

50 pts.

Name Keef

THE EAR: HEARING AND BALANCE

15. Using the key choices, select the terms that apply to the following descriptions. Place the correct letter in the answer blanks.

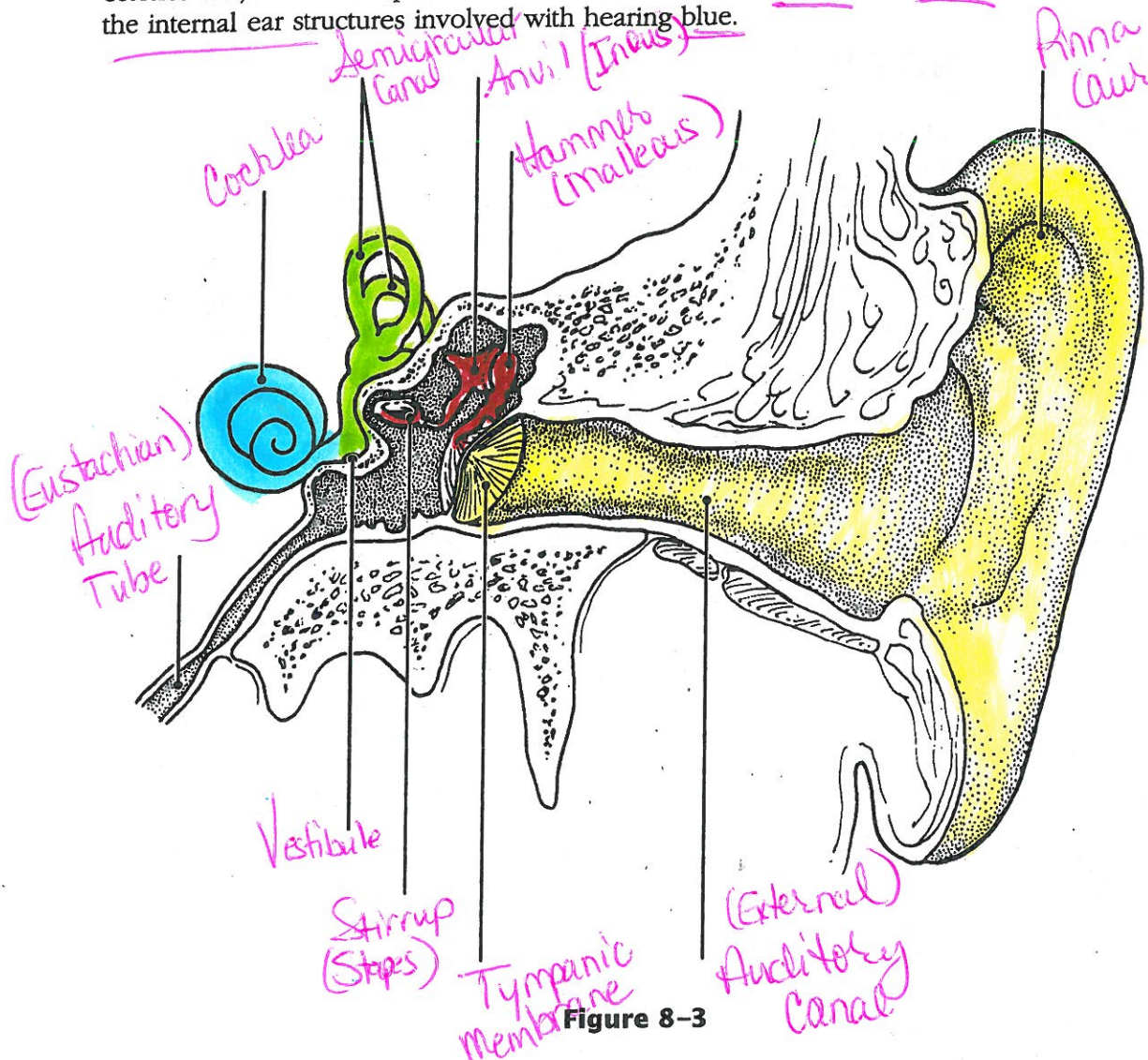
Key Choices

- | | | | |
|--------------------------|-----------------------------|------------------------|----------------------|
| A. Anvil (incus) | E. External acoustic meatus | I. Pinna | M. Tympanic membrane |
| B. Pharyngotympanic tube | F. Hammer (malleus) | J. Round window | N. Vestibule |
| C. Cochlea | G. Oval window | K. Semicircular canals | |
| D. Endolymph | H. Perilymph | L. Stirrup (stapes) | |

