

Test – Lesson 5 – Ears

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1. Which statement about hearing is correct? Sound direction is detected by _____.

- (A) the angle that sounds strike the ear
- (B) the difference in pressure exerted against the right and left tympanic membranes
- (C) the difference in time between the sound striking the right and left tympanic membranes
- (D) the difference in volume between the sound striking the right and left tympanic membrane

2. Which statement about the middle ear are correct? Sounds vibrating the tympanic membrane are transmitted by three bones in the middle ear, in the following order:

- (A) incus, malleus, stapes
- (B) malleus, incus, stapes
- (C) stapes, incus, malleus
- (D) malleus, stapes, incus

3. Which statements about the middle and inner ear are true? (Select all that apply.)

- (A) Sounds reach the cochlea after passing through the round window, oval window, and then, the tympanic membrane.
- (B) The tympanic membrane, round window, and oval window all border on the middle ear.
- (C) The Eustachian tube conducts fluid from the oval window to the round window.
- (D) The middle ear connects to the pharynx at the back of the mouth through the Eustachian tube.

4. Which statement about sound is true?

- (A) Sound consist of succeeding waves of densely packed air molecules.
- (B) Sound is carried between waves of densely pack air molecules.
- (C) Sound consists of air molecules vibrating in synchrony.
- (D) Sound is carried by vibrating electromagnetic waves.

5. Which statements about the cochlea are true? (Select all that apply.)

- (A) The cochlea has an upper chamber, a middle chamber, and a lower chamber.
- (B) Both the upper chamber and the lower chamber are filled with a fluid called “perilymph.”
- (C) The middle chamber is filled with “endolymph.”
- (D) The Organ of Corti is in the middle chamber.

6. Which statements about the inner ear are true? (Select all that apply.)

- (A) Vibrations entering the inner ear through the oval window and exit the round window.
- (B) Vibrations entering the inner ear stimulate the Organ of Corti in the cochlea.
- (C) The first part of the Organ of Corti senses high-pitched sounds better than low-pitched sounds.
- (D) The Organ of Corti detects the vibrations with delicate hairs.

7. Which statements about the Organ of Corti are true? (Select all that apply.)

- (A) Hair cells in the Organ of Corti are bathed in a fluid called perilymph.
- (B) Hair cells in the Organ of Corti are housed inside a chamber called the scala tympani.
- (C) Hair cells in the Organ of Corti are attached to the basilar membrane.
- (D) Hair cells in the Organ of Corti are connected to the cochlear nerve.

8. Which statements about the Organ of Corti are true? (Select all that apply.)

- (A) Hair cells in the Organ of Corti are bathed in a fluid with a high potassium content.
- (B) Perilymph is a fluid high in sodium content.
- (C) Hair cells in the Organ of Corti are suspended from the tectorial membrane
- (D) Perilymph circulates in the perilymph chamber.

9. Which statements are true about the balance system of the inner ear? (Select all that apply.)

- (A) The semicircular canals detect rotation of the head.
- (B) The utricle detects the horizontal movement of the head.
- (C) The utricle detects tilting of the head.
- (D) Hair cells on the otoliths inside the semicircular canals detect rotation of the head.

10. Structures needed to keep your eyes locked onto a target moving to your right include: _____. (Select all that apply.)

- (A) right abducens nerve
- (B) left lateral rectus muscle
- (C) right oculomotor nerve
- (D) left medial longitudinal fasciculus

11. Which statements about the Eustacian tube are true? The Eustacian tube _____ . (Select all that apply.)

- (A) opens into the mouth beneath the tongue
- (B) equalizes pressure between the mouth and the external ear canal
- (C) equalizes pressure on both sides of the tympanic membrane
- (D) opens during yawning and equalizes pressure between the middle ear and pharynx

12. Which statement about sinuses in the skull bone is true?

- (A) Vibrations in the sinuses serve to aide hearing.
- (B) Being hollow, sinuses serve to lighten the weight of the skull.
- (C) The maxillary sinuses are located between and slightly above the eyes.
- (D) The mastoid sinus is located behind the ear.

13. Which statements about the mouth and pharynx are true? (Select all that apply.)

- (A) Salivary glands are found in front of the ear and beneath the jaw.
- (B) Turbinates in the nasopharynx warm and moisten inhaled air.
- (C) The epiglottis closes over the trachea during swallowing.
- (D) The vocal cords close when the arytenoid cartilages rotate.