1. _____ are specialized cells that conduct impulses through the nervous system.
   a. Hormones
   b. Gametes
   c. Neurons
   d. Lesions
   e. Convolutions

2. **Neurotransmitters are**
   a. protein molecules found on dendrites.
   b. small, sphere shaped containers that fuse with the cell membrane.
   c. chemical messengers that carry information from neuron to neuron.
   d. protein molecules found on somas.
   e. white, fatty substances that serve to insulate axons.

3. **Which of the following is FALSE regarding the communication between neurons?**
   a. Neural communication occurs every time an individual moves or has a thought.
   b. The synapse is the site where the pre-synaptic neuron communicates with the post-synaptic neuron.
   c. The permeability of the cell membrane is what allows the electrical impulse to travel down the length of the neuron.
   d. A single neuron may form synapses with thousands of other neurons.
   e. Neurons send and receive information via physical contact between one another.

4. **At rest, a neuron carries the electrical potential of _______ millivolts, which is called the _______.**
   a. -70; resting potential
   b. -30; refractory period
   c. 0; neural threshold
   d. 30; refractory period
   e. 50; resting potential

5. **Suppose a neuron was resting comfortably when, all of the sudden and for a brief moment, it experienced an inflow of positive neurons. What did the neuron just experience?**
   a. an action potential
   b. a refractory period
   c. a synapse
   d. a generative period
   e. the all-or-none law

6. **Which of the following would likely occur if an individual's brain lost the ability to create any action potentials?**
   a. The individual would have some impairment in movement, but no other obvious deficit in functioning.
   b. This person would show speech impairments.
   c. Because information in the brain could no longer be transmitted, death would likely result.
   d. The individual would retain most function, but vision would be impaired.
   e. Because action potentials are not necessary for neural communication, no deficits in functioning would be noted.

7. **Which of the following is FALSE of the myelin sheath?**
   a. It insulates the axon.
   b. It plays a role in multiple sclerosis (MS).
   c. It serves to speed up transmission of a neural impulse.
   d. It often contains numerous gaps, called nodes of Ranvier.
   e. It fuels the synaptic cleft.
8. According to your text, which of the following would NOT result if the myelin sheath began to deteriorate?
   a. coordination would become impaired and eventually lost
   b. action potentials will become more intense
   c. movements would become jerky
   d. muscles would become weak
   e. speech would become impaired

9. What structure houses the neurotransmitters until the action potential arrives at the axon terminal?
   a. nodes of Ranvier
   b. receptor sites on post-synaptic neurons
   c. the nucleus
   d. synaptic vesicles
   e. soma

10. Reuptake occurs when
    a. neurotransmitters bind with their appropriate receptor sites.
    b. unused neurotransmitters are broken down and recycled for later use.
    c. neurotransmitters are reabsorbed by the axon terminal from the synapse, intact and ready for later use.
    d. receptors change shape to allow for the binding of neurotransmitters.
    e. the synaptic vesicles merge with the cell membrane to release neurotransmitters.

11. _______ is the main neurotransmitter involved in the contraction and release of muscles.
    a. GABA
    b. Glutamate
    c. Serotonin
    d. Epinephrine
    e. Acetylcholine

12. _______ is the primary neurotransmitter involved in mood, sleep, appetite, impulsivity, and aggression.
    a. Acetylcholine
    b. Norepinephrine
    c. Serotonin
    d. Glutamate
    e. GABA

13. Mary is waiting to be evaluated by a physician. She complains of problems eating, sleeping, and changes in mood. She also reports that she is quick to become frustrated. Mary likely has issues with _______.
    a. serotonin.
    b. dopamine.
    c. glutamate.
    d. norepinephrine.
    e. acetylcholine.

14. Aaron has been taking college classes for the past four semesters, but is really struggling to pass his courses. He has had difficulty learning since he was young. Which of the following neurotransmitters is most likely involved in Aaron's learning difficulties?
    a. endorphins
    b. GABA
    c. epinephrine
    d. serotonin
    e. acetylcholine
15. **Which of the following is FALSE?**
   a. Dopamine plays a role in movement.
   b. Serotonin plays a role in mood.
   c. Epinephrine plays the primary role in controlling anxiety.
   d. Acetylcholine plays a role in learning.
   e. Endorphins play a role in feelings of well being and pain relief.

