

8

Special Senses (12 pts)

Name: Answer Key  
 Period: \_\_\_\_\_

142 Anatomy & Physiology Coloring Workbook

3. Identify each of the eye muscles indicated by leader lines in Figure 8-1. Color code and color each muscle a different color. Then, in the blanks below, indicate the eye movement caused by each muscle. (3 pts)

- 1. Superior rectus Look up
- 2. Inferior rectus Look down
- 3. Superior oblique Look up at an angle.

- 4. Lateral rectus Moves eye laterally or out.
- 5. Medial rectus Moves eye medially or in.
- 6. Inferior oblique Look down at an angle.

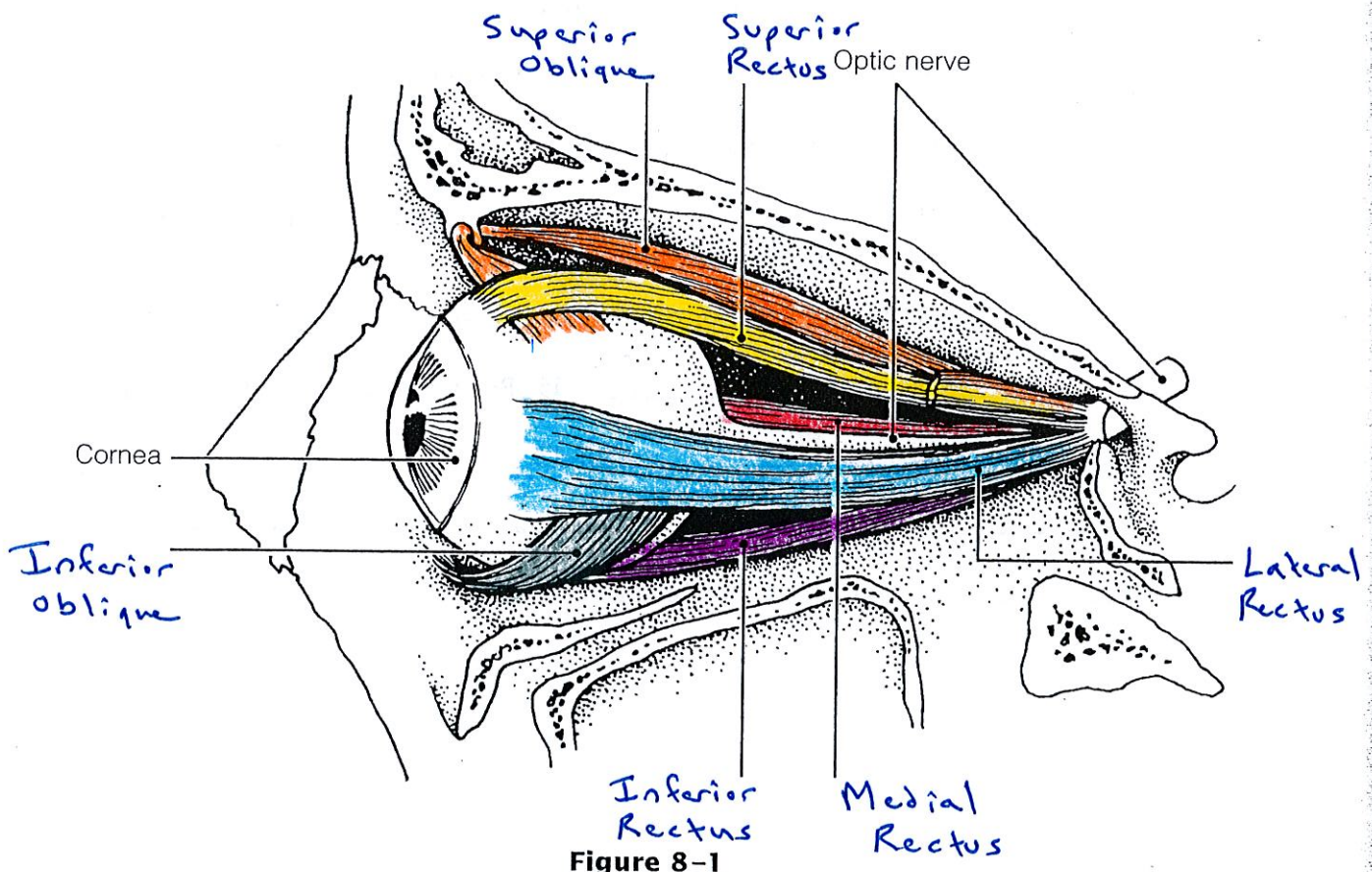















Figure 8-1

8. Using key choices, identify the parts of the eye described in the following statements. Insert the correct term or letter response in the answer blanks. (3 pts)

*Key Choices*

- |   |  |  |
|---|--|--|
| A.  Aqueous humor    | F.  Fovea centralis | K.  Sclera              |
| B.  Canal of Schlemm | G.  Iris            | L.  Suspensory ligament |
| C.  Choroid coat     | H.  Lens            | M.  Vitreous humor      |
| D.  Ciliary body     | I.  Optic disk      |  |
| E.  Cornea           | J.  Retina          |  |

