

1. Describe how Phineas Gage's brain injury and Paul Broca's discovery of language deficits after a patient's stroke demonstrate that certain parts of the brain influence certain traits or abilities. Give specific examples from each case study.
2. What is a reflex? Define the roles of sensory and motor neurons in a reflex. Provide an example to illustrate the roles.
3. Detail the functions of a neuron's dendrites, axon, and axon terminals to describe how information is received and sent by a neuron. What is the space between neurons that the message must cross?
4. Explain how and why deterioration of the myelin sheath in multiple sclerosis would impact sensation and movement.
5. Describe the process of reuptake. Give an example of how drugs that affect this process can be used in the treatment of disease.
6. What happens when a neuron at rest is stimulated to a level that reaches threshold? Can this process happen continuously? Why or why not?
7. Describe what it means that brain function is localized. Discuss the limitations of this localization.
8. Where do humans have more brain material in comparison to other species, and what does that mean behaviorally?
9. Why might a person have split-brain surgery, and what happens during this surgery? Give one example of a unique behavior that can occur after split-brain surgery.
10. Where are the somatosensory and motor cortexes located? How is the amount of brain material on these cortexes allocated? Explain and give an example.
11. Explain two ways in which the left and right hemispheres of the cerebrum differ in function.

12. Discuss the role of stem cells in neurogenesis and brain plasticity. Give one example of plasticity that can occur after brain damage.
13. Differentiate between the central and peripheral nervous systems in terms of composition and function. Name and, using examples, describe the functions of the two divisions of the peripheral nervous system.
14. Name and describe the functions of the two divisions of the autonomic nervous system. Provide examples to illustrate the functions.
15. You're sitting in the theater watching a movie when the fire alarm goes off. You jump and get out of your seat to leave the theater, but the alarm stops and an announcement is made that the alarm was unintentional and there is no emergency. You calm down and go back to enjoying your movie. Name and explain the roles of the divisions of the autonomic nervous system in your responses.
16. Describe what electroencephalography measures, how it does it, and why it is well-suited for assessing seizure-based disorders like epilepsy.
17. Compare and contrast how computed tomography and positron emission tomography work to provide information about the brain. What type of information does each provide? Give an example of what each would be best used for.

Answer Key

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1. Phineas Gage's brain injury and the autopsy on Paul Broca's stroke patient provided evidence for the idea of:
 - A) localization.
 - B) association areas.
 - C) phrenology.
 - D) the nervous system.

2. After Phineas Gage's brain injury, his basic abilities remained intact but his _____ changed significantly.
 - A) ability to form new memories
 - B) ability to hold a job
 - C) personality characteristics
 - D) coordination and balance

3. Jaylen was in a car accident, which caused damage to his brain the damage sustained by Phineas Gage. As a result, you would predict that Jaylen would MOST likely demonstrate changes in his:
 - A) coordination and balance.
 - B) personality characteristics.
 - C) ability to form new memories.
 - D) ability to hold a job.

4. Damage to _____ impairs a person's ability to speak.
 - A) Broca's area
 - B) the frontal cortex
 - C) the hippocampus
 - D) Gage's area

5. Kiara suffered a stroke that damaged the part of the brain called Broca's area. This means that Kiara will MOST likely have:
 - A) an impaired ability to speak.
 - B) significant personality changes.
 - C) issues forming new memories.
 - D) an impaired ability to understand speech.

6. Broca's area is associated with the ability to:
 - A) see.
 - B) speak.
 - C) hear.
 - D) taste.

7. In your psychology class, you learned about the famous case in which railroad worker Phineas Gage suffered a severe head injury. An iron rod he was using hit blasting powder, causing the rod to shoot up and through his head. Phineas Gage survived with his basic abilities intact although his personality underwent a profound change. Phineas Gage's case BEST illustrates the idea that:
- A) specific parts of the brain correspond to specific functions and abilities.
 - B) the brain adapts its functioning in response to damage.
 - C) new neurons are created after the brain has been damaged.
 - D) damage to the reticular activating system causes a person's personality to change.
8. Scientists who believe that specific parts of the brain are responsible for specific functions and abilities are supported in this belief by:
- A) the typical outcome of split-brain surgery.
 - B) Phineas Gage's change in personality after sustaining a severe head injury.
 - C) the ability of the brain to adapt its structure or function in response to damage.
 - D) the discovery that new neurons are created by the brain after injury.
9. In an abnormal psychology class, you had a guest speaker from a local rehabilitation center that specializes in patients with brain injuries. The speaker discussed the case of a patient who suffered a stroke and lost the ability to speak. However, all of this patient's other abilities remained entirely intact. It is MOST likely that the stroke damaged which part of the patient's brain?
- A) corpus callosum
 - B) hypothalamus
 - C) Broca's area
 - D) Wernicke's area
10. Dr. Emerson is a neurologist who studies the brain and how it functions. Dr. Emerson is particularly interested in the part of the brain that affects a person's ability to speak when it has been damaged. The part of the brain Dr. Emerson is interested in is:
- A) the corpus callosum.
 - B) the amygdala.
 - C) Wernicke's area.
 - D) Broca's area.
11. A neuron is:
- A) a cell that facilitates communication.
 - B) a chemical that is used for signaling.
 - C) the gap between connecting cells.
 - D) the substance that insulates the signaling portion of cells.

12. Cells that facilitate communication within the nervous system are called:
- A) dendrites.
 - B) neurons.
 - C) axons.
 - D) action potentials.
13. _____ are the building blocks of the brain.
- A) Hormones
 - B) Synapses
 - C) Neurons
 - D) Neurotransmitters
14. A newly discovered life form was found. Unlike humans, this life form has no way to pass information between cells in their bodies. It can be assumed that this life form has no:
- A) hormones.
 - B) neurons.
 - C) corpus callosum.
 - D) cerebral hemispheres.
15. In a recent study, scientists analyzed how the brain develops in people with autism spectrum disorder compared to those without the disorder. The scientists were specifically interested in the development of _____, which are cells that are responsible for communication within the brain.
- A) neurons
 - B) neurotransmitters
 - C) synapses
 - D) axons
16. Lknarf Industries is a large, multi-national corporation with hundreds of employees. The employees of Lknarf Industries use an internal messaging system which allows them to communicate quickly, easily, and efficiently with one another. The company's approach to communication operates MOST similarly to the:
- A) nervous system.
 - B) corpus callosum.
 - C) cerebral hemispheres.
 - D) endocrine system.

