1. The pinna is made of which form of connective tissue? __________________

2. Name two characteristics of the external auditory canal that act to prevent foreign substances and creatures from reaching the middle ear?

3. Name the three parts of the inner ear.

4. The _______________ is the first ear structure to vibrate in response to external sound waves.

5. The ossicles are located in the ______________ ear.

6. Which ear structure acts to equalize middle ear air pressure with external air pressure ("popping")? ________________________________
   This structure connects the middle ear with ________________________________

7. Which two structures contact the malleus (hammer)? __________________________
   Which two structures contact the stapes (stirrup)? __________________________

8. Fluid movement in the cochlea results in the stimulation of the hair cells in the organ of __________.

9. The hair cells of Q7 are examples of which type of sensory receptor? _____________

10. The bending of these hair cells results in the production of ____________________.

11. Name the two parts of the inner ear responsible for balance (equilibrium).

12. Dynamic equilibrium involves which types of body movements? ________________

13. Identify the structure that monitors static equilibrium. ________________________
   Describe how static equilibrium is monitored.

14. The loops of the semicircular canals are oriented at ____ degree angles in order to monitor all potential angles of movement.

15. Loss of hearing due to a ruptured eardrum is a form of ____________________ deafness.

16. The ___________ lobe of the brain is responsible for processing auditory input.

17. The ___________ lobe of the brain is responsible for understanding auditory input.

18. Is equilibrium a general or special sense? __________________

19. Are your two pinnas identical or dissimilar?
   How is this an advantage?

20. Name the structure that monitors dynamic equilibrium. ________________________
Special Senses Study Questions II KEY
The EAR
Dr. J. Lim

1. The pinna is made of which form of connective tissue? cartilage
2. Name two characteristics of the external auditory canal that act to prevent foreign substances and creatures from reaching the middle ear? wax and hair
3. Name the three parts of the inner ear. cochlea, vestibule and semicircular canals
4. The eardrum (typanic membrane) is the first ear structure to vibrate in response to external sound waves.
5. The ossicles are located in the middle ear.
6. Which ear structure acts to equalize middle ear air pressure with external air pressure (“popping”)? auditory/eustachian tube
   This structure connects the middle ear with the back of the throat
7. Which two structures contact the malleus (hammer)? eardrum and incus (anvil)
   Which two structures contact the stapes (stirrup)? incus (anvil) and cochlea
8. Fluid movement in the cochlea results in the stimulation of the hair cells in the organ of Corti.
9. The hair cells of Q7 are examples of which type of sensory receptor? mechanoreceptor
10. The bending of these hair cells results in the production of a neural impulse.
11. Name the two parts of the inner ear responsible for balance (equilibrium). vestibule and semicircular canals
12. Dynamic equilibrium involves which types of body movements? angular or rotational body movements
13. Identify the structure that monitors static equilibrium. vestibule
   Describe how static equilibrium is monitored. A change in head position with respect to gravity causes the otoliths and gelatinous material to move. This cause the hair cells to be bend and produce a neural impulse
14. The loops of the semicircular canals are oriented at 90 degree angles in order to monitor all potential angles of movement.
15. Loss of hearing due to a ruptured eardrum is a form of conduction deafness.
16. The temporal lobe of the brain is responsible for processing auditory input.
17. The frontal lobe of the brain is responsible for understanding auditory input.
18. Is equilibrium a general or special sense? special
19. Are your two pinnas identical or dissimilar? dissimilar
   How is this an advantage? Receive differing auditory inputs
20. Name the structure that monitors dynamic equilibrium. semicircular canals