16. **When deciphering the difference between the peripheral nervous system and the central nervous system, which of the following is true?**
   a. The central nervous system contains nerves surrounded only by neural tissue.
   b. The peripheral nervous system includes the brain and spinal cord.
   c. The peripheral nervous system contains the spinal nerves and endocrine system.
   d. The peripheral nervous system transmits messages to and from the body and brain.
   e. The central nervous system is a component within the peripheral nervous system.

17. **Which of the following is FALSE regarding the peripheral nervous system?**
   a. It is devised of the brain and spinal cord.
   b. It has the somatic nervous system as one of its components.
   c. It connects the CNS to the rest of the body.
   d. It has the autonomic nervous system as one of its components.
   e. It plays a role in the fight-or-flight response.

18. **The somatic nervous system, which is part of the _____, helps control _____.
   a. central nervous system; voluntary muscle movement
   b. peripheral nervous system; voluntary muscle movement
   c. autonomic nervous system; involuntary muscle movement
   d. peripheral nervous system; involuntary muscle movement
   e. central nervous system; involuntary muscle movement

19. **The autonomic nervous system, which is part of the _____, helps control _____.
   a. central nervous system; voluntary muscle movement
   b. peripheral nervous system; voluntary muscle movement
   c. autonomic nervous system; involuntary muscle movement
   d. peripheral nervous system; involuntary muscle movement
   e. central nervous system; involuntary muscle movement

20. **The _____ nervous system prepares our bodies for action whereas the _____ nervous system helps our bodies return to a normal state.**
   a. central; peripheral
   b. peripheral; central
   c. somatic; autonomic
   d. parasympathetic; sympathetic
   e. sympathetic; parasympathetic

21. **The part of the brain involved in controlling heart rate, breathing, blood pressure, and many other functions is the**
   a. forebrain.
   b. motor cortex.
   c. midbrain.
   d. substantia nigra.
   e. medulla.

22. **The _____ is the part of the brain involved in smooth muscle movement, tone, and posture.**
   a. corpus callosum
   b. cerebellum
   c. cerebral cortex
   d. cerebrum
   e. convolution
23. **Damage to the cerebellum will likely result in**
   a. an inability to solve problems.
   b. problems with hearing.
   c. an inability to understand language.
   d. difficulty with movement and balance.
   e. a short attention span.

24. **Current research suggests that deficits in dopamine-producing neurons in the substantia nigra may play a large role in which of the following diseases?**
   a. major depression
   b. Alzheimer's disease
   c. multiple sclerosis
   d. Parkinson's disease
   e. anorexia nervosa

25. **Which of the following is FALSE regarding the forebrain?**
   a. It is where cognitive functions are controlled.
   b. It contains the brainstem.
   c. It is the largest part of the brain.
   d. It contains the thalamus and hypothalamus.
   e. It contains the limbic system.

26. **The _______ plays the role of a relay station and is responsible for information flowing in or out of the forebrain.**
   a. hypothalamus
   b. amygdala
   c. thalamus
   d. hippocampus
   e. limbic system

27. **Which of the following brain structures is involved in regulating hunger, thirst, temperature, and sexual behavior?**
   a. pons
   b. thalamus
   c. cerebellum
   d. amygdala
   e. hypothalamus

28. **Which of the following is FALSE?**
   a. An injury to the hypothalamus may result in disturbances in sleep and wakefulness.
   b. Damage to the hypothalamus might impair one's ability to cool himself/herself by sweating when he/she is overheating.
   c. An injury to the hypothalamus may result in changes in sexual behavior.
   d. An injury to the hypothalamus may result in impairments in unconscious motor movement.
   e. Damage to the hypothalamus might impair one's ability to warm himself/herself by shivering when he/she is too cold.