17. At a busy intersection, a police officer directs traffic. The movement of the cars is controlled by the police officer, who is responsible for communicating to drivers how to proceed. The role of the police officer is MOST similar to the role of _____ in brain functioning.
- A) neurotransmitters
 - B) neurons
 - C) glands
 - D) the endocrine system
18. The majority of the neurons in your brain:
- A) receive sensory input.
 - B) serve as connections between neurons.
 - C) send motor commands.
 - D) facilitate reflexes.
19. Interneurons:
- A) connect only to other nearby neurons.
 - B) receive sensory signals from the outside world.
 - C) send commands to the brain to initiate movement.
 - D) support and protect other neurons.
20. A neuron that connects only to nearby neurons is a:
- A) sensory neuron.
 - B) interneuron.
 - C) motor neuron.
 - D) glial cell.
21. When at sea, ships use flags to communicate with other ships that are nearby. These flags would not be used to communicate with ships farther away. The use of flags by ships is similar to the use of _____ in the brain.
- A) neurotransmitters
 - B) glial cells
 - C) interneurons
 - D) synapses

22. When Li looks at a painting at the art museum, neurons send that information to her visual cortex, amygdala, and hippocampus. This distribution of information among the neurons in Li's brain is MOST likely due to activity of:
- A) afferent neurons.
 - B) interneurons.
 - C) glial cells.
 - D) sensory neurons.
23. Your brain contains approximately _____ billion neurons.
- A) 1
 - B) 10
 - C) 100
 - D) 1000
24. Sensory neurons are also called:
- A) afferent neurons.
 - B) interneurons.
 - C) efferent neurons.
 - D) motor neurons.
25. _____ send information to your brain from your senses.
- A) Efferent neurons
 - B) Motor neurons
 - C) Afferent neurons
 - D) Glial cells
26. When Angelo bit into an orange, neurons carried the information about the taste to his brain. This information was MOST likely carried by:
- A) afferent neurons.
 - B) interneurons.
 - C) efferent neurons.
 - D) motor neurons.
27. When reaching into your book bag, you accidentally jab yourself on the sharp point of a pencil. The pain you feel when this happens is communicated to your brain by your:
- A) glial cells.
 - B) interneurons.
 - C) motor neurons.
 - D) sensory neurons.

28. Motor neurons are also called:
- A) afferent neurons.
 - B) interneurons.
 - C) efferent neurons.
 - D) sensory neurons.
29. _____ send information from your brain to your muscles.
- A) Sensory neurons
 - B) Motor neurons
 - C) Afferent neurons
 - D) Glial cells
30. Sandra took a sip of spoiled milk and immediately spit it out. Her ability to spit the milk out so quickly is MOST directly due to the activity of her:
- A) afferent neurons.
 - B) interneurons.
 - C) efferent neurons.
 - D) sensory neurons.
31. As you were riding to school with your roommate one day, a bobble-head doll your roommate had on the dash board fell when the car stopped suddenly at a red light. Without thinking, you reached out and caught the bobble-head before it fell to the floorboard. When you did so, you were using your:
- A) motor neurons.
 - B) glial cells.
 - C) interneurons.
 - D) sensory neurons.
32. _____ carry messages to your brain, whereas _____ carry messages from your brain.
- A) Sensory neurons; motor neurons
 - B) Motor neurons; sensory neurons
 - C) Interneurons; glial cells
 - D) Glial cells; interneurons
33. A(n) _____ is an automatic motor response to sensory input.
- A) efferent
 - B) afferent
 - C) action potential
 - D) reflex

34. When Linda's doctor hits her knee with a small hammer, her knee involuntarily jerks forward. The involuntary movement of Linda's knee is a(n):
- A) spasm.
 - B) contraction.
 - C) action potential.
 - D) reflex.
35. Which statement is true about reflexes?
- A) Reflexes take anywhere between a few seconds to a minute to begin.
 - B) Reflexes are involuntary, automatic motor responses to sensory input.
 - C) Reflexes are voluntary, automatic motor responses to sensory input.
 - D) Reflexes are learned reactions to sensory stimuli.
36. The _____ is the part of the neuron that performs basic cellular activities.
- A) dendrite
 - B) soma
 - C) axon
 - D) axon terminal
37. The soma of a neuron:
- A) performs basic cellular activities.
 - B) carries information toward other neurons.
 - C) forms connections with the next neuron.
 - D) receives information from a previous neuron.
38. The _____ is the central region of the neuron which performs the basic activities that keep it functioning properly.
- A) axon
 - B) cell body
 - C) myelin sheath
 - D) synapse
39. The cell body of a neuron:
- A) performs the basic activities which keep a neuron functional.
 - B) receives signals sent from other neurons.
 - C) forms connections with other neurons.
 - D) supports and protects neurons.

40. In a car, the motor or engine provides the energy necessary for the basic functions that allow the car to be operated. The part of the neuron that corresponds BEST to a car motor or engine is the:
- A) axon.
 - B) cell body.
 - C) myelin sheath.
 - D) synapse.
41. The _____ is the part of the neuron that carries information toward other neurons.
- A) cell body
 - B) dendrite
 - C) axon terminal
 - D) axon
42. The axon:
- A) performs the basic activities which keep a neuron functional.
 - B) receives signals sent from other neurons.
 - C) forms connections with other neurons.
 - D) carries information toward other neurons.
43. At many pharmacy drive-throughs, customers use a tube to send their prescriptions to the pharmacist inside. When a customer arrives, they place their prescription in the tube and then press a button. The prescription is then transported via the tube inside to the pharmacist. This tube operates MOST similarly to which part of the neuron?
- A) cell body
 - B) myelin sheath
 - C) dendrite
 - D) axon
44. The small branches that form connections with the next neuron are called the:
- A) dendrites.
 - B) soma.
 - C) neurotransmitters.
 - D) axon terminal.
45. The axon terminals of a neuron:
- A) perform basic cellular activities.
 - B) carry information toward other neurons.
 - C) form connections with the next neuron.
 - D) receive information from another neuron.

46. Neurons send information via their _____ and receive information via their _____.
- A) axon terminals; dendrites
 - B) dendrites; axon terminals
 - C) synapse; dendrites
 - D) dendrites; cell body
47. Information sent to other neurons travels along the _____ before reaching the _____, which forms connections with the next neuron.
- A) dendrites; axon terminals
 - B) axon; dendrites
 - C) axon; axon terminals
 - D) cell body; dendrites
48. Alicia sent a text to her friend Crystal letting her know that she could not meet her to go to the movies as planned. Crystal received this information in her email inbox. Alicia sending this message to Crystal's inbox operates MOST similarly to the _____ of the neuron.
- A) synaptic vesicles
 - B) soma
 - C) dendrites
 - D) axon terminals
49. The myelin sheath of a neuron:
- A) speeds its communication.
 - B) slows its communication.
 - C) covers the dendrites and axon terminals.
 - D) restricts the reuptake process.
50. _____ covers the axons of a neuron, helping messages travel quickly and efficiently.
- A) Dendrites
 - B) Axon terminals
 - C) Receptors
 - D) Myelin

