

ASSIGNMENT SHEET

CHAPTER 11: ANATOMY AND PHYSIOLOGY OF THE HUMAN BODY

Unit 3: The Senses

WORDS TO KNOW CHALLENGE

A. Word Search: Find the following words hidden in the puzzle.

BUD	HUMOR	SEE
CATARACT	IRIS	SENSATION
CHOROID	LENS	SENSES
COCHLEA	MOTOR	SENSORY
CONJUNCTIVA	NOSE	SIGHT
CORNEA	OPTIC	SMELL
EAR	OTITIS	STAPES
EYE	PUPIL	TASTE
GLAUCOMA	RETINA	TOUCH
HEAR	SCLERA	VISION

H O P T I C O C H L E A V X G
 B U D C U S M E L L B M N E L
 I P M H Q H E A R I O V M R A
 S E E O Y S E N S A T I O N U
 T I B R R C T A S T E S T U C
 A O R O E O O R L E Q I O E O
 P U P I L R U S E N S O R Y M
 E W U D S N C I N T U N E E A
 S I G H T E H E S O I L O V N
 C A T A R A C T I E I N E S R
 C O N J U N C T I V A U A C E
 Y T O T I T I S C L E R A M C

B. Word Scramble: Unscramble the following terms.

- | | |
|----------|-----------------|
| 1. _____ | U A O U E Q S |
| 2. _____ | N U S I T N T I |
| 3. _____ | A S T E S P |
| 4. _____ | O D H O C I R |
| 5. _____ | H C E O L C A |
| 6. _____ | A L P E I A L P |
| 7. _____ | A T C R A A T C |
| 8. _____ | A M L C I R A L |
| 9. _____ | U E S T V O I R |

UNIT REVIEW

A. Short Answer

1. List the five senses of the human body and identify the organ(s) responsible for the perception.

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____

2. Name the structures of the eye through which light passes in the process of sight.

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____
- f. _____

3. Explain the function of the lens and the process of accommodation. _____

4. How does the cornea affect vision? _____

5. Name the two humors and describe their purpose.

- a. _____
 - 1. _____
 - 2. _____
- b. _____
 - 1. _____
 - 2. _____

6. Explain how sounds are heard. _____

7. How is equilibrium maintained? _____

8. Describe the structure of the olfactory organ and explain how an odor can be detected. _____

9. Define the following terms:

- a. Epistaxis _____
- b. Allergic rhinitis _____
- c. Nasal polyp _____

10. Identify the sensations that are perceivable by the skin.

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____
- f. _____
- g. _____

B. Matching:

1. Match the disease or disorder of the eye in column II with the major symptoms in column I.

- | COLUMN I | COLUMN II |
|---|-------------------------------------|
| _____ 1. Scratch from foreign body or injury to the cornea | a. Age-related macular degeneration |
| _____ 2. Red-rimmed, crusted eyelids with scales, itching, and burning | b. Amblyopia |
| _____ 3. Aching, loss of peripheral vision, visual halos around lights | c. Arcus senilis |
| _____ 4. Visual deviation of the eyeball; blurred or double vision | d. Blepharitis |
| _____ 5. Drooping of the upper eyelid | e. Cataract |
| _____ 6. Inward turning of one eye with blurred vision | f. Conjunctivitis |
| _____ 7. Redness, pain, and occasional discharge caused by an infectious microbe | g. Corneal abrasion |
| _____ 8. Painless, gradual visual blurring and loss of vision | h. Corneal ulcers |
| _____ 9. Pain, especially on blinking; excessive tearing; exudate; irregular cornea; blurred vision | i. diabetic retinopathy |
| _____ 10. Red, painful swelling of gland of the eyelid | j. Glaucoma |
| _____ 11. Inability to accommodate for near vision | k. Hordeolum |
| _____ 12. Visual floating spots, light flashes, and gradual vision loss | l. Myopia |
| _____ 13. Glare, blurred vision, reduced visual acuity, eventual blindness | m. Presbyopia |
| _____ 14. A thin, grayish-white circle at edge of cornea | n. Ptosis |
| _____ 15. Gradual loss of central vision | o. Detached retina |
| _____ 16. Vision is blurred except close objects due to misshapen eyeball | p. Strabismus |