29. **Santiago was in a biking accident and sustained brain damage to his limbic system. Which of the following impairments will he likely have?**
   a. impairment in reading fear on someone's face
   b. jerky movements
   c. poor muscle tone
   d. impairment in speech
   e. impairment in sleep regulation
30. Ahli has a tumor growing on his amygdala. His family and team of doctors are afraid that the tumor will soon prevent Ahli's amygdala from properly functioning. Which of the following would give an indication that the amygdala is being negatively affected by the tumor growth?
   a. Ahli is beginning to display problems with language use.
   b. Ahli is having an increasingly difficult time remembering the names of those on his medical team.
   c. Though Ahli nearly got hit by a car the other day, he continues to walk into the street without looking for oncoming traffic.
   d. It appears that Ahli is losing the ability to regulate his response to hunger and thirst.
   e. Though his right arm is fine, he is now starting to lose the ability to use his left arm.

31. The ______ plays a central role in the storing of new memories, the response to new or unexpected stimuli, and navigational ability.
   a. hypothalamus
   b. cerebellum
   c. amygdala
   d. hippocampus
   e. pons

32. Movement on the ______ side of the body is controlled by the ______ hemisphere of the brain, by way of the ______.
   a. right; right; corpus callosum
   b. left; left; occipital lobe
   c. right; left; corpus callosum
   d. left; right; occipital lobe
   e. right; right; occipital lobe

33. The corpus callosum is located within the ______ and is important to overall functioning because ______.
   a. cerebral cortex; it allows neurotransmitters to bind to receptor sites
   b. cerebrum; allows the hemispheres to communicate and coordinate
   c. hindbrain; it allows for humans to sustain life
   d. cerebrum; it regulates hunger, thirst, and sexual behavior
   e. cerebellum; allows the hemispheres to work in symphony with one another

34. Lateralization refers to
   a. the idea that the right side of the brain controls the left side of the body.
   b. the notion that each hemisphere of the brain specializes in particular functions.
   c. the procedure in which the corpus callosum is severed.
   d. the inability to produce speech.
   e. communication between the central nervous system and the peripheral nervous system.

35. Broca's area and the motor cortex can be found in the ______.
   a. occipital lobe.
   b. frontal lobe.
   c. parietal lobe.
   d. cerebellum.
   e. temporal lobe.

36. Leroy sustained a blow to the head recently which resulted in damage to his frontal lobe. Which of the following will NOT be a likely result?
   a. He may experience Broca's aphasia.
   b. He may have an impairment in planning for the future.
   c. He may have difficulty moving muscles voluntarily.
   d. He may have problems with impulsivity.
   e. He may lose his vision.
37. **Bindu recently found out she has a tumor in her brain. She is having problems making sense of things that she touches and determining what stimuli cause pain and which do not. Based on this information, Bindu's tumor is likely located in her _______.**
   a. occipital lobe.
   b. cerebellum.
   c. motor cortex.
   d. frontal association area.
   e. somatosensory cortex.

38. **The _______ is a/are vital brain structure(s) required for the proper processing of vision.**
   a. amygdala
   b. hippocampus
   c. occipital lobes
   d. substantia nigra
   e. temporal lobes

39. **Which of the following brain structures is needed for proper auditory processing and function?**
   a. the occipital lobes
   b. limbic system
   c. parietal lobes
   d. hippocampus
   e. the temporal lobes

40. **Danielle was born with an absence of her primary auditory cortex. Which of the following will likely result?**
   a. Danielle will not be about to hear from her right ear.
   b. Danielle will not be able to hear from her left ear.
   c. Danielle will not be able to hear at all.
   d. Danielle will be able to hear a little from each ear.
   e. Danielle will need to get tubes put in her ears and then wear a hearing aid in order to hear.

41. **Which of the following is true of Wernicke's aphasia?**
   a. The person uses words or word fragments but does not make sense.
   b. The person has problems in producing fluent speech.
   c. The person knows what he/she wants to say but has trouble articulating his/her thoughts.
   d. The person is aware of his/her problems in speech.
   e. It has only been reported in males.