Module 9 A & P

Assignment #1 Read pages249 - 261.

Write the answers on your own paper, not on this sheet.

1. Define the following terms:
   a. Sensory receptor
   b. Somatic receptor
   c. Visceral receptor
   d. Special receptor
   e. Mechanoreceptor
   f. Thermoreceptor
   g. Photoreceptor
   h. Chemoreceptor
   i. Nociceptor
   j. Cutaneous receptor

2. The cell body of a neuron rests in the spinal cord, and the axon travels all of the way to the effector it controls. Is this an autonomic neuron or somatic motor neuron?

3. List three differences between the somatic motor nervous system and the autonomic nervous system.

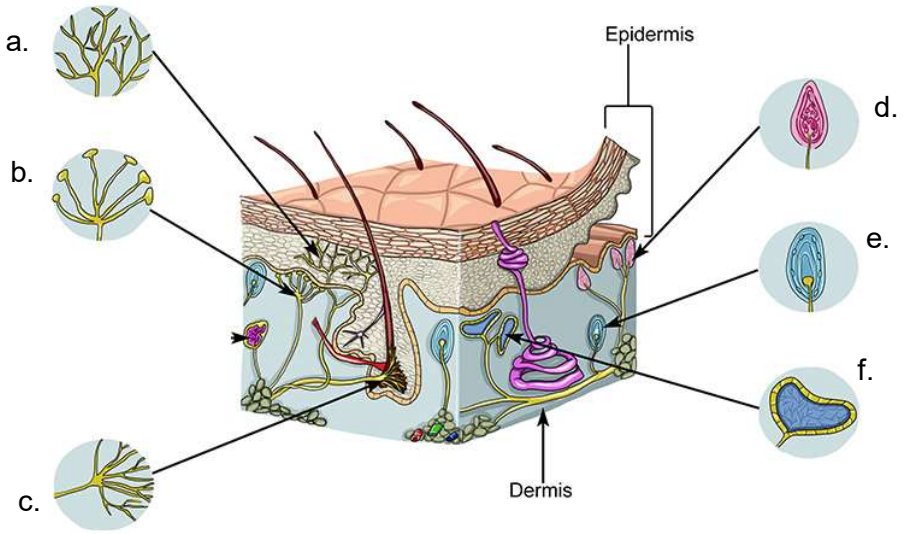
4. Compare the sympathetic and parasympathetic divisions of the ANS according to:

   a. Length of neurons
   b. Where in the body they can be found
   c. Position of the autonomic ganglia

5. What is the difference between the cerebral cortex's projection and its modality?

6. What is adaptation? Why do chemoreceptors adapt faster than nociceptors?

7. Identify the cutaneous nerves pictured below AND list their major functions.



8. What are proprioceptors?

9. Which proprioceptors detect the extent to which a muscle is relaxed? Which detect the extent to which the muscle is contracted?

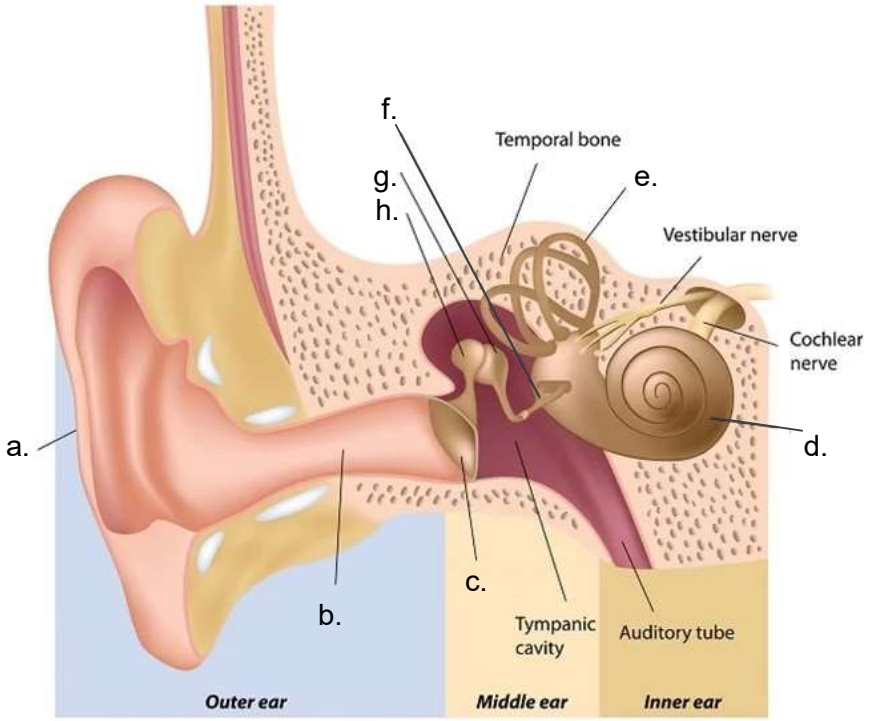
10. There are at least four conditions which must be met in order for a person to smell a substance. What are they?

