Terms

1. **Neurons:** Be able to label and list functions for
   - Dendrites
   - Soma or Cell Body
   - Axon
   - Nodes of Ranvier
   - Axon Terminal (Terminal Button)
   - Myelin Sheath

2. **Glia:** know functions for
   - astrocytes
   - microglia
   - oligodendrocyte
   - Schwann cells

Information Processing

I. **Electrical Signaling: within a neuron**

Resting Potential (RMP)

- Definition of RMP
- how it is measured
- ion
- Polarization
location of Na+ ions; K+ ions
- forces maintaining RMP & generating potential energy
  Selective Permeability
  Diffusion
  Electrostatic Force
  Sodium-Potassium Pump

**Action Potential:**

- definition
- Threshold
- ionic events at threshold (i.e., what happens to Na+ ions)
- movement of ions during various phases of Action Potential
- Conduction down axon
  - what happens at nodes of Ranvier
  - saltatory conduction

**II. Chemical events: between neurons**

- Vesicles- location and function
- Steps in Neurotransmitter release
- Parts of the synapse: pre-synaptic terminal; synaptic cleft; post-synaptic membrane
  Neurotransmitter Effects on Receptors
  Post-synaptic potentials
  Reuptake (transporters) vs. Enzymatic Degradation
III. Mechanisms of Action of Drugs

Antagonist vs. antagonist effects

Know drug examples given in class and how they work

-novocaine

-botox

-cocaine vs. methamphetamine

-aricept

-hallucinogens

-THC