9.01 - Neuroscience & Behavior Fall 2003

Massachusetts Institute of Technology Instructor: Professor Gerald Schneider

Study Questions for lecture 4 assigned readings.

From Rosenzweig pp. 25-56:

- 1. Give a brief account of the process by which information is transmited from the presynaptic cell to the postsynaptic cell. What change occurs in the postsynaptic cell?
- 2. What are the two parts of the neuron doctrine?
- 3. Write a brief description of the anatomy of the autonomic nervous system, using the following terms in your answer: autonomic ganglia, preganglionic neurons, postganglionic neurons, sympathetic nervous system, sympathetic chain, parasympathetic nervous system.
- 4. The hypothalamus, a collection of small nuclei, is implicated in numerous important, basic functions. Name some of these.
- 5. Name the parts of the basal ganglia and a major function of this system,
- 6. Describe the architecture and basic functions of the cerebellum and pons.
- 7. What is meant by a "cortical column"? Describe the size and shape of a column; what is its functional significance?
- 8. How many layers does the cortex have, and how do the layers vary from one another?
- 9. Give an outline of modern techniques for producing images of a living person's brain and the particular advantages each technique offers.