1. __________ is the measure of potential energy generated by separated charges. In a cell, it’s referred to as ______________ ______________.

a. __________ indicate the flow of positively or negatively charged ________ across the ______________ of your cells’ membranes.

b. A ________________ is like a battery just sitting in the sack that is you. When it’s just sitting there, it’s more ______________ on the ____________ of the cell, relative to the extracellular space around it. When a neuron has a negative membrane potential like this, it is said to be ________________.

c. What is the sodium-potassium pump? Explain.

d. The membrane is also riddled with _______________________, large proteins that can provide safe passage across the membrane when their respective gates are open.

i. Most are ____________________________, which open at certain membrane potentials, and close at others. Some others are ____________________________; they only open up when a specific neurotransmitter latches on to it. We also have ____________________________, which open in response to physically stretching the membrane.

e. How does an action potential occur? Explain.

i. When part of an axon is in the middle of all this, and its ion channels are open, it can’t respond to any other stimulus, no matter how strong—this is called the ______________________________, and it’s there to help prevent signals from traveling in both directions down the axon at once.

ii. A ____________________________ tends to trigger __________________________ action potentials.

iii. Action potentials also vary by speed, or ______________________________.

iv. ____________________________ is from the Latin word for “leaping”.