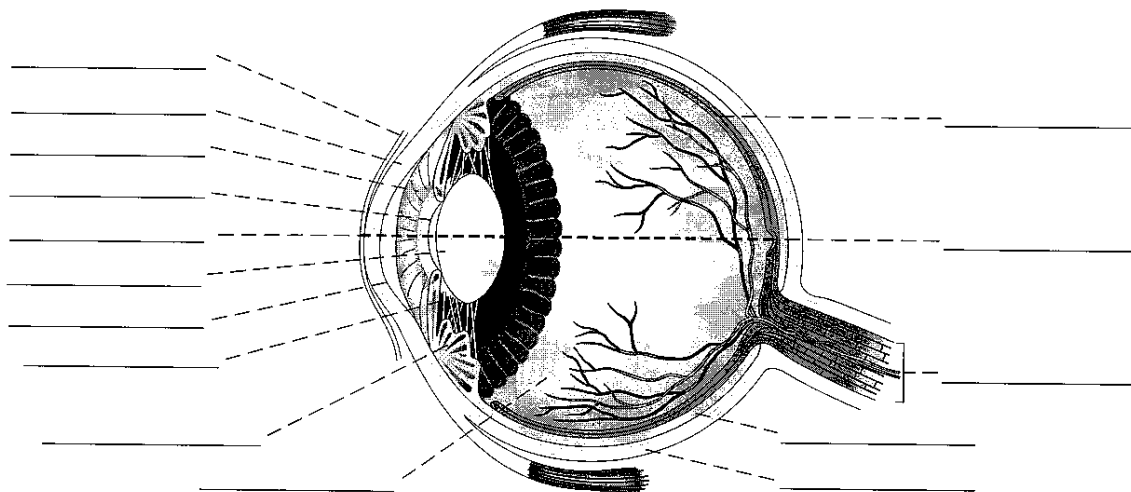
2. Match the major symptoms in column II with the diseases and disorders of the ear in column I.

- | COLUMN I | COLUMN II |
|-------------------------------------|--|
| _____ 1. Auditory canal obstruction | a. Loss of equilibrium, headache, nausea, and vomiting due to movement |
| _____ 2. Ménière's disease | b. Severe, deep, throbbing pain; fever; hearing loss; nausea; and vomiting, dizziness, bulging eardrum |
| _____ 3. Motion sickness | c. Slow, progressive conduction hearing loss |
| _____ 4. Otitis externa | d. A degree of hearing loss; possible discomfort; may be a foreign body |
| _____ 5. Otitis media | e. Severe vertigo, tinnitus, nerve hearing loss, nausea, and vomiting |
| _____ 6. Otosclerosis | f. Infection in auditory canal, pain, fever, conduction hearing loss |
| _____ 7. Presbycusis | g. Loss of ability to hear high-frequency sounds, tinnitus, possible depression |

