

Senses and Perception Race Answer Sheet

1. True or (False): Our hearing system does not blend the frequencies of different sounds into one while processing. **Hearing Question**
2. When the sensory cells on the (taste buds) are stimulated, they cause signals to be transferred to the ends of nerve fibers, which send impulses along cranial nerves to taste regions in the brainstem. **Taste Question**
3. This is the sense by which we determine the characteristics of objects: size, shape, and texture. (Touch) **Touch and Pain Question**
4. Odorants stimulate receptor proteins found on hair-like (cilia) at the tips of the sensory cells, a process that initiates a neural response. **Smell Question**
5. Visual information from the part of the eye called the (retina) is relayed through the lateral geniculate nucleus of the thalamus to the primary visual cortex. **Vision Question**
6. The separation of frequencies occurs in the snail-shaped (cochlea), which is tuned along its length to different frequencies. **Hearing Question**
7. Taste is focused on distinguishing chemicals that have the following five tastes: Sweet, salty, sour, bitter, and umami. **Taste Question**
8. Separate senses with their own receptor organs, taste and (smell) are nonetheless intimately entwined in the cortex allowing us to detect the flavors of food. **Smell Question**
9. The sensory fibers that respond to stimuli that damage tissue and can cause pain are called (nociceptors). **Touch and Pain Question**
10. Airborne odor molecules, called (odorants), are detected by specialized sensory neurons located in a small patch of mucus membrane lining the roof of the nose. **Smell Question**
11. List the three separate processing systems into which neuroscientists believe visual signals are fed. **Vision Question**
 - One system appears to process information mainly about shape
 - Second, mainly about color
 - Third, movement, location, and spatial organization.
12. Sound is processed in the auditory cortex on both sides of the brain. However, for most people, the (left) side is specialized for perceiving and producing speech. **Hearing Question**
13. Signals from touch receptors pass via (sensory nerves) to the spinal cord, where they synapse, or make contact with, other nerve cells, which in turn send the information to the thalamus and sensory cortex. **Touch and Pain Question**
14. Tastants, chemicals in foods, are detected by (taste buds), special structures embedded within small protuberances on the tongue called papillae. **Taste Question**