

42. The region of the cerebral cortex that responds to visual cues is found at the _____ of the brain and the region that responds to auditory cues is found at the _____.
- a. front; sides
 - b. front; back
 - c. sides; front
 - d. sides; back
 - e. back; sides
43. The animal exhibiting the **LOWEST** degree of cephalization would be a _____.
- a. squid
 - b. jellyfish
 - c. rat
 - d. flatworm
 - e. sea urchin
44. Compared to motor neurons, sensory neurons have larger _____ and smaller _____.
- a. axons; dendrites
 - b. axons; cell bodies
 - c. dendrites; axons
 - d. dendrites; cell bodies
 - e. cell bodies; dendrites
45. Sympathetic and parasympathetic neurons are _____.
- a. generally not under voluntary control
 - b. part of the autonomic nervous system
 - c. primarily composed of sensory neurons
 - d. a and b
 - e. a, b, and c
46. In the central nervous system, the primary function of the oligodendrocytes is to _____.
- a. insulate the axons and dendrites of nerve cells
 - b. provide neurons with glucose
 - c. initiate motor responses
 - d. receive sensory input
 - e. mediate between the sensory and motor regions of the brain
47. The myelin sheath constructed by the Schwann cells is primarily composed of _____.
- a. microfilaments
 - b. plasma membrane
 - c. cytoplasmic proteins
 - d. synapses
 - e. axons
48. A monosynaptic reflex arc does **NOT** include a(n) _____.
- a. sensory receptor
 - b. sensory dendrite
 - c. interneuron
 - d. motor dendrite
 - e. motor axon

49. The resting potential of a nerve cell results from a combination of the activities of the _____ pump and the diffusion of _____.
- Na⁺-K⁺ pump; Na⁺
 - Cl⁻ pump; Cl⁻
 - Cl⁻ pump; K⁺
 - Cl⁻ pump; Na⁺
 - Na⁺-K⁺ pump; K⁺
50. Cell membranes are most permeable to _____.
- Na⁺
 - K⁺
 - Cl⁻
 - Ca⁺⁺
51. The resting potential results from the conflicting tendencies of _____.
- K⁺ to diffuse down both an electrical and concentration gradient
 - Na⁺ to diffuse down both an electrical and concentration gradient
 - K⁺ and Na⁺ ions to diffuse down a concentration gradient
 - K⁺ and Cl⁻ to diffuse down an electrical gradient
 - Na⁺ and Cl⁻ to diffuse down an electrical gradient
52. During the first potential, first _____ the cell then _____ the cell.
- K⁺ enters; Na⁺ leaves
 - Na⁺ enters; K⁺ leaves
 - K⁺ leaves; Na⁺ enters
 - Na⁺ leaves; K⁺ enters
53. Which of the following could speed the transmission of nerve impulses?
- increasing the strength of the stimulus
 - increasing the diameter of the axon
 - myelination of the axon
 - a and b
 - b and c
54. Membranes depolarize as _____ and the cell through _____.
- K⁺ leaves; the Na⁺-K⁺ pump
 - K⁺ leaves; gated K⁺ channels
 - Na⁺ enters; the Na⁺-K⁺ pump
 - Na⁺ enters; gated Na⁺ channels
55. Information is transferred across a chemical synapse _____.
- by ion movement from the first cell to the second
 - when the membrane of the first cell fuses with the membrane of the second
 - when neurotransmitter released by the first cell binds to the second
 - by electrons from the first cell that induce permeability changes in the second
 - by neurotransmitter uptake into the cytoplasm of second cell