51. Multiple sclerosis causes deterioration of a neuron's _____, which results in problems with movement and sensation.
- A) dendrites
 - B) axon terminals
 - C) myelin sheath
 - D) neurotransmitters
52. Shana has multiple sclerosis. This means that her neurons' _____ will deteriorate over time.
- A) dendrites
 - B) axon terminals
 - C) myelin sheaths
 - D) neurotransmitters
53. Danielle has a disease that decreases both incoming messages from the senses as well as her ability to move. She MOST likely has:
- A) multiple sclerosis.
 - B) Broca's aphasia.
 - C) anterograde amnesia.
 - D) Wernicke's aphasia.
54. Glial cells:
- A) break down a neuron's myelin sheath.
 - B) receive and send information.
 - C) support and protect neurons.
 - D) release neurotransmitters.
55. Which statement about glial cells is true?
- A) Glial cells create myelin sheaths.
 - B) Glial cells receive and send information between neurons.
 - C) Glial cells send sensory messages to the brain.
 - D) Glial cells release neurotransmitters.
56. The dendrites of a neuron:
- A) performs basic cellular activities.
 - B) carries information toward other neurons.
 - C) forms connections with the next neuron.
 - D) receive information from another neuron.

57. _____ are branches at the end of neurons that receive signals from other neurons.
- A) Axon terminals
 - B) Synapses
 - C) Dendrites
 - D) Myelin sheaths
58. Woodrow's doctor sent an email to Woodrow confirming an upcoming appointment. Woodrow received this information in his email inbox. Woodrow receiving the doctor's email in his inbox operates MOST similarly to functioning of a neuron's:
- A) synaptic vesicles.
 - B) soma.
 - C) dendrites.
 - D) axon terminals.
59. Your letter carrier delivers mail to the mailbox where you live. Your mailbox functions in the same way as the _____ of the neuron.
- A) synaptic vesicles
 - B) soma
 - C) dendrites
 - D) axon terminals
60. Neurotransmitters must travel across _____ to reach the next neuron.
- A) glial cells
 - B) the synapse
 - C) receptor sites
 - D) the soma
61. A synapse is:
- A) a saclike container packed with neurotransmitters.
 - B) a neurotransmitter receptor.
 - C) the gap between neurons.
 - D) a space between myelin on the axon.
62. Dr. O'Connor discovered a new species of sea slug. In this species, the axon terminals and the dendrites of the neurons communicate via direct contact. Unlike humans, this species does not have _____ between its neurons.
- A) glial cells
 - B) synapses
 - C) receptor sites
 - D) axons

63. _____ are the chemical messengers that travel across the synapses between neurons.
- A) Synaptic vesicles
 - B) Action potentials
 - C) Neurotransmitters
 - D) Hormones
64. Neurotransmitters are:
- A) cells that carry information to the brain.
 - B) chemical messengers that travel across synapses from one neuron to the next.
 - C) electrical impulses that cause a neuron to fire.
 - D) chemical messengers sent throughout the body via the bloodstream.
65. Dr. Pahz studies the effect of chemicals produced by the brain on a person's mood and their perception of pain. Dr. Pahz MOST likely studies:
- A) synaptic vesicles.
 - B) action potentials.
 - C) neurotransmitters.
 - D) hormones.
66. Endorphins are:
- A) saclike containers for neurotransmitters.
 - B) openings for neurotransmitters in dendrites.
 - C) spaces that neurotransmitters must cross between neurons.
 - D) neurotransmitters involved in reducing pain and increasing pleasure.
67. The “high” that runners feel during marathons MOST likely results from the release of:
- A) histamine.
 - B) endorphins.
 - C) GABA.
 - D) epinephrine.
68. Alberto's grandfather has Parkinson's disease, which results in tremors and slow movement. The medicine Alberto's grandfather takes increases his levels of _____, which is low in people with Parkinson's disease.
- A) dopamine
 - B) GABA
 - C) epinephrine
 - D) serotonin

69. Which neurotransmitter is most involved in sleep?
- A) dopamine
 - B) acetylcholine
 - C) epinephrine
 - D) serotonin
70. As individuals age, they need fewer hours of sleep. This is MOST likely due to changes in the levels of the neurotransmitter:
- A) dopamine.
 - B) acetylcholine.
 - C) epinephrine.
 - D) serotonin.
71. The neurotransmitter that is MOST involved in the fight-or-flight response is:
- A) dopamine.
 - B) GABA.
 - C) epinephrine.
 - D) serotonin.
72. Cynthia just rode a roller coaster with her friends. Cynthia loved the experience but her heart is pounding and she feels shaky and breathless. The neurotransmitter that is MOST likely responsible for Cynthia's physical response to riding the roller coaster is:
- A) GABA.
 - B) acetylcholine.
 - C) epinephrine.
 - D) serotonin.
73. At times, Stefan feels more anxious than usual. When Stefan feels like this, it affects his functioning. If a psychiatrist prescribed Stefan medicine to help with his anxiety during these times, that medicine would MOST likely address which neurotransmitter?
- A) dopamine
 - B) GABA
 - C) acetylcholine
 - D) serotonin
74. An _____ is a drug that enhances the impact of a neurotransmitter.
- A) efferent
 - B) agonist
 - C) afferent
 - D) antagonist

75. Parkinson's disease causes tremors and slow movement due to the brain's inability to produce enough dopamine. Thus, to treat Parkinson's, doctors would MOST likely prescribe a dopamine:
- A) efferent.
 - B) agonist.
 - C) afferent.
 - D) antagonist.
76. A drug that interferes with the impact of a neurotransmitter is called an:
- A) efferent.
 - B) agonist.
 - C) afferent.
 - D) antagonist.
77. Schizophrenia is partially caused by the brain's overproduction of dopamine. Thus, to treat schizophrenia, doctors would MOST likely prescribe a dopamine:
- A) efferent.
 - B) agonist.
 - C) afferent.
 - D) antagonist.
78. The tiny, sack-like containers containing neurotransmitters are called:
- A) receptor sites.
 - B) synaptic vesicles.
 - C) axon terminals.
 - D) dendrites.
79. A synaptic vesicle is:
- A) a saclike container for neurotransmitters.
 - B) an opening for neurotransmitters in dendrites.
 - C) the space neurotransmitters must cross between neurons.
 - D) a receptor for neurotransmitters.
80. A receptor site is:
- A) a saclike container for neurotransmitters.
 - B) an opening for specific neurotransmitters in dendrites.
 - C) the space neurotransmitters must cross between neurons.
 - D) a space between the myelin on the axon.

