

14. Which of the following neuroglia have processes which wrap CNS nerve fibers, forming insulating myelin sheaths on thicker nerve fibers?
- A. ependymal cells
  - B. oligodendrocytes
  - C. Schwann cells
  - D. microglial cells
  - E. astrocytes
15. Which of the following statements concerning myelin sheaths is FALSE?
- A. myelin sheaths are segmented protein-lipoid sheaths along most long or large diameter axons
  - B. myelin sheaths protect and electronically insulate axons
  - C. myelin sheaths increase the speed of nerve impulse transmission
  - D. CNS myelin sheaths are formed of concentric layers of Schwann cell membranes
16. The following characteristics apply to neurons (nerve cells), EXCEPT:
- A. long life
  - B. amitotic
  - C. low metabolic rate
  - D. plasma membrane electrical signalling
  - E. cell to cell interactions
17. The plasma membrane of a resting neuron is more permeable to potassium ions than to sodium ions because the membrane has:
- A. More voltage-gated sodium ion channels
  - B. More ligand-gated potassium ion channels
  - C. More potassium leakage channels
  - D. Fewer voltage-gated sodium ion channels
  - E. More carrier molecules for potassium ions
18. The action potential (axonal nerve impulse) is measured in millivolts (mV) and on average is ranged from:
- A. -90mV to +20mV
  - B. -80mV to +45mV
  - C. -70mV to +30mV
  - D. -30mV to +60mV
19. IPSPs (inhibitory postsynaptic potentials):
- A. are nerve impulses that jump from node to node
  - B. allow activity of neurons to be synchronized
  - C. drive the membrane potential farther from threshold
  - D. are graded, local depolarizations
  - E. are the slowest steps of neurotransmission
20. The relative refractory period of a nerve impulse is:
- A. the time that follows the absolute refractory period
  - B. the time when most Na<sup>+</sup> channels have returned to their resting state
  - C. the time when some K<sup>+</sup> channels are still open
  - D. the time when the threshold for the generation of a new action potential (AP) is elevated
  - E. all the above