

9.01 Study Questions

**Lecture 19**

1. [Question repeated from class 18 study questions:] From what was said in class and what is described in the slides, try to distinguish two separate factors that cause sprouting of axonal arbors in the CNS. What is the “pruning effect” of some brain lesions?
2. What are two ways that the competitive growth vigor of developing axons might be increased?
3. What is the S-R model? Why is it important, both historically and in current thinking?
4. Pavlov and Skinner produced evidence that made S-R models appear to be more comprehensive in their explanations of behavior of higher animals. What kind of evidence was it?
5. Describe Renshaw’s evidence for a 0.5-0.7 millisecond synaptic delay in the spinal cord.
6. What are the main reasons people do not fall down when they pick up one foot by flexion of leg muscles? What kinds of connections are involved, in addition to those from the vestibular system?
7. What is subliminal excitation? How is this relevant to thinking about reflexes and their control by supraspinal motor systems?
8. Why is reciprocal inhibition so important for normal function?
9. Novelty can produce strong motivational effects. Describe these effects, and suggest how they are adaptive for an animal?