**Biology as Secondary Discipline**

**Question 1.** State which is the main excitatory neurotransmitter in the Central Nervous System of vertebrates and enumerate which are the different types of receptors for this neurotransmitter

**Question 2.** Why is GABA an inhibitory neurotransmitter? Under which circumstances can GABA become excitatory?

**Question 3.** Outline the steps involved in the presynaptic release of neurotransmitter at a central synapse. Why would the closure of a potassium channel in the presynaptic axon terminal change the amount of neurotransmitter released?

**Question 4.** What is saltatory nerve conduction?

**Question 5.** What are "optogenetics" and why is this technique becoming extremely useful in Neurophysiology?

**Question 6.** Which are the known functions of the cerebellum?

**Question 7.** Describe the broad connectivity of the thalamus. What kind of thalamic activity supports sleep and wake states?

**Question 8.** Describe the layer organization of the neocortex