

ID# _____

Exam 1

PS325, Fall 1998

OK, here's your first exam of the semester. Take a deep breath. Read each question carefully and answer it completely. Remember, I think of a point as a minute, so each multiple-choice question (worth 1 point) should take you no more than a minute to complete. Each essay question is worth 20 points, so you should expect to spend about 20 minutes writing your essay responses. You don't have to use fully constructed sentences in your essays. Partial sentences, figures, etc., work just fine as long as you are *completely clear*. Good Luck!!

Use the lined pages at the back of the exam to answer the two essay questions.

Essay 1. Among the topics that we have discussed so far, pick out three *different* areas and indicate their relevance to everyday life by, for example, showing their importance to your own experiences outside of the classroom, or showing how people in the workplace (artists, athletes, architects, etc.) might make use of the information. [20 pts]

Essay 2. Describe the evidence to support the idea that we effectively have two completely different visual systems in our retinas (duplex or duplicity theory). Use evidence from psychological, physiological, and anatomical approaches. [20 pts]

1. In class, we saw the Ames rotating trapezoidal window. Describe the perceived experience and an explanation for why it occurs. How is this demonstration useful for informing theories of visual perception? [5 pts]

2. A large-amplitude wavelength looks
 - a. dim.
 - b. bright.
 - c. red.
 - d. purple.

3. What symptom of glaucoma permits researchers to detect this problem in its early stages?
 - a. loss of peripheral vision
 - b. overall vision loss
 - c. clouding of the lens
 - d. change in the shape of the cornea

4. The _____ is (are) responsible for carrying information about illumination differences and moderate or rapid movement.
 - a. magno pathway
 - b. parvo pathway
 - c. horizontal cells
 - d. amacrine cells

5. Compared to other cues to depth, accommodation is
 - a. a strong pictorial cue.
 - b. more effective in conveying relative distance.
 - c. more effective in conveying egocentric distance.
 - d. weak, at best.

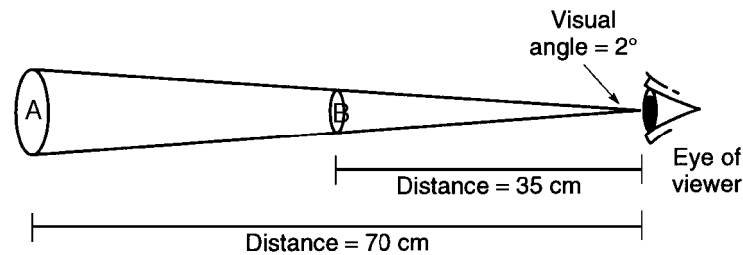
6. Ordinarily context helps us to perceive shapes accurately. However, this is not true in the case of
 - a. top-down processing.
 - b. the perception of complex shapes.
 - c. the twisted-cord illusion.
 - d. shape constancy.

7. People who favor the Gestalt approach to shape perception argue that
 - a. all experiences can be analyzed into their most basic sensations.
 - b. shape perception can largely be explained at the physiological level.
 - c. all species tend to organize shapes in the same fashion.
 - d. we perceive objects as well-organized wholes.

8. Data-driven (bottom-up) approaches to shape perception
 - a. would emphasize the importance of the information in the stimulus.
 - b. would emphasize the importance of cognitive operations.
 - c. are no longer thought to be important.
 - d. are thought to be more important than conceptually driven processes.

9. Binocular disparity
 - a. is most effective for determining the depth of nearby objects.
 - b. is most effective for determining the depth of distant objects.
 - c. is more effective than any of the monocular cues for depth.
 - d. is an important pictorial depth cue.

10. In motion parallax,
- objects closer to you than the fixation point move in the same direction as your own movement.
 - objects farther from you than the fixation point move in the opposite direction from your own movement.
 - objects farther from you than the fixation point move in the same direction as your own movement.
 - both eyes are necessary in order to use this cue in depth perception.



11. Refer to the above figure to answer the following questions (circle the correct answer for each):
- Because circle A is twice as large as circle B, its visual angle will be (twice as large as, the same as, half as large as) that of circle B.
 - With the same visual angle, because circle A is twice as far away as circle B, it will actually be (twice as large as, the same size as, half as large as) circle B.
 - If circle A were the same size as circle B, but twice as far away, its visual angle would be (smaller than, the same as, larger than) that of circle B.
12. Recent research on lightness perception indicates that
- we organize the visual scene before we perceive the lightness of objects in the scene.
 - we perceive the lightness of objects in a scene before we organize those objects.
 - lightness perception and organization of objects occur simultaneously.
 - the nature of the stimuli determines whether lightness perception or organization of objects occur first.
13. In the video with Penn and Teller, you saw several illustrations of the role of pictorial depth cues. Penn and Teller were actually involved in illustrating several illusions. Briefly describe two of the illusions that they demonstrated and tell me what those illusions tell us about perceptual processing. [5 pts]

14. Briefly describe size constancy (using the terms proximal and distal stimulus). Describe the research that indicates an important source of size constancy. [5 pts]

15. Briefly list and describe the stages of shape processing proposed by the computational theorists. [5 pts]