

Thermoreceptors

Chemoreceptors

Photoreceptors

Nociceptors

Gustation

Umami

Crista galli

Cribriform plate

Olfactory bulb

Rods/cones

Fibrous tunic

Vascular tunic

Neural tunic

Aqueous humor

Vitreous humor

Fovea

2. Trace/describe/diagram the paths of the touch, gustatory, olfactory, visual and auditory senses from receptors to brain.

3. Be able to identify the structures listed in the supplement page 123

Endocrine System

1. Describe/define each of the following terms in as much detail as possible (*for endocrine glands be sure to list their hormones, functions and control mechanisms)

Ducts

Cytoplasmic enzymes

Negative feedback

Four types of hormones: amino acid derivatives, peptides, steroids, eicosanoids

*Hypothalamus (list 3 control mechanisms and 4 hormones)

*Pituitary gland: anterior (7)/posterior (2)

Sella turcica

*Thyroid gland (2) remember C-cells!

Goiter

*Parathyroid glands (1)

*Pancreas

Alpha cells (1)

Beta cells (1)

Delta cells (1)

F-cells (1)

*Pineal gland (1)

Adrenal glands

Cortex (dozens, but describe class of hormones, examples?)

Medulla (2)

2. Describe the negative feedback mechanism that controls blood glucose levels in as much detail as possible.
3. Describe how hormones are able to be specific to their target cells/tissues.
4. Describe the four general mechanisms of control over hormones