81. _____ are openings in dendrites that match specific neurotransmitters.
- A) Receptor sites
 - B) Synaptic vesicles
 - C) Axon terminals
 - D) Somas
82. The process of reuptake:
- A) increases the amount of neurotransmitters in the synapse.
 - B) aids in getting neurotransmitters to receptor sites.
 - C) returns neurotransmitters to the neuron that released them.
 - D) releases neurotransmitters into the synapse.
83. The process that occurs when a neurotransmitter is taken back up by the neuron that sent it is called:
- A) neurogenesis.
 - B) reuptake.
 - C) firing.
 - D) refraction.
84. Reuptake is the:
- A) waiting time during which a neuron is reset.
 - B) firing of an electrical impulse through the axon.
 - C) process that occurs when a neurotransmitter is reabsorbed by sending neuron.
 - D) creation of new neurons by the brain after it has been damaged.
85. For his sister's birthday, Jacob baked a cake to celebrate. Jacob had batter left over after filling the cake pan, which he returned to the mixing bowl. Returning the excess batter to the mixing bowl is MOST similar to the _____ of a neuron.
- A) resting potential
 - B) reuptake process
 - C) action potential
 - D) refractory period
86. Which statement is TRUE about the reuptake process? Reuptake:
- A) occurs when neurotransmitters do not successfully release into the synapse.
 - B) returns neurotransmitters to the sending neuron.
 - C) is the process by which neurotransmitters attach to receptor sites
 - D) causes the firing of an electrical impulse that travels through the axon.

87. The release of an electric impulse that travels through the neuron's axon is called the:
- A) action potential.
 - B) resting potential.
 - C) refractory period.
 - D) reuptake process.
88. A neuron's communication process begins with the:
- A) action potential.
 - B) resting potential.
 - C) refractory period.
 - D) reuptake process.
89. An action potential is the:
- A) chemical transmission of information between two neurons.
 - B) low-level electrical charge of an inactive neuron.
 - C) firing of an electrical impulse in a neuron.
 - D) waiting time during which a neuron is at rest.
90. Sarah lives in an old house. Sarah wants to update parts of her house, starting with her light switches. Currently, Sarah can only turn the lights all the way on or all the way off. Sarah plans to install switches that allow her to adjust the level of her lights instead of just turning them on or off. The way Sarah's current light switches operate is MOST similar to a neuron's _____.
- A) action potential
 - B) resting potential
 - C) refractory period
 - D) reuptake process
91. The low-level electrical charge a neuron has when it is not firing is called the:
- A) action potential.
 - B) resting potential.
 - C) refractory period.
 - D) reuptake process.
92. The resting potential of a neuron is defined as the:
- A) low-level electrical charge in a neuron when it is not firing.
 - B) minimum level of electrical change necessary to fire a neuron.
 - C) level of electrical charge present necessary to reset a neuron's firing potential.
 - D) electrical charge needed to begin the neuron's firing process.

93. Jonathan enjoys working out. While exercising, Jonathan uses a significant amount of energy. He uses much less energy when not working out, but some is required to keep him going throughout his day. Jonathan's energy level between his workouts is MOST similar to the _____ of a neuron.
- A) action potential
 - B) resting potential
 - C) refractory period
 - D) reuptake process
94. The threshold of a neuron is the:
- A) level of electrical charge required for a neuron to fire.
 - B) low-level electrical charge of an inactive neuron.
 - C) firing of an electrical impulse in a neuron.
 - D) waiting time during which a neuron resets its electrical charge.
95. The action potential of a neuron is triggered when the _____ is reached.
- A) resting potential
 - B) action potential
 - C) refractory period
 - D) threshold
96. When a person has a heart attack, doctors often use a machine to deliver a dose of electricity to the person's heart. After the defibrillator is used, a period of time is needed for it to recharge. The period of time defibrillator needs to recharge is MOST similar to the _____ of a neuron.
- A) action potential
 - B) resting potential
 - C) refractory period
 - D) reuptake process
97. The _____ of a neuron is the time during which a neuron resets its electrical charge.
- A) resting potential
 - B) threshold
 - C) action potential
 - D) refractory period

98. What is the correct order of electrical activity of a neuron?
- A) resting potential, action potential, refractory period
 - B) resting potential, refractory period, action potential
 - C) refractory period, action potential, resting potential
 - D) action potential, resting potential, refractory period
99. Which statement about a neuron's electrical activity is FALSE?
- A) The strength of an action potential depends on the strength of what triggered it.
 - B) At rest, neurons have a low-level electrical charge.
 - C) Action potentials operate on the all-or-none principle.
 - D) There is a period of time after an action potential during which a neuron cannot fire again.
100. _____ is the idea that specific parts of the brain are responsible for specific behaviors or abilities.
- A) Plasticity
 - B) Neurogenesis
 - C) Localization
 - D) Association
101. Localization refers to the idea that _____ particular behaviors or abilities.
- A) specific parts of the brain are responsible for
 - B) the lobes of the brain work together to perform
 - C) the two hemispheres of the brain are primarily responsible for
 - D) each lobe of the brain is solely responsible for
102. Dr. Katz recently conducted a study in which she examined how the frontal lobe of people with dementia functioned as compared to people without dementia. Dr. Katz theorized that the frontal lobe is responsible for specific cognitive abilities, which are affected by dementia. Dr. Katz's approach corresponds MOST closely to the concept of:
- A) localization.
 - B) plasticity.
 - C) association.
 - D) specialization.

103. You work at a large factory that manufactures farm equipment. The factory has different areas responsible for manufacturing specific parts of the equipment. Your job is the area of the factory that puts all of the parts together so that the equipment can operate. The way the different areas of the factory operate is MOST similar to the concept of brain:
- A) localization.
 - B) plasticity.
 - C) association.
 - D) specialization.
104. Relatively speaking, the _____ of the human brain is larger in humans than in other species.
- A) top and front
 - B) brainstem
 - C) top and back
 - D) hindbrain
105. Which statement about brain size across species is true?
- A) Human brains are bigger at the back and bottom than other species' brains.
 - B) Humans have larger forebrains than other species.
 - C) Reptiles have larger forebrains than birds and mammals.
 - D) Species that evolved more recently have larger brainstems.
106. Which statement about the brain is false?
- A) The back and bottom control basic functions.
 - B) The top and front control advanced functions.
 - C) Specific parts of the brain are responsible for specific activities and behaviors.
 - D) Some parts of the brain can function entirely independently from the rest of the brain.
107. Which statement about the brain is true?
- A) The back and bottom control advanced functions.
 - B) The top and front control basic functions.
 - C) Specific parts of the brain are responsible for specific activities and behaviors.
 - D) Some parts of the brain can function entirely independently from the rest of the brain.

