Touch, Temperature, Pain

Read Chapter 16.1

Fill in the blanks

1. Match the receptor with the correct stimulus. **Proprioceptors, Thermoreceptors, Merkle's, Meissner, Free nerve ending, Pacinian, Ruffini, Hair follicle**.
    a. Detects temperature _____
    b. Detects touch and vibration _____
    c. Detects light touch and pressure and found in all areas of the skin _____
    d. Detects light touch and pressure but found mostly in non-hairy skin like the palms _____
    e. Detects pain _____
    f. Detects stretching of the skin _____
    g. Detects deep pressure and vibration _____
    h. Detects body position and motion _____
    i. Detects extreme temperatures _____
2. Sensory neurons are (afferent or efferent) _____ neurons.
3. Proprioceptors are located in the muscles, joints, and the _____ system.
4. Receptors potentials are (action potentials or graded potentials) _____
5. When a receptor is an individual cell, it releases neurotransmitters that target a _____. The neurotransmitters are released because _____ ions move into the receptor cell and they are released by a process called _____.
6. An increase in the intensity of a stimulus is transmitted to the brain through an increase in (frequency or amplitude) _____ of receptor potentials.
7. An increase in the intensity of a stimulus is transmitted to the brain through an increase in (frequency or amplitude) _____ of action potentials.
8. George jumped into a swimming pool and felt the cold water initially but then soon he didn't notice the temperature of the water. This is an example of a _____-adapting receptor.
9. Areas of the skin that are highly sensitive contain more (small or large) _____ receptive fields.

10. The anterolateral white matter tract carries information about _____ _____
11. The sensory information traveling through the dorsal-medial crosses over in the _____
12. All sensory information goes the _____ in the brain before it goes to the somatosensory cortex.
13. The somatosensory cortex is located in the _____ lobe, also called the _____ gyrus.
14. Name a part of the body that would have more large receptive fields _____.
15. List 4 types of stimuli that are detected by free nerve endings that transmit pain signals
    a. _____
    b. _____
    c. _____
    d. _____
16. _____ is an inflammatory molecule that causes pain.
17. A drug that reduces pain is called an _____
18. The 2 main neurotransmitters that transmit pain signals are:
    a. _____
    b. _____
19. Endogenous pain killers made in the brain are called _____
20. Drugs that bind to the same receptors as endogenous pain killers are called _____
21. A local anesthetic reduces pain transmission by blocking _____
22. Anti-inflammatory drugs block the production of _____
23. General anesthetic inhibit a region of the brainstem called the _____
24. Match the referred pain organ with the area of the body that it can be felt: Gallbladder, heart, kidneys, stomach, appendix
    a. Upper center region of abdomen _____
    b. Left arm _____
    c. Lower right region of abdomen _____
    d. Lower back and outer thighs _____
    e. Right shoulder _____