1. The knee-jerk reflex requires the activity of the:
   a. central nervous system.
   b. motor cortex.
   c. limbic system.
   d. cerebellum.

2. Signal reception is to _________________ as signal transmission is to ________________.
   a. interneuron; neural network
   b. dendrite; axon
   c. neurotransmitter; hormone
   d. sympathetic nervous system; parasympathetic nervous system

3. A drug that inhibits the release of a particular neurotransmitter into the synaptic gap is called a(n):
   a. opiate.
   b. agonist.
   c. antagonist.
   d. glutamate

4. X-ray photographs of the brain are necessary to produce a(n):
   a. EEG.
   b. PET scan.
   c. CT scan.
   d. fMRI.

5. Heartbeat, digestion, and other self-regulating bodily functions are governed by the
   a. voluntary nervous system
   b. autonomic nervous system
   c. sympathetic nervous system
   d. skeletal nervous system

6. Neurotransmitters bind to receptor sites and influence the flow of ________________ into receiving neurons.
   a. ions
   b. glial cells
   c. vesicles
   d. hormones

7. You would die if you suffered destruction of the:
   a. amygdala
   b. hippocampus.
   c. angular gyrus.
   d. corpus callosum.
   e. medulla.

8. In which brain structure are nerves from the left side of the brain routed to the right side of the body?
   a. thalamus
   b. cerebellum
   c. reticular formation
   d. hindbrain

9. Stimulation of the reticular formation will cause a:
   a. thirsty cat to drink.
   b. hungry cat to stop eating.
   c. violent cat to become passive.
   d. sleeping cat to awaken.

10. An undersupply of GABA would most closely be linked to:
    a. schizophrenia
    b. paralysis
    c. insomnia
    d. Alzheimer's disease

11. If Professor Kelly lesions (not stimulates) the amygdala of a laboratory rat, it is most likely that the rat will become:
    a. hungry.
    b. aggressive.
    c. physically uncoordinated.
    d. less emotionally reactive.

12. The secretions of the pituitary gland are most directly regulated by the:
    a. reticular formation.
    b. hypothalamus.
    c. amygdala.
    d. cerebellum.

13. Nerve cells in the brain receive life-supporting nutrients and insulating myelin from:
    a. glial cells.
    b. neurotransmitters.
    c. motor neurons.
    d. hormones.

14. Alicia suffered a brain disease that destroyed major portions of her temporal lobes. Alicia is most likely to suffer some loss of
    a. hearing.
    b. hunger and thirst.
    c. pain sensations.
    d. vision.

15. The parietal lobes are to ________________ as the occipital lobes are to ________________.
    a. hearing; speaking
    b. sensing touch; seeing
    c. sensing pleasure; sensing pain
    d. tasting; smelling
    e. hearing; seeing

16. Direct stimulation of a part of the motor cortex would most likely result in:
    a. feelings of anger.
    b. acceleration of heartbeat.
    c. a sensation of being touched on the arm.
    d. movement of a hand.

17. Damage to the association areas in the frontal lobe is most likely to interfere with the ability to:
    a. formulate plans.
    b. recognize familiar faces.
    c. understand word meanings.
    d. experience emotion.

18. The region of your cerebral cortex that enables you to recognize a person as your own mother is:
    a. Wernicke's area.
    b. the angular gyrus.
    c. Broca's area.
    d. an association area.

19. After she suffered a stroke, Mrs. Jacobs had so much difficulty speaking that she had to communicate by writing. This suggests
    that her cortex was damaged in:
    a. the occipital lobe.
    b. Broca's area.
    c. the angular gyrus.
    d. Wernicke's area.

20. The sympathetic nervous system ________________ digestion and ________________ heartbeat.
21. After researchers rearranged the neural pathways of newborn ferrets, the animals could see lights with their auditory cortex. This best illustrates:
   a. phrenology.  
   b. tomography.  
   c. plasticity.  
   d. split brain surgery

22. If an individual’s right cerebral hemisphere is completely destroyed by disease, that person is unable to see anything:
   a. with his or her right eye.  
   b. with his or her left eye.  
   c. in his or her right field of vision.  
   d. in his or her left field of vision.

23. A picture of a cat is briefly flashed in the left visual field and a picture of a mouse is briefly flashed in the right visual field of a split-brain patient. The individual will be able to say she saw a _______ and use her left hand to indicate she saw a _______.
   a. cat; cat  
   b. mouse; mouse  
   c. cat; mouse  
   d. mouse; cat  
   e. none of these are correct

24. The right hemisphere is superior to the left at:
   a. solving arithmetic problems.  
   b. recognizing people’s faces.  
   c. understanding simple verbal requests.  
   d. processing information in an orderly sequence.

25. The concentration of glucose in active regions of the brain underlies the special usefulness of a(n):
   a. MRI.  
   b. CT scan.  
   c. EEG.  
   d. PET scan.

26. When Sally went to the doctor complaining of black spots in her left field of vision, the doctor immediately ordered a scan of her ________ lobe.
   a. left occipital  
   b. right occipital  
   c. left temporal lobe  
   d. right temporal

27. What will most likely happen as a neurosurgeon sedates the entire right cerebral hemisphere of a patient who is asked to count aloud with both arms extended upward?
   a. The patient’s left arm will fall limp and he will become speechless.  
   b. The patient’s right arm will fall limp and he will become speechless.  
   c. The patient’s left arm will fall limp but he will continue counting aloud.  
   d. The patient’s right arm will fall limp but he will continue counting aloud.