108. The main function of the brainstem is to:
- A) pass along sensory information to other brain areas.
 - B) regulate movement and control coordination.
 - C) maintain basic functions necessary for life.
 - D) facilitate motivation and emotion.
109. Which function is NOT controlled by the brainstem?
- A) breathing
 - B) heartbeat
 - C) memory
 - D) swallowing
110. If a person sustains severe damage to their brainstem, which would be the MOST likely outcome?
- A) impaired memory
 - B) death
 - C) sensory processing deficits
 - D) blindness
111. Which is NOT a part of the brainstem?
- A) thalamus
 - B) reticular activating system
 - C) pons
 - D) medulla
112. During surgery, patients are often placed on machines to control their breathing and heartbeat. These machines function MOST similarly to which part of the brain?
- A) cerebellum
 - B) brainstem
 - C) corpus callosum
 - D) limbic system
113. The _____ is the collection of neurons in the brainstem which are involved in alertness, attention, sleep, and waking.
- A) reticular activating system
 - B) limbic system
 - C) hippocampus
 - D) cerebellum

114. Your professor is discussing the part of the brainstem that is involved in alertness, attention, sleep, and waking. Your professor is MOST likely discussing the:
- A) limbic system.
 - B) hippocampus.
 - C) cerebellum.
 - D) reticular activating system.
115. Which part of the brainstem is involved in arousal, alertness, and attention?
- A) thalamus
 - B) reticular activating system
 - C) pons
 - D) medulla
116. Sophie suffered an injury to her brainstem and now has problems staying alert and maintaining attention. What part of Sophie's brainstem was MOST likely injured?
- A) thalamus
 - B) reticular activating system
 - C) pons
 - D) medulla
117. The _____ is the part of the brainstem involved in sleeping, breathing, and the maintenance of equilibrium.
- A) thalamus
 - B) reticular activating system
 - C) pons
 - D) medulla
118. Santiago suffered an injury to his brainstem and now has problems maintaining equilibrium. What part of Santiago's brainstem was MOST likely injured?
- A) thalamus
 - B) reticular activating system
 - C) pons
 - D) medulla
119. After a stroke, Raymond experienced problems with his equilibrium. What part of the brain did Raymond's stroke MOST likely affect?
- A) thalamus
 - B) reticular activating system
 - C) pons
 - D) medulla

120. The part of the brainstem primarily responsible for heartbeat and breathing is the:
- A) thalamus.
 - B) reticular activating system.
 - C) pons.
 - D) medulla.
121. Omar took a medication that slowed his heartbeat. The drug is MOST likely acting on the:
- A) thalamus.
 - B) reticular activating system.
 - C) pons.
 - D) medulla.
122. The part of the brainstem primarily responsible for heartbeat and breathing is the:
- A) thalamus.
 - B) reticular activating system.
 - C) pons.
 - D) medulla.
123. The main function of the _____ is to regulate movement and control coordination.
- A) amygdala
 - B) hippocampus
 - C) cerebellum
 - D) brainstem
124. The cerebellum is hypothesized to be involved in all these functions EXCEPT:
- A) balance.
 - B) emotion.
 - C) attention.
 - D) memory.
125. The cerebellum is located near the _____ of the brain.
- A) front
 - B) top
 - C) base
 - D) middle

126. The _____ is involved in the regulation of movement.
- A) frontal lobe
 - B) brainstem
 - C) reticular activating system
 - D) cerebellum
127. Aesha suffered damage to her cerebellum. Aesha is MOST likely to have difficulty with which task?
- A) using the correct amount of pressure to write without tearing her paper
 - B) producing coherent speech in response to a question
 - C) having enough energy to complete a 30-min cardio workout
 - D) being able to sleep continuously through the night
128. After an accident, George's ability to walk was impaired. The area of the brain George MOST likely damaged is his:
- A) thalamus.
 - B) cerebellum.
 - C) hippocampus.
 - D) amygdala.
129. Jamie is a top-level gymnast. As a gymnast, Jamie has good balance and coordination of movement. The area of Jamie's brain that is responsible for her balance and coordination is the:
- A) thalamus.
 - B) pons.
 - C) cerebellum.
 - D) amygdala.
130. The _____ is the brain's main sensory processing center.
- A) limbic system
 - B) thalamus
 - C) cerebellum
 - D) pons
131. The main function of the thalamus is to:
- A) process sensory information.
 - B) regulate movement coordination.
 - C) maintain basic life functions.
 - D) process motivation and emotion.

132. Processing and sending sensory information are done by the:
- A) brainstem.
 - B) cerebrum.
 - C) limbic system.
 - D) thalamus.
133. Which is NOT true about the thalamus? The thalamus:
- A) works with the basal ganglia to help control movement.
 - B) passes along sensory information to other brain areas.
 - C) is located near the center of the brain.
 - D) is one of the structures that makes up the brainstem.
134. Which is true about the thalamus? The thalamus:
- A) is involved in motivation.
 - B) is involved in sensation.
 - C) surrounds the limbic system.
 - D) is part of the cerebrum.
135. If a person suffered damage to their thalamus, which ability would MOST likely be impaired?
- A) coordination and movement
 - B) understanding and producing speech
 - C) processing of sensory information
 - D) regulating emotions
136. In class, you learned about a person who suffered a head injury that made them unable to process information from the senses. What part of the person's brain was MOST likely damaged for this to occur?
- A) cerebellum
 - B) corpus callosum
 - C) thalamus
 - D) hypothalamus
137. The _____ is the cluster of brain areas located near the center of the brain that is involved primarily in emotion.
- A) limbic system
 - B) reticular activating system
 - C) thalamus
 - D) hypothalamus

138. The main function of the limbic system is to:
- A) pass along sensory information to other brain areas.
 - B) regulate movement and control coordination.
 - C) maintain basic functions necessary for life.
 - D) facilitate motivation and emotion.
139. Which is NOT true about the limbic system? The limbic system:
- A) is surrounded by the thalamus.
 - B) is involved in the production of emotion.
 - C) initiates feelings of motivation.
 - D) includes the amygdala.
140. Fathima suffered damage to her limbic system. She now has difficulty:
- A) walking in a straight line.
 - B) producing speech.
 - C) seeing red light.
 - D) feeling motivated.
141. Recently, one of your favorite artists released a new song. This song is about the happiness and sadness of two people who fell in love but eventually broke up. After taking an introductory psychology course, you know that the feelings described in the song are MOST likely regulated by the:
- A) cerebellum
 - B) thalamus
 - C) limbic system
 - D) reticular activating system
142. Which of these is NOT part of the limbic system?
- A) amygdala
 - B) hippocampus
 - C) thalamus
 - D) hypothalamus
143. What is the main function of the hypothalamus?
- A) maintenance of homeostasis
 - B) formation and storage of memory
 - C) relay of sensory information
 - D) initiation of movement

