

Sense Questions: Not covered in Lab

Complete these on this paper or another paper if necessary. You can find this info in your book or on the net.

Somatic senses

1. Name the organ that has absolutely no somatic senses at all.
2. Explain the type of information that your sense of kinesthesia provides. Explain how it allows you perform physical tasks like playing piano or scratching your buns (things you do without watching your movements).

Taste

1. Name the proper name for the sensory structures of taste that are located on your tongue.
2. Name the 4 different flavors we can detect and which part of the tongue is sensitive to each.
3. How can we distinguish between thousands of foods using so few different tastes? What other organ is also used when tasting food?

Olfaction (smell)

1. Describe the location of the olfactory nerves.
2. Explain how a molecule that you inhale is converted into a nerve impulse and sent to the brain.
3. Why is it that there are very few ambient smells on extremely dry days and more smells on damp days? Refer to your answer to #2 when considering the explanation
4. Describe sensory adaptation. How does this phenomenon create the illusion that you house does not smell like anything but your friends' houses do?

HEARING

1. Describe the function (not the definition) of each of these ear structures in one sentence or less.
 - a. Eustacean tube-
 - b. Pinna (auricle)-
 - c. External Auditory Meatus-
 - d. Tympanic membrane-
 - e. Ossicles (malleus, incus, stapes)-
 - f. Cochlea-
 - g. Semicircular canal-
2. Contrast the type of information gathered by your static equilibrium against that of your dynamic equilibrium? What structures of the inner ear provide each type?
3. Explain how the semicircular canals function to achieve your sense of dynamic equilibrium.
4. What does spinning in circles do in the semicircular canals that cause the sensation of dizziness?

VISION

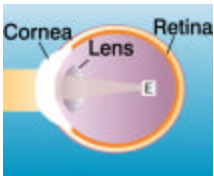
1. Describe what stimulus causes the pupil to constrict or dilate. What structures cause the physical changes that regulate pupil size?
2. What is the common word for visual accommodation? What physical changes occur in the eye to accomplish it?
3. The act of accommodation in the eye is involuntary. What sensory information does your body use to gauge which object your eyes should accommodate to? (How do your eyes choose the intended subject?)
4. What material is found between the lens and the retina? Describe its composition.

5. Differentiate between rods and cones for each of the following: quantity found in the eye, sensitivity to light, color sensitivity, and sharpness of resulting image.

Attribute	Rods	Cones
Quantity		
Sensitivity		
Color		
Sharpness		

6. Describe the structure of the fovea centralis. Where is it? Why is it important to vision?

7. Explain if the eye below would result in nearsightedness or farsightedness? Sketch an eye with the opposite problem. Describe what optical corrections glasses or contacts do to correct each of the two problems?



8. Explain what causes colorblindness. Which group of people has the highest risk for colorblindness? What are the two most common varieties of colorblindness? Why is it possible to only be "blind" to some colors and not others? Are you colorblind?