- I 1. E 2. M 3. Structures composing the outer ear
- K 4. C 5. N 6. Structures composing the bony or osseous labyrinth
- A 7. F 8. L 9. Collectively called the ossicles
- N 10. K 11. Ear structures not involved with hearing
- B 12. Allows pressure in the middle ear to be equalized with the atmospheric pressure
- M 13. Vibrates as sound waves hit it; transmits the vibrations to the ossicles
- C 14. Contains the organ of Corti
- B 15. Connects the nasopharynx and the middle ear
- K 16. N 17. Contain receptors for the sense of equilibrium
- G 18. Transmits the vibrations from the stirrup to the fluid in the inner ear
- D 19. Fluid that bathes the sensory receptors of the inner ear
- H 20. Fluid contained within the osseous labyrinth, which bathes the membranous labyrinth

16. Figure 8-3 is a diagram of the ear. Use anatomical terms (as needed) from the key choices in Exercise 15 to correctly identify all structures in the figure provided with leader lines. Color all external ear structures yellow; color the ossicles red; color the equilibrium areas of the inner ear green; and color the internal ear structures involved with hearing blue.

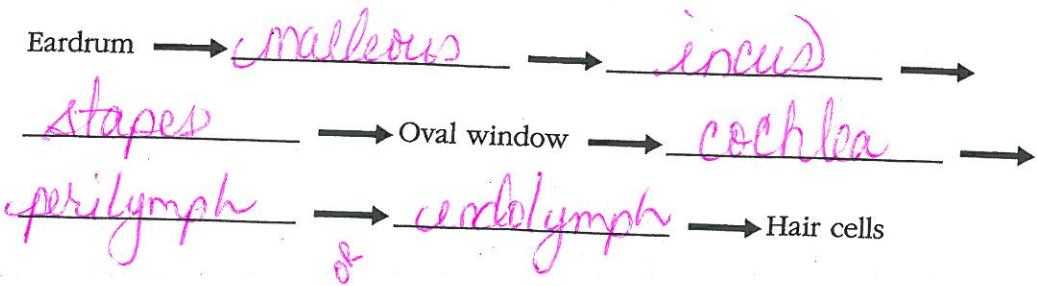
#(coloring)



+10 (labels)

Figure 8-3

17. Sound waves hitting the eardrum set it into vibration. Trace the pathway through which vibrations and fluid currents travel to finally stimulate the hair cells in the organ of Corti. Name the appropriate ear structures in their correct sequence and insert your responses in the answer blanks.



+3

+17

7 20. Indicate whether the following conditions relate to conduction deafness (C) or sensorineural (central) deafness (S). Place the correct letter choice in each answer blank.

- C 1. Can result from a bug wedged in the external auditory meatus
- S 2. Can result from damage to the cochlear nerve
- S 3. Sound is heard in one ear but not in the other, during both bone and air conduction
- C 4. Often improved by a hearing aid
- C or S 5. Can result from otitis media
- C 6. Can result from otosclerosis, excessive earwax, or a perforated eardrum
- S 7. Can result from a blood clot in the auditory cortex of the brain

3 21. List three things about which a person with equilibrium problems might complain. Place your responses in the answer blanks.

dizziness (vertigo), nausea, and balance

3 22. Circle the term that does not belong in each of the following groupings.

1. Hammer Anvil Pinna Stirrup

X 2. Tectorial membrane Crista ampullaris Semicircular canals Cupula

3. Gravity Angular motion Sound waves Rotation

X 4. Utricule Saccule Auditory tube Vestibule

5. Vestibular nerve Optic nerve Cochlear nerve Vestibulocochlear nerve