144. Dante had a stroke that damaged his hypothalamus. He is now unable to:
- A) make new memories.
 - B) regulate his feelings of hunger.
 - C) feel emotions, especially fear.
 - D) engage in fluid movement.
145. The hypothalamus:
- A) is controlled by the pituitary gland.
 - B) influences the autonomic nervous system.
 - C) regulates breathing and movement.
 - D) controls development of new memories.
146. Dr. Lambert studies people who have difficulty judging when they are hungry and when they are full. Dr. Lambert is MOST likely studying the:
- A) cerebellum.
 - B) thalamus.
 - C) hypothalamus.
 - D) hippocampus.
147. The _____ is the part of the limbic system involved in memory, especially spatial memory and long-term memory.
- A) hypothalamus
 - B) amygdala
 - C) hippocampus
 - D) thalamus
148. Kris was in a car accident that damaged his hippocampus. Kris now has significant difficulty:
- A) initiating movement.
 - B) making new memories.
 - C) seeing color.
 - D) feeling hunger or thirst.
149. Severe damage to the hippocampus may result in:
- A) anterograde amnesia.
 - B) Broca's aphasia.
 - C) personality change.
 - D) blindness.

150. Alek recently had a stroke. Although Alek can remember events that happened before his stroke, he cannot form new memories. Alek MOST likely has:
- A) Wernicke's aphasia.
 - B) Broca's aphasia.
 - C) anterograde amnesia.
 - D) receptive aphasia.
151. Which statement about the hippocampus is NOT true?
- A) The hippocampus can be damaged by high levels of stress.
 - B) Long-term use of alcohol can decrease the size of the hippocampus.
 - C) Damage to the hippocampus can result in inability to recall past events.
 - D) The hippocampus is especially important for spatial memory.
152. You are at a furniture store shopping for a new couch. You really like one couch in particular and can picture exactly where in your house it will go best. To do this, you are using a mental map to of your house's layout. The part of the brain that you are MOST relying on to remember the layout of your house is the:
- A) cerebellum.
 - B) thalamus.
 - C) hypothalamus.
 - D) hippocampus.
153. The _____ is the part of the limbic system involved most directly in emotion, especially fear.
- A) hippocampus
 - B) hypothalamus
 - C) amygdala
 - D) thalamus
154. _____ is almost exclusively controlled by the amygdala.
- A) Joy
 - B) Fear
 - C) Disgust
 - D) Sadness

155. Radley was in a car accident and damaged his amygdala. Which outcome would Radley MOST likely experience because of that damage?
- A) difficulty regulating negative emotions
 - B) impaired ability to form new memories
 - C) impaired ability to synthesize and interpret information
 - D) difficulty in the ability to understand speech
156. Which statement about the amygdala is NOT true? The amygdala:
- A) helps to establish long-term memories.
 - B) controls the experience of fear.
 - C) initiates the fight-or-flight response.
 - D) affects the startle reflex.
157. The front and upper part of the brain that is made up of two hemispheres and is involved in complex human abilities is the:
- A) cerebrum.
 - B) brainstem.
 - C) corpus callosum.
 - D) cerebral cortex.
158. The cerebrum is the:
- A) bundle of neurons that connects the two cerebral hemispheres.
 - B) front and upper part of the brain involved in complex human abilities.
 - C) brain material devoted to synthesizing and interpreting information.
 - D) part of the limbic system involved most directly in emotion.
159. Katie's cat Sparklepaws always runs to greet Katie when she comes home. Sparklepaws learned Katie always gives Sparklepaws treats when she comes home. Although Katie thinks that Sparklepaws is very clever, she knows that Sparklepaws is less able to think, plan, and reason than humans because:
- A) cats do not have a corpus callosum.
 - B) humans have larger cerebrums than other animals.
 - C) humans have larger brainstems than other animals.
 - D) cats do not have a frontal lobe.
160. The cerebral cortex is where:
- A) sensory information is processed.
 - B) memories are formed and stored.
 - C) basic vital functions are maintained.
 - D) emotion and motivation is initiated.

161. The cerebrum is divided into two:
- A) lobes.
 - B) hemispheres.
 - C) association areas.
 - D) cortices.
162. You are watching TV with a friend. Your friend asks you for the remote for the TV. You pick up the remote and hand it to your friend with your left hand. The use of your left hand is controlled to complete these actions by the _____ of your brain.
- A) occipital lobe
 - B) right hemisphere
 - C) left hemisphere
 - D) limbic system
163. Zeke is on his school's soccer team. During practice, Zeke and his teammates practice kicking balls into the soccer goal. When Zeke kicks the ball, he always uses his right foot. Zeke's use of his right foot to kick the ball is controlled by the _____ of Zeke's brain.
- A) temporal lobe
 - B) right hemisphere
 - C) left hemisphere
 - D) reticular activating system
164. Joey is a physical therapist. One of her patients has weakness on the left side of their body after suffering a stroke. The patient's stroke MOST likely occurred in the patient's:
- A) reticular activating system.
 - B) left hemisphere.
 - C) right hemisphere.
 - D) parietal lobe.
165. Which statement BEST represents how the cerebral hemispheres operate? The _____ side of the brain controls the _____.
- A) left; right arm and left leg
 - B) left; left arm and left leg
 - C) right; right arm and left leg
 - D) right; left arm and left leg

166. _____ is a specialty of the right hemisphere.
- A) Thinking logically
 - B) Understanding the literal meaning of language
 - C) Understanding things in context
 - D) All-or-none thinking
167. The left hemisphere of the brain specializes in:
- A) understanding the emotional tone of language.
 - B) nuanced, shades-of-gray thinking.
 - C) thinking logically.
 - D) focusing on how things happen.
168. The corpus callosum is responsible for:
- A) synthesizing and interpreting information from the senses.
 - B) connecting and allowing communication between the cerebral hemispheres.
 - C) regulating and maintaining the vital functions necessary for life.
 - D) forming and storing spatial and long-term memories.
169. The _____ connects and facilitates communication between the two cerebral hemispheres.
- A) hypothalamus
 - B) hippocampus
 - C) frontal lobe
 - D) corpus callosum
170. At work, you are responsible for assigning tasks needed to complete various projects your company is handling. When choosing who to assign to a task, you have to consider how the task should be completed in relation to the overall project goal. To assign responsibility, you are using the left and right hemispheres of your brain, which communicate via the:
- A) cerebral cortex.
 - B) parietal lobe.
 - C) association areas.
 - D) corpus callosum.
171. Which brain structure is cut during split-brain surgery?
- A) corpus callosum
 - B) hypothalamus
 - C) brainstem
 - D) amygdala

