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
   - Nocireceptors
   - 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