- L. Suspensory ligament 1. Attaches the lens to the ciliary body
- A. Aqueous humor 2. Fluid that provides nutrients to the lens and cornea
- K. Sclera 3. The "white" of the eye
- I. Optic disk 4. Area of retina that lacks photoreceptors
- D. Ciliary body 5. Contains muscle that controls the shape of the lens
- C. Choroid coat 6. Nutritive (vascular) tunic of the eye
- B. Canal of Schlemm 7. Drains the aqueous humor of the eye
- J. Retina 8. Tunic, containing the rods and cones
- M. Vitreous humor 9. Gel-like substance that helps to reinforce the eyeball
- C. Choroid coat 10. Heavily pigmented tunic that prevents light scattering within the eye
- D. Ciliary body  $\leftarrow$  (11) G. Iris (12) Smooth muscle structures (intrinsic eye muscles)
- F. Fovea centralis 13. Area of acute or discriminatory vision
- E. Cornea (14) A. Aqueous humor (15) Refractory media of the eye (#14-17)
- H. Lens (16) M. Vitreous humor (17) (Any order)
- E. Cornea 18. Anterionmost part of the sclera—your "window on the world"
- G. Iris 19. Pigmented "diaphragm" of the eye

9. Using the key choice terms given in Exercise 8, identify the structures indicated by leader lines on the diagram of the eye in Figure 8-2. Select different colors for all structures provided with a color-coding circle in Exercise 8, and then use them to color the coding circles and corresponding structures in the figure. (2 pts)

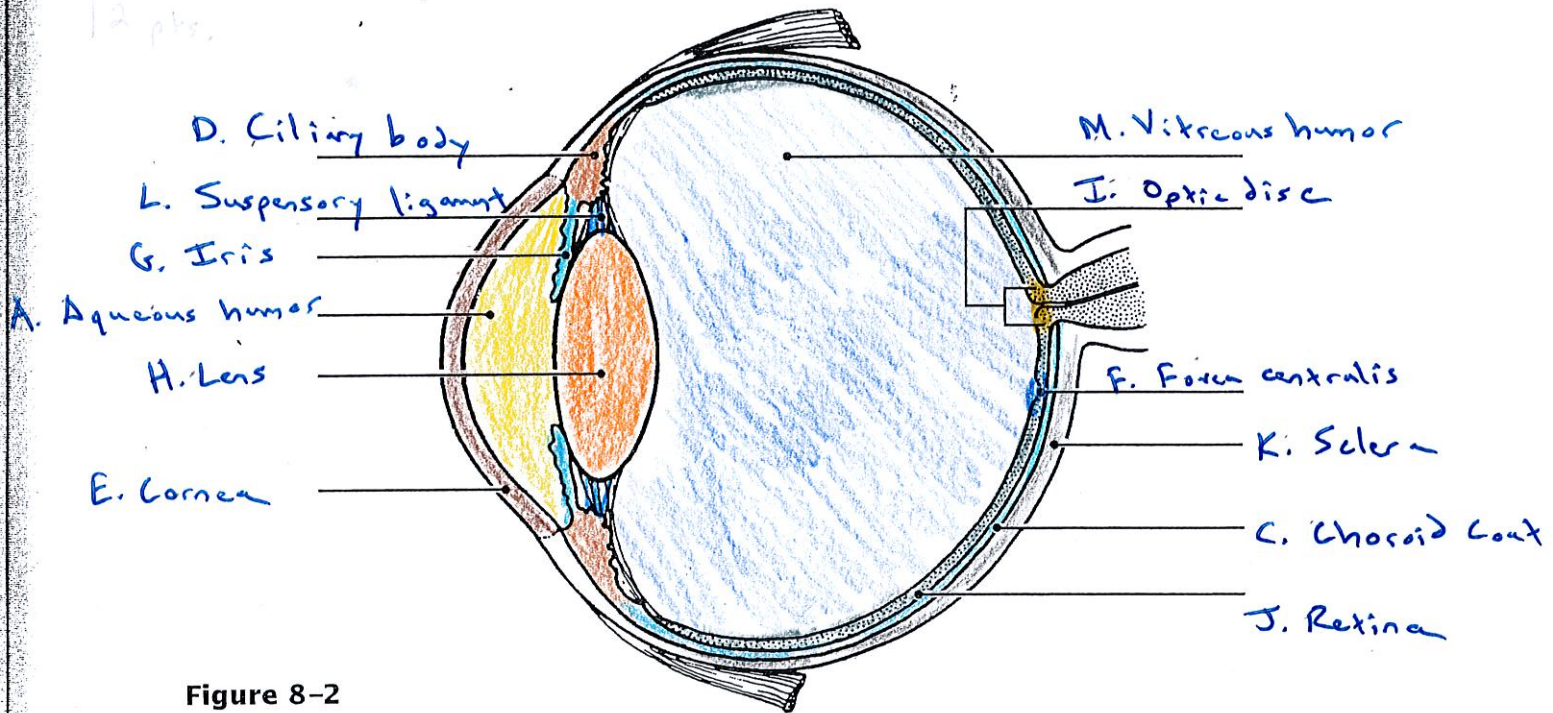


Figure 8-2

## Short Answer Questions (Answer on Back)

(4 pts)

2. Why do you often have to blow your nose after 'crying'? Tears are produced by the lacrimal gland and drained by the lacrimal canals and nasolacrimal duct which drain tears into your nose.
6. What is the blind spot, and why is it called this?  
The blind spot or optic disc is where retinal nerve cells leave the eye. There are no photoreceptors in this area (rods or cones) so this area is a "blind spot".
7. How do the functions of the rods and cones differ?  
Rods are very sensitive and give you vision in low light, but it's not in color. Cones give great detail in bright light, including color vision.
13. Define hyperopia, myopia, and emmetropia.  
Hyperopia: Far-sightedness (can see things far away).  
Myopia: Near-sightedness (can see things up close).  
Emmetropia: normal vision (can focus both near and far).