

## Chapter 1

1. Demetri is a participant in an auditory detection study using the method of constant stimuli. He never detects the 10 unit tone. He detects the 20 unit tone on 25% of the trials. He detects the 30 unit tone on 50% of the trials. He detects the 40 unit tone on 80% of the trials and he detects the 50 unit tone on 95% of the trials. His threshold for hearing tones would be taken as the: a) 15 unit tone b) 20 unit tone c) 30 unit tone d) 50 unit tone
2. The difference between the method of limits and the method of adjustment is that, in the method of adjustment, stimulus intensity is changed in a \_\_\_\_\_ manner. a) continuous b) stepwise c) discrete d) none of the above
3. Trying to read a note written by someone with poor handwriting involves a) bottom-up processing b) top-down processing c) peripheral vision d) a and b above
4. Beth is casting shadows on the wall and watching whether her cat Tiger jumps at the shadows or not. She uses different hand motions to see if there is a difference in whether Tiger jumps or not. Beth is informally studying which relationship? a) between stimulus and physiology b) between physiology and perception c) between the stimulus and perception d) all of the above
5. We refer to the “stimulus on the receptors” in visual processing as the: a) aperture b) proximal stimulus c) attended stimulus d) percept

## Chapter 2

1. Our perception of the environment depends on: a) the properties of the objects in the environment b) the coding of the environment by the sensory receptors c) the organization and nature of the interconnections among neurons d) all of the above
2. The upper limit of a neuron's firing rate is estimated to be \_\_\_\_ impulses per second. a) 20 - 40 b) 100 -200 c) 500 – 800 d) none of the above
3. Synaptic vesicles contain chemicals called \_\_\_\_\_ that are released across the synapse to the next neuron. a) electrolytes b) neurotransmitters c) collagens d) calcium ions
4. A neuron with an excitatory center-inhibitory surround receptive field will respond *most* when we stimulate a) only the center b) only the surround c) the center and surround together d) part of the surround
5. An advantage of \_\_\_\_\_ coding of visual object representation is that a large number of stimuli can be signaled by a few neurons. a) specificity b) extrastriate c) distributed d) modular

## Chapter 3

1. The structure of the eye that provides about 80% of the eye's focusing power is the a) iris b) pupil c) cornea d) lens
2. The blind spot is located a) the fovea b) the macula c) where the optic nerve leaves the eye d) at the optic chiasm
3. There are \_\_\_\_ different cone receptors, each with different absorption spectra. a) 2 b) 3 c) 4 d) none of the above
4. Acuity is better in the \_\_\_\_ than in the \_\_\_\_\_. a) periphery; fovea b) optic disk; fovea c) cornea; periphery d) fovea; periphery
5. The difficulty of reading under dim light conditions can be explained by a) the increased sensitivity of the cones under low light conditions b) the increased acuity of the cones under low light conditions c) the fact that rods mediate low light vision and they have poor acuity d) the fact that the cones predominate for low light vision and have poor acuity

## Chapter 4

1. Neurons in the LGN have receptive fields that are: a) center-surround b) side-by-side columnar c) motion sensitive perpendicular to their orientation d) b and c above
2. Unlike simple cells, complex cells respond best to: a) stationary images b) small spots of light c) moving images d) stationary lines anywhere on the retina
3. \_\_\_\_\_ refers to the fact that the response properties of neurons can be shaped by an animal's or person's perceptual experience. a) selective adaptation b) neural plasticity c) modularity c) integration
4. An electrode is placed in an orientation column that responds best to orientations of 45 degrees. The adjacent column of cells will probably best respond to orientations of a) 0 degrees b) 40 degrees c) 90 degrees d) all of the above
5. A large vertical object, such as a tree trunk, will cause a) every neuron in one hyper column to fire, but no firing in other columns. b) firing of a number of neurons that respond to vertical orientation. c) firing of neurons in a number of different columns. d) b and c above
6. The dorsal extrastriate pathway goes to the \_\_\_\_\_ lobe. a) parietal b) frontal c) temporal d) occipital

## Chapter 5

1. Jada looks at a picture of a horse that was taken from directly above the horse, and has difficulty recognizing the horse. According to Biederman's RBC theory of object recognition, this difficulty would be explained by a) image-description modeling. b) the accidental viewpoint. c) too many GEONS being present in the picture. d) perspective convergence.
2. Jimmy looks at a picture of a side of a submarine that has dents and bumps on it. When he turns the picture upside-down, what he originally perceived as bumps, now look like dents, and vice versa. This is due to the a) Pragnanz effect b) oblique effect c) figure-ground segregation d) the "light-from-above" heuristic.
3. The law of similarity can account for grouping of stimuli (elements) that are similar in a) orientation. b) shape. c) color. d) all of the above
4. Border ownership means that when figure-ground segregation occurs, the border between the figure and background a) seems to change color. b) is perceived to be associated with the background. c) is perceived to be associated with the figure. d) seems to disappear.

## Chapter 5 (cont.)

5. The reason why V1 neurons can make figure-ground discriminations seems to be a) their output is modulated by the surrounding visual image b) feedback from the LGN c) cortical magnification of receptive fields d) none of the above

6. Gestalt psychologists used the example of illusory contours to support the claim that a) perceptions are formed by combining sensations. b) vision can be modeled on computer processing. c) the whole is different than the sum of its parts. d) perception is always influenced by knowledge

## Answers

Chapter 1: 1-c, 2-a, 3-d, 4-c, 5-b

Chapter 2: 1-d, 2-c, 3-b, 4-a, 5-c

Chapter 3: 1-c, 2-c, 3-b, 4-d, 5-c

Chapter 4: 1-a, 2-c, 3-b, 4-b, 5-d, 6-a

Chapter 5: 1-b, 2-d, 3-d, 4-c, 5-a, 6-c