11. What type of papillae are found on the tongue? Which of these papillae contain taste buds?

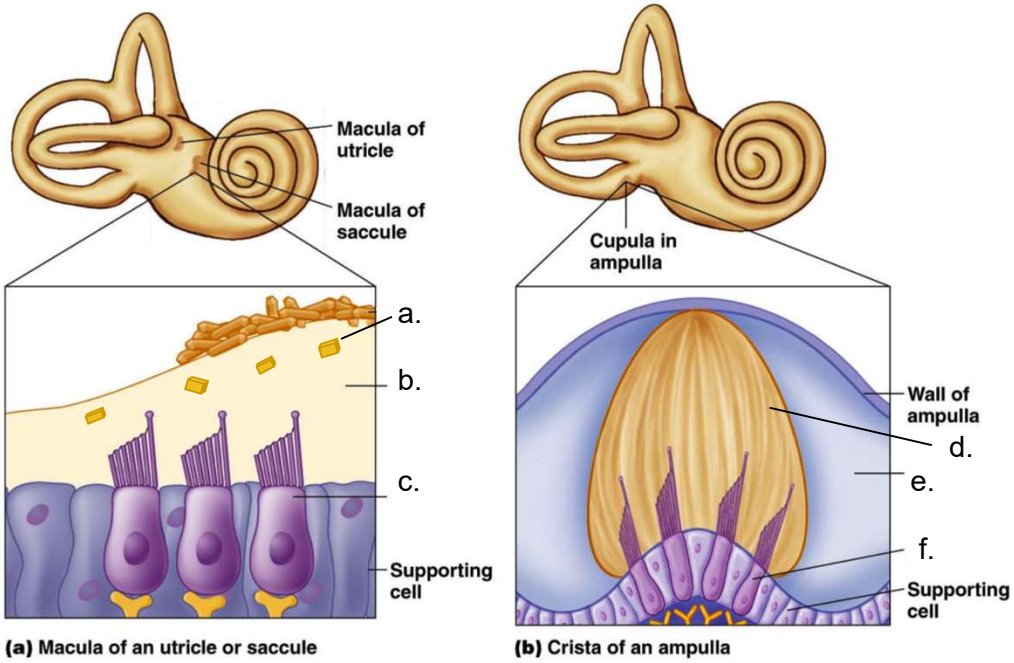
12. List the 5 flavors your tongue can taste.

13. When tasting wine, a wine taster will slosh the wine around in his or her mouth so that it hits every part of the tongue. Why?

14. Identify the structures of the ear: Use the diagrams on pages 270 and 274.



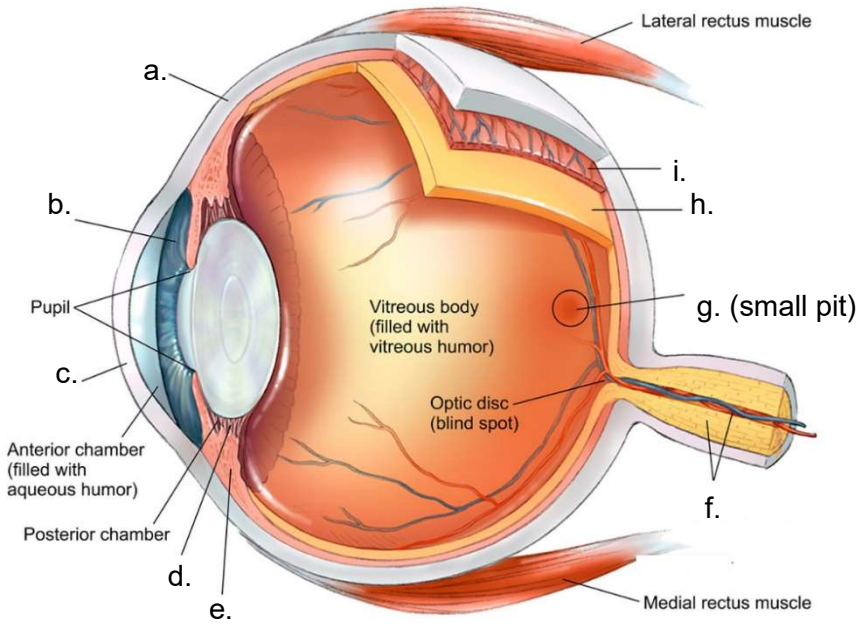
15. Identify the structures in the following figures:



16. Which of the structures above are involved in the sense of static equilibrium? Which are involved in the sense of dynamic equilibrium?

17. The major structures involved in hearing are: incus, tympanic membrane, tectorial membrane, perilymph, malleus, basilar membrane, stapes, endolymph. List these structures in order in terms of when they start to vibrate. Start with the structures which vibrate first and end with those that vibrate last.

18. Identify the structures of the eye AND list the function of each.



19. What causes people to have a “blind spot” in their vision?

20. Which cell detects color: rods or cones?

21. What three things must occur to bring an image into proper focus?

22. What is:
    a. Presbyopia?
    b. Myopia?
    c. Hyperopia?

23. Given the following receptors, classify them as first either somatic, visceral, or special. Then classify them again as either a mechanoreceptor, thermoreceptor, photoreceptor, chemoreceptor, or nociceptor.

    a. Hair follicle receptors
    b. Olfactory neurons
    c. Taste buds
    d. Pain receptors in the kidney
    e. Free nerve endings in the skin that detect cold temperatures
    f. Rods and cones
    g. Hair cells in the macula of the vestibule
    h. Golgi tendon organ