172. Split-brain surgery is typically used to treat:
- A) paralysis.
 - B) aphasia.
 - C) epilepsy.
 - D) amnesia.
173. A person who has medication-resistant epilepsy may have surgery on their _____ to reduce the number and severity of their seizures.
- A) corpus callosum
 - B) frontal lobe
 - C) cerebellum
 - D) cerebral cortex
174. When she was a teenager, Kathy had brain surgery to reduce the severity and number of epileptic seizures she was having. The part of Kathy's brain that was operated on was MOST likely the:
- A) corpus callosum.
 - B) frontal lobe.
 - C) cerebellum.
 - D) cerebral cortex.
175. If a person's corpus callosum is cut, what is the MOST likely outcome?
- A) decreased amount of epileptic seizures
 - B) decreased ability to make new long-term memories
 - C) increased difficulty in walking and coordination
 - D) increased amount of cognitive processing errors
176. The _____ lobe of the brain is responsible for vision.
- A) frontal
 - B) parietal
 - C) temporal
 - D) occipital

177. Kaden has a brain tumor. Because of the location of the tumor, Kaden has difficulty seeing certain colors and movements. Kaden's tumor is most likely located on his _____ lobe.
- A) frontal
 - B) parietal
 - C) temporal
 - D) occipital
178. The _____ lobe of the brain contains the area responsible for understanding speech.
- A) frontal
 - B) parietal
 - C) temporal
 - D) occipital
179. The area of the brain responsible for understanding speech is:
- A) Broca's area.
 - B) Wernicke's area.
 - C) the occipital lobe.
 - D) the parietal lobe.
180. When he was small, Lucas had a very high fever that caused damage to part of his brain. Since then, Lucas has had difficulty understanding speech. This suggests that the damage to Lucas' brain was MOST likely to the _____ lobe.
- A) frontal
 - B) parietal
 - C) temporal
 - D) occipital
181. Tiana was in an accident that damaged part of her brain. Since the accident, Tiana has difficulty with her perception of sound. Tiana's accident MOST likely affected her _____ lobe.
- A) frontal
 - B) parietal
 - C) temporal
 - D) occipital

182. Impairment in the ability to understand speech is called:
- A) Wernicke's aphasia.
 - B) Broca's aphasia.
 - C) anterograde amnesia.
 - D) expressive aphasia.
183. The area of the brain responsible for understanding speech is:
- A) Broca's area.
 - B) Wernicke's area.
 - C) the occipital lobe.
 - D) the parietal lobe.
184. Wade has difficulty understanding what others are saying and even though Wade can speak, his sentences are often incoherent and make little sense. Wade most likely has _____ aphasia.
- A) Wernicke's
 - B) Broca's
 - C) receptive
 - D) anomic
185. Dr. Ogden works at a Veteran's Administration hospital with veterans who have suffered brain injuries. One of the veterans Dr. Ogden worked with developed problems with processing feelings of pain and temperature. The area of the brain which MOST likely suffered damage was the _____ lobe.
- A) frontal
 - B) parietal
 - C) temporal
 - D) occipital
186. The _____ is a strip of brain matter located in the parietal lobe which is involved in receiving information from the senses.
- A) sensory processing center
 - B) Wernicke's area
 - C) somatosensory cortex
 - D) Broca's area

187. The _____ lobe of the brain is responsible for complex thinking tasks, planning, purposeful actions, and other advanced functions.
- A) frontal
 - B) parietal
 - C) temporal
 - D) occipital
188. The _____ lobe of the brain contains part of the motor cortex responsible for movement.
- A) frontal
 - B) parietal
 - C) temporal
 - D) occipital
189. The _____ is a strip of brain matter in the frontal lobe which is involved in voluntary movement.
- A) motor cortex
 - B) Wernicke's area
 - C) somatosensory cortex
 - D) Broca's area
190. While on Tom's job at a construction site, another worker accidentally dropped a brick on his head. For several months after the accident, Tom had significant trouble with planning, organization, and decision making. Fortunately, Tom recovered most of his functioning although at times he still has minor trouble with these skills. It is MOST likely that the accident affected Tom's _____ lobe.
- A) frontal
 - B) parietal
 - C) temporal
 - D) occipital
191. Impairment in the ability to produce speech is called:
- A) neurogenesis.
 - B) Broca's aphasia.
 - C) anterograde amnesia.
 - D) receptive aphasia.

192. When Matthew tries to speak, he has trouble getting out the words needed to express his thoughts. Matthew MOST likely has:
- A) Wernicke's aphasia.
 - B) Broca's aphasia.
 - C) anterograde amnesia.
 - D) receptive aphasia.
193. Which statement is NOT true about the frontal lobe? The frontal lobe contains:
- A) the motor cortex.
 - B) the somatosensory cortex.
 - C) the areas necessary for executive function.
 - D) Broca's area.
194. _____ is responsible for understanding speech whereas _____ is responsible for producing speech.
- A) The somatosensory cortex; the motor cortex
 - B) The frontal lobe; the temporal lobe
 - C) Wernicke's area; Broca's area
 - D) Broca's area; Wernicke's area
195. The area of the brain that receives information from parts of the body is _____ and the area that sends information to parts of the body is _____.
- A) the frontal lobe; the temporal lobe
 - B) Wernicke's area; Broca's area
 - C) the motor cortex; the somatosensory cortex
 - D) the somatosensory cortex; the motor cortex
196. An association area is:
- A) the bundle of neurons that connects the two cerebral hemispheres.
 - B) the front and upper part of the brain involved in complex human abilities.
 - C) brain material devoted to synthesizing and interpreting information.
 - D) the part of the limbic system involved most directly in emotion.
197. Association areas are found in the:
- A) cerebrum.
 - B) brainstem.
 - C) limbic system.
 - D) cerebellum.

198. Which statement about association areas is false? Association areas:
- A) are where information is integrated.
 - B) do more than just take in information.
 - C) process individual bits of information.
 - D) are spread across the cerebrum.
199. Which statement about association areas is true? Association areas:
- A) break down information into individual components.
 - B) send individual components of information to parts of the brain.
 - C) synthesize the meaning of information.
 - D) are spread across the brainstem.
200. A part of the brain that is devoted to both synthesizing and assigning meaning to information is:
- A) an association area.
 - B) the somatosensory cortex.
 - C) Wernicke's area.
 - D) Broca's area.
201. Which function would be performed by an association area?
- A) perceiving the sound that a baby is crying
 - B) moving your head away from an oncoming ball
 - C) feeling hungry after going a day without food
 - D) understanding to pick up the phone when it rings
202. The ability of the brain to adapt its structure and function in response to damage or experience is called:
- A) reuptake.
 - B) plasticity.
 - C) aphasia.
 - D) localization.
203. Plasticity is the ability of the brain to:
- A) adapt its structure and function in response to damage or experience.
 - B) recycle neurotransmitters back to the neuron that released it.
 - C) synthesize and interpret information rather than merely take it in.
 - D) send information from one neuron to the next in line.

