Read each question carefully and answer it completely. Pay careful attention to the point value of questions so that you allocate your time appropriately (1 point = 1 minute). Multiple-choice questions are worth 1 point each. Good Luck!

Essay #1: Among the topics that we have discussed so far, pick out three different areas and indicate their relevance to everyday life (e.g., by showing their importance to your own experiences outside of the classroom, showing how people in the workplace might make use of the information, etc.). [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. The correspondence problem affects the visual system as it detects motion in that:
   a. our perception of movement depends not only on the moving object, but also on the background
   b. as some objects in the visual field become uncovered (through disocclusion), others become covered (through occlusion)
   c. our visual system is susceptible to perceiving illusions
   d. we must link an image on the retina at one time point to a slightly different image at another time point

2. The images in the popular Magic Eye books are technically called:
   a. autostereograms
   b. random-dot stereograms
   c. stereoscopic pictures
   d. illusions

3. Lateral inhibition results in the experience of
   a. enhanced perception of edges.
   b. enhanced perception of color.
   c. faster light adaptation.
   d. poorer perception of color.

4. Autokinesis (the autokinetic effect) is presumably due to
   a. small movements of a stationary car produced by action of the engine.
   b. induced motion.
   c. involuntary eye movements.
   d. movement aftereffects.

5. Which of the following terms is NOT in the equation for Emmert’s law?
   a. perceived size
   b. retinal image size
   c. perceived distance
   d. binocular disparity

6. An object that is perceived to be blue appears that way because its surface is:
   a. absorbing most of the long wavelengths (e.g., reds and oranges)
   b. absorbing most of the medium wavelengths (e.g., yellows and greens)
   c. absorbing most of the short wavelengths (e.g., blues)
   d. both a and b
7. Bert is looking at a computer screen on which is picture of a smiley face comprised of two green eyes, a blue nose, and a red smile on a yellow face. He focuses on the blue nose, and whenever his eyes move, the image moves with his eye such that the blue nose is always presented on the same location on his retina. After some time, what will Bert report seeing at the place of the nose?
   a. it will be green, just like the two eyes
   b. it will be gray because the perception of color will fade
   c. it will be yellow, just like the background
   d. it will look like a black gap in the middle of the face

8. Pairs of lights that look exactly the same but are composed of physically different stimuli are called:
   a. protanopes
   b. metamer
   c. nonspectral hues
   d. monochromatic colors

9. A light gray object looks slightly red when presented against a green background. This effect is due to:
   a. simultaneous color contrast
   b. objective color contrast
   c. successive color contrast
   d. subjective color contrast

10. Spatial frequency is measured by:
    a. the distance the stimulus falls from the retina
    b. the amplitude of the component sine waves
    c. the number of cycles in each degree of visual angle
    d. the number of component sine wave gratings

11. Cells in V1:
    a. do not respond to illusory contours or real lines
    b. respond to both illusory contours and real lines
    c. respond to illusory contours but not real lines
    d. respond to real lines but not to illusory contours

12. The visual angle of a person facing you in the distance:
    a. changes as she moves left or right
    b. changes as she moves forward or backward
    c. remains constant despite any changes in her position
    d. both a and b

13. Most of the ganglion cells leaving the eye have their first synapse in the
    a. superior colliculus.
    b. primary visual cortex.
    c. lateral geniculate nucleus.
    d. optic nerve.

14. In the recognition-by-components approach, basic shapes called _________________ are processed.
    a. templates
    b. prototypes
    c. geons
    d. figures

15. The midget ganglion cells
    a. are found at the beginning of the P (parvo) pathway.
    b. are found at the beginning of the M (magno) pathway.
    c. are predominantly connected to rods.
    d. are primarily responsible for sensitivity, due to convergence.
16. According to the corollary discharge theory, motion is perceived when
   a. the sensory information is sent directly to the comparison structure.
   b. impulses from motion-specific retinal cells stimulate the visual cortex at the
      same time the pursuit system is activated.
   c. the images that cross over a person’s retina move in the same direction that their
      eyes are moving.
   d. the information from the eye-head system is inconsistent with the information
      from the image-retina system.

17. What does retinotopic mean?
   a. The retina is located at the back of the eye.
   b. The retina is the primary focus of investigation.
   c. Neurons that receive information from neighboring areas on the retina are
      found near each other.
   d. The receptors on the retina are arranged so that the receptor-to-ganglion ratio is
      higher for rods than for cones.

18. We tend to perceive figures as good, regular, and simple. What does this illustrate?
   a. masking
   b. the law of Prägnanz
   c. the figure-ground relationship
   d. our tendency to perceive all figures as three-dimensional

19. According to Marr, the stage in perception when an image is a viewer-centered representation of the
    visible surfaces of the visual field is known as a
   a. 2.5D sketch.
   b. primal sketch.
   c. 3D sketch.
   d. zero-crossing.

20. The difficulties we experience in accurately perceiving stimuli in unusual orientations (such as the
    upside-down Mrs. Thatcher) is support for
   a. a data-driven (bottom-up) approach to shape perception.
   b. a conceptually driven (top-down) approach to shape perception.
   c. the spatial-frequency approach.
   d. the prototype-matching approach.

21. Psychologists who favor the direct perception approach explain motion perception in terms of
    a. relative stimulation of motion-sensitive neurons.
    b. the corollary discharge theory.
    c. the self-motion illusion.
    d. information from the stimuli.

22. Which visual pathway conveys motion cues for depth perception?
   a. P
   b. K
   c. S
   d. M

23. In ________________, our sensitivity to various wavelengths moves toward the shorter wavelengths
    as we change from photopic to scotopic conditions.
   a. simultaneous color contrasts
   b. successive color contrasts
   c. the McCullough effect
   d. the Purkinje shift
24. Regarding our perception of self-motion, Helmholtz argued that the _______________ of information was most important while Sherrington argued that the _______________ of information was most important. Evidence supports _______________.
   a. inflow; outflow; Sherrington
   b. inflow; outflow; Helmholtz
   c. outflow; inflow; Sherrington
   d. outflow; inflow; Helmholtz

25. Which of the following statements is **FALSE**?
   a. We can detect motion better under conditions of greater luminance than lesser luminance.
   b. We can detect motion better when the stimulus is against a plain background than a textured background.
   c. We can detect motion better when the stimulus is visible for longer durations than shorter durations.
   d. We can detect motion better when the stimulus is against a stationary background than a moving background.

26. Constancy seems to be essential to visual perception. **Briefly** review the elements that you think are important for visual perception (as discussed in Chapter 4), then define what we mean by constancy and, finally, tell me why constancy might well be considered a prerequisite for vision. [10 pts.]