28. After suffering a stroke that damaged his angular gyrus, Mr. Chang is likely to experience the greatest difficulty:
   a. recognizing familiar faces.  
   b. speaking fluently.  
   c. understanding other people when they speak.  
   d. reading poetry.

29. Raccoons have much more precise control of their paws than dogs. You would expect that raccoons have more cortical space dedicated to "paw control" in the ____________ of their brains.
   a. frontal lobes  
   b. parietal lobes  
   c. temporal lobes  
   d. occipital lobes

30. A person whose corpus callosum has been split has a picture of a key flashed to her right visual field. She will probably:
   a. verbally report that a key was seen.  
   b. only be able to write the word key using her left hand.  
   c. only be able to draw a picture of a key using her left hand.  
   d. do none of the above.

31. The branching extensions of nerve cells that receive incoming signals from sensory receptors or from other neurons are called the:
   a. axons.  
   b. synapses.  
   c. dendrites.  
   d. neurotransmitters.

32. Sheila was able to jerk her hand out of the scalding water before sensing any pain because this withdrawal reflex:
   a. was activated by interneurons in her spinal cord.  
   b. did not involve any activity within her central nervous system.  
   c. was activated by the rapidly responding reticular formation of her brain.  
   d. was activated by her self-regulating autonomic nervous system.

33. The slowdown of neural communication in multiple sclerosis involves a degeneration of the:
   a. dendrites.  
   b. blood cells.  
   c. corpus callosum.  
   d. myelin sheath.  
   e. pituitary gland.

34. The resting potential of a neuron refers to:
   a. a brief electrical charge that travels down the axon.  
   b. the storage of neurotransmitter molecules within synaptic vesicles.  
   c. the electrical imbalance between the inside and outside of the neural membrane.  
   d. a capacity to reabsorb neurotransmitter molecules released into the synaptic gap.

35. L-dopa helps to control the:
36. In order to measure activity in a variety of different regions of the brain, researchers are most likely to make use of a:
   a. MRI.  
   b. fMRI.  
   c. CT scan.  
   d. all of these

37. The reuptake of a neurotransmitter such as serotonin would involve the reabsorption of serotonin into a(n):
   a. axon terminal.  
   b. receiving neuron.  
   c. myelin sheath.  
   d. synaptic gap.

38. Cortisol is to hormone as _______________ is to neurotransmitter.
   a. synapse  
   b. epinephrine  
   c. estrogen  
   d. dopamine

39. The tremors of Parkinson's disease result from the loss of nerve cells that produce the _______________.
   a. serotonin.  
   b. ACh  
   c. GABA.  
   d. dopamine.

40. The medulla is to the control of _______________ as the cerebellum is to the control of _______________.
   a. eating; sleeping  
   b. breathing; running  
   c. hearing; seeing  
   d. memory; attention

41. If Dr. Doodle wants to conduct experiments on the pleasure centers of teenage brains (for which I'm sure there would be many volunteers), he would insert an electrode into the
   a. thalamus  
   b. sensory cortex  
   c. hypothalamus  
   d. all of these

42. I am having a baby and am in excruciating pain. I would most likely yell to my doctor, "I clearly am having a problem with my __________ levels right now; I need an _____________."
   a. acetylcholine; agonist.  
   b. endorphin; agonist.  
   c. dopamine; antagonist.  
   d. estrogen; antagonist.

43. People can simultaneously process many aspects of sensory information such as color, shape, and size. This best illustrates the functioning of multiple:
   a. Acetylcholine agonists.  
   b. reticular formations.  
   c. endorphins.  
   d. neural networks.

44. Paralysis triggered by botulin poisoning is most likely to be relieved by a(n):
   a. ACh agonist  
   b. serotonin agonist  
   c. ACh antagonist  
   d. serotonin antagonist

45. The spatial junctions where impulses are chemically transmitted from one neuron to another are called:
   a. neurotransmitters.  
   b. interneurons.  
   c. synapses.  
   d. dendrites.e. thresholds.

46. Information is carried from the tissues of the body to the central nervous system by:
   a. interneurons.  
   b. sensory neurons.  
   c. motor neurons.  
   d. endocrine glands.

47. Information travels from the spinal cord to the brain via:
   a. interneurons.  
   b. the circulatory system.  
   c. sensory neurons.  
   d. the sympathetic nervous system.

48. Motor neurons are to the _______________ nervous system as interneurons are to the ________________ nervous system.
   a. sympathetic; parasympathetic  
   b. peripheral; central  
   c. autonomic; somatic  
   d. parasympathetic; sympathetic

49. The parasympathetic nervous system is a division of the ______________ nervous system.
   a. autonomic  
   b. somatic  
   c. central  
   d. sympathetic

50. After a sky-diving accident, Laurie's speech did not make sense to others, although the individual words did have meaning. It is likely that her cortex was damaged in:
   a. the sensory area.  
   b. Broca's area.  
   c. the angular gyrus.  
   d. Wernicke's area.