204. Which statement about plasticity is false? Plasticity:
- A) occurs primarily in the frontal cortex.
 - B) occurs more in young people.
 - C) is an adaptation of structure and/or function.
 - D) involves neurogenesis.
205. Neurogenesis is the:
- A) creation of new neurons.
 - B) crossing of the synapse by neurotransmitters.
 - C) revision of the purpose of existing neurons.
 - D) result of damage to Wernicke's area.
206. _____ is the creation of new neurons.
- A) Reuptake
 - B) Localization
 - C) Neurogenesis
 - D) Specialization
207. Stem cells are:
- A) unspecialized cells.
 - B) cells created during neurogenesis.
 - C) cells damaged by strokes.
 - D) specialized cells.
208. Cells that do not yet have a specialized structure or function are:
- A) glial cells.
 - B) interneurons.
 - C) stem cells.
 - D) brain cells.
209. Sydney is a sculptor whose medium is clay. When starting a project, Sydney uses a lump of clay which can be molded into any type of shape she wants. What the lump of clay eventually becomes is based on what Sydney needs to make for her customers. The lump of clay Sydney uses is MOST similar in function to:
- A) glial cells.
 - B) interneurons.
 - C) stem cells.
 - D) somatosensory cortex cells.

210. Which is NOT an example of plasticity?
- A) a larger than usual amount of the somatosensory cortex dedicated to the hand and fingers in a person with a visual disability
 - B) a larger than usual amount of the motor cortex dedicated to the forelimbs of rats without whiskers
 - C) increased motivation by the limbic system to seek food when a person is hungry
 - D) change in the limbic system of a person with a phobia after undergoing psychotherapy
211. While fixing the electrical system in his house, Bruce accidentally shocked himself. This caused him to fall and hit his head. When he fell, Bruce sustained permanent damage to parts of his brain. Over time, other areas of Bruce's brain partially took over the function of the damaged areas. This is an example of the concept of:
- A) split-brain function.
 - B) plasticity.
 - C) localization.
 - D) myelination.
212. The _____ consists of the full set of nerves that connect the brain with all other parts of the body.
- A) corpus callosum
 - B) nervous system
 - C) central nervous system
 - D) cerebral cortex
213. The nervous system is BEST defined as the nerves which:
- A) connect the central nervous system to the parts of the body controlled voluntarily.
 - B) stimulate the body in response to stressors.
 - C) connect the brain with all other parts of the body.
 - D) calm the body after exposure to stressors.
214. At a local hospital, all patients with cardiac issues are housed on one floor of the hospital. On this floor is a nurses' station which is connected to each patient room. From their station, the nurses can send and receive messages from patients as well as control the equipment in the patients' rooms. The nurses' station on this floor would be MOST comparable to which part of the human body?
- A) corpus callosum
 - B) nervous system
 - C) central nervous system
 - D) cerebral cortex

215. Dr. Browne is a neuropsychologist who studies the functioning of the human brain. Although Dr. Browne is interested in all parts of the brain, his area of interest is primarily the _____, which consists of the full set of nerves that connect the brain with all other parts of the body.
- A) corpus callosum
 - B) central nervous system
 - C) cerebral cortex
 - D) nervous system
216. The nervous system:
- A) connects your brain to all parts of your body.
 - B) controls only voluntary movement.
 - C) regulates only involuntary movement.
 - D) stimulates the body in response to stressors.
217. Which statement about the nervous system is NOT true? The nervous system:
- A) connects your brain to all parts of your body.
 - B) is made up of neurons.
 - C) sends and receives messages from all over your body.
 - D) sends hormones through the body.
218. The _____ nervous system is made up of the brain and the spinal cord.
- A) central
 - B) peripheral
 - C) autonomic
 - D) parasympathetic
219. The central nervous system:
- A) connects your brain to all parts of your body.
 - B) is made up of the brain and the spinal cord.
 - C) regulates only the parts of the body controlled voluntarily.
 - D) stimulates the body in response to stressors

220. In the early days of the telephone, all calls were routed through a switchboard. The switchboard was controlled by an operator. The operator connected the incoming calls to their intended location via telephone wires. The part of the body that operates MOST similarly to this method of communication is the:
- A) brainstem.
 - B) corpus callosum.
 - C) peripheral nervous system.
 - D) central nervous system.
221. A researcher who studies how communication is controlled by the brain and the spinal cord is focusing on the _____ nervous system.
- A) central
 - B) peripheral
 - C) autonomic
 - D) somatic
222. The _____ is made up of the neurons that connect the central nervous system to other parts of the body.
- A) central nervous system
 - B) peripheral nervous system
 - C) reticular activating system
 - D) endocrine system
223. The peripheral nervous system:
- A) connects your brain to all parts of your body.
 - B) regulates only the parts of the body controlled involuntarily.
 - C) regulates only the parts of the body controlled voluntarily.
 - D) connects the central nervous system to other parts of the body.
224. The _____ nervous system connects the central nervous system to the parts of the body that are controlled voluntarily.
- A) somatic
 - B) autonomic
 - C) parasympathetic
 - D) sympathetic

225. The somatic nervous system:
- A) connects the central nervous system to the parts of the body that are controlled voluntarily.
 - B) connects the central nervous system to the parts of the body that are controlled involuntarily.
 - C) consists of the brain and the spinal cord.
 - D) calms the body down when stressors decrease.
226. If you were to reach out and turn off the light in your room, this would be controlled by the _____ nervous system.
- A) somatic
 - B) autonomic
 - C) parasympathetic
 - D) sympathetic
227. Dr. Miin is a sport psychologist. She is interested in improving the performance of elite tennis players. Dr. Miin helps players to improve actions such as their backhand and their serve. Dr. Miin is concentrating on the athlete's actions that are controlled by the:
- A) autonomic nervous system.
 - B) sympathetic division.
 - C) parasympathetic division.
 - D) somatic nervous system.
228. The _____ connects the central nervous system to the parts of the body controlled involuntarily.
- A) central nervous system
 - B) peripheral nervous system
 - C) reticular activating system
 - D) endocrine system
229. The autonomic nervous system:
- A) connects the central nervous system to the parts of the body that are controlled voluntarily.
 - B) connects the central nervous system to the parts of the body that are controlled involuntarily.
 - C) consists of the brain and the spinal cord.
 - D) regulates all communication with the brain.

230. Which statement about the autonomic nervous system is NOT true? The autonomic nervous system:
- A) is part of the peripheral nervous system.
 - B) is separated into two divisions.
 - C) includes the brain and spinal cord.
 - D) controls involuntary movement.
231. Which of the following is not controlled by the autonomic nervous system?
- A) hiccupping
 - B) walking
 - C) sneezing
 - D) breathing
232. After you eat, your body works to digest your food. The part of the nervous system that is responsible for your digestion is the:
- A) sympathetic division.