9.01 - Neuroscience & Behavior

Fall 2003

Massachusetts Institute of Technology

Instructor: Professor Gerald Schneider

Readings Study Questions LECTURE 27

on Rosenzweig Chapter 8 (pages 281-321)

- 1. Explain the difference between brightness, hue, and saturation.
- 2. Describe the functions of the rods, the bipolar cells, and the ganglion cells in the retina. What are some similarities and differences of their electrical responses and receptive fields?
- 3. How does the eye adapt to the range of light intensities that it encounters? Give several mechanisms.
- 4. Why is our visual acuity much higher in the fovea than in the periphery?
- 5. What are the receptive fields in area V1 like?
- 6. What is an ocular dominance column?
- 7. What is some evidence area V5 (MT) is involved in motion processing?
- 8. What are the two major visual processing streams? Describe their differences.