C. Label the Illustration

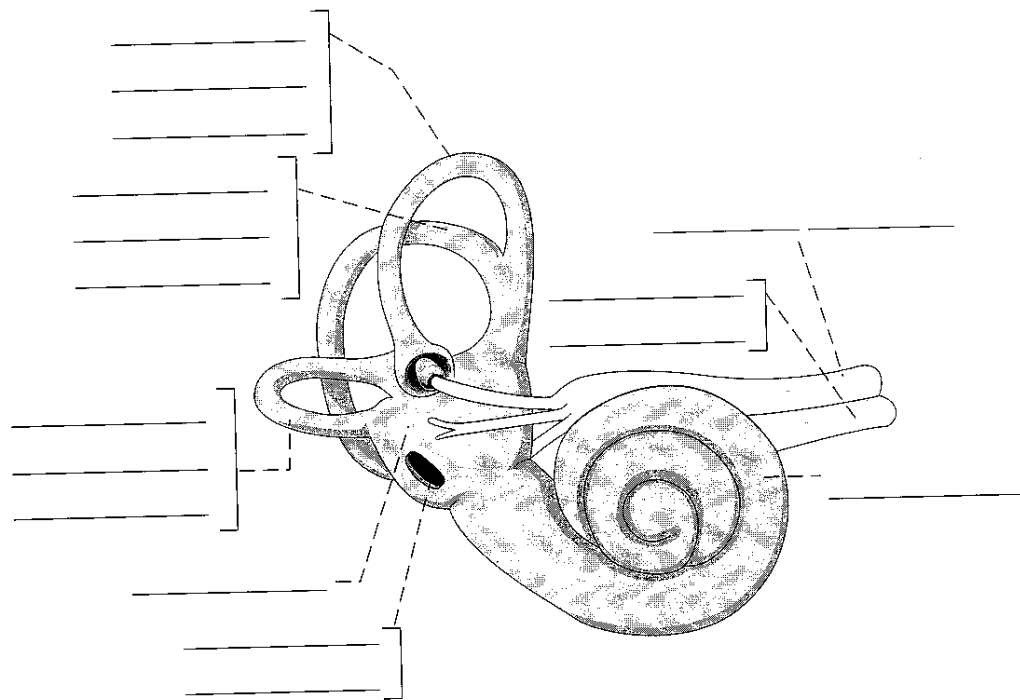
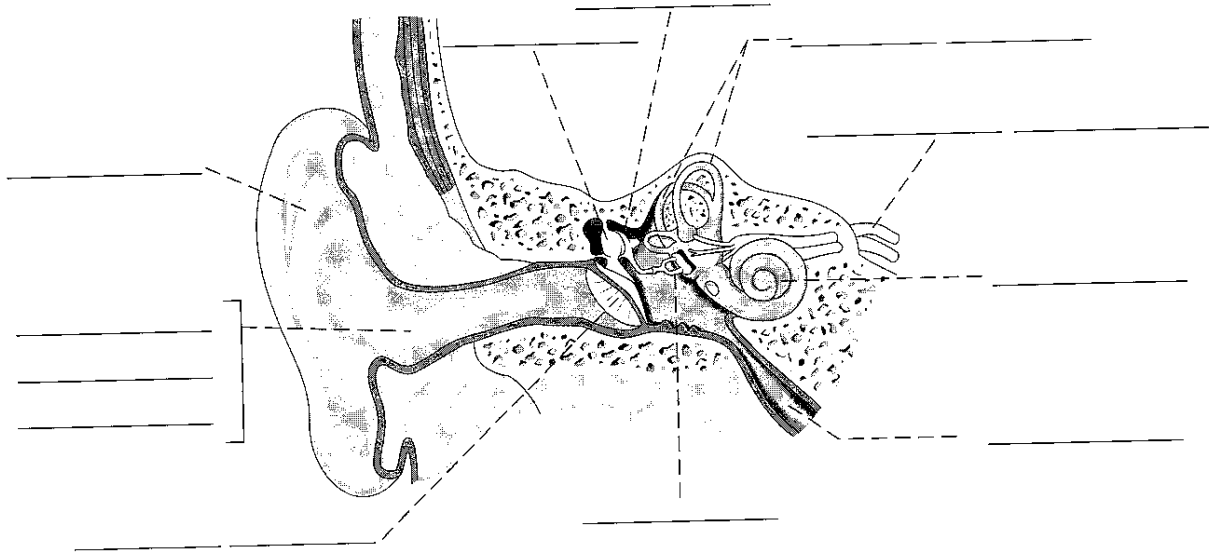
1. Add labels to each part of the eye. Refer to Figure 11-46 in the textbook.

- | | |
|------------------|-------------------|
| Anterior chamber | Optic nerve |
| Choroid | Path of light |
| Ciliary body | Posterior chamber |
| Conjunctiva | Pupil |
| Cornea | Retina |
| Fovea centralis | Sclera |
| Iris | Vitreous body |
| Lens | |



2. Label the illustrations of the outer, middle, and inner ear using the following terms. Refer to Figures 11-56 and 11-57 in the textbook.

Outer and Middle Ear	Inner Ear
Auricle	Cochlea
Cochlea	Cochlear nerve
Eustachian tube	Lateral semicircular canal
External auditory canal	Oval window
Incus	Posterior semicircular canal
Malleus	Superior semicircular canal
Semicircular canals	Vestibular nerve
Stapes	Vestibule
Tympanic membrane	
Vestibulocochlear nerve	



CASE STUDIES

Scenario 1

You notice that a little girl in your daughter's preschool class has one eye that turns inward. You have never seen the child with glasses. You have a chance to talk with the mother at a preschool program. She says she is not worried about it because she thinks her daughter will outgrow it and they don't have any insurance coverage.

Critical Thinking Questions

1. How far should you go to impress on the mother that the child needs to be evaluated by a pediatric ophthalmologist? _____

2. What could you say to the mother to impress upon her that her daughter's vision might be lost if the eye is not treated? _____

3. How can you find out if treatment is available without a lot of cost to the parents? _____

Scenario 2

A 24-year-old male patient is being seen in the office for treatment of an upper respiratory infection. During your interview he proudly announces that he has quit smoking. In the process of your assessment you notice his teeth are quite stained, especially on one side. He explains to you that he is using a little smokeless tobacco to satisfy his need for nicotine.

Critical Thinking Questions:

1. What should you tell him about his new habit? _____

2. Where can you obtain some written materials for him? _____

3. What should you question about his dental care? _____

UNIT APPLICATION

Research Activity

There are four rather common conditions that may lead to blindness, sometimes unnecessarily. Make a chart that divides a piece of paper horizontally into four sections after saving the top inch for headings. You will need five vertical columns, one small and four of equal size. In the first, smaller column, enter: Age-related macular degeneration, Diabetic retinopathy, Glaucoma, and Retinal Detachment. one in each of the horizontal sections. Across the top row enter for titles: Description, Signs/symptoms, Etiology, and Treatment. Referring to the text, enter the information on each condition. When completed, look at the descriptors in each column. Which disorders

occur slowly and which are sudden? Which ones require immediate treatment? Which ones can be "cured"? Are there any that could be avoided with good health practices? Which ones cause pain? Which ones are most likely to go unnoticed until some damage has occurred? Your knowledge of these conditions may some day help save someone's vision.

CERTIFICATION AND REGISTRATION REPARATION

- _____ 1. The outside of the eye is covered with a tough membrane called the:
 - a. retina
 - b. sclera
 - c. choroid
 - d. cornea
- _____ 2. When the ciliary body focuses the lens for near or far vision, it is known as:
 - a. refraction
 - b. astigmatism
 - c. ciliary contraction
 - d. accommodation
- _____ 3. The amount of light entering the eye is controlled by the muscles of the:
 - a. iris
 - b. cornea
 - c. lens
 - d. pupil
- _____ 4. The area of the retina where vision is sharpest is called the:
 - a. optic disc
 - b. fovea centralis
 - c. vision receptor
 - d. myopia
- _____ 5. When a cataract develops:
 - a. a grayish-white circle appears around the cornea
 - b. the lens becomes cloudy
 - c. the macula has thinned
 - d. the pupil dilates
- _____ 6. Glaucoma is the result of:
 - a. improper drainage of the aqueous humor
 - b. increased pressure against the retina
 - c. increased interocular pressure
 - d. interference of blood supply to the eye
- _____ 7. The middle ear contains the:
 - a. tympanic membrane, malleus, and stapes
 - b. cochlea, malleus, and incur
 - c. malleus, stapes, and semicircular canals
 - d. malleus, incus, and stapes
- _____ 8. Meniere's disease is characterized by:
 - a. ringing in the ears and vertigo
 - b. pain and redness of the tympanic membrane
 - c. loss of hearing
 - d. motion sickness
- _____ 9. The most common cause of conductive deafness is:
 - a. presbycusis
 - b. otitis media
 - c. tinnitus
 - d. otosclerosis
- _____ 10. Nasal polyps are:
 - a. developed from infected hair follicles
 - b. benign growths in the nose
 - c. malignant growths in the nose
 - d. the main cause of nosebleeds
- _____ 11. Candidiasis:
 - a. can lead to oral cancer
 - b. causes a red, swollen, and painful tongue
 - c. interferes with the sense of taste
 - d. causes cream-colored patches of exudate on the tongue
- _____ 12. Oral cancer may be caused by:
 - a. use of alcohol
 - b. use of chewing tobacco and snuff
 - c. eating spicy foods
 - d. the lack of vitamins C and E

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- _____ 13. A trabeculoplasty
- a. instills a tiny tube through the tympanic membrane
 - b. reshapes the trabecula of the eye
 - c. removes the lens of the eye
 - d. makes an opening for aqueous fluid
- _____ 14. The electronystagmograph diagnostic test:
- a. evaluates balance
 - b. determines the need for a hearing aid
 - c. measures the intraocular pressure
 - d. determines the strength of the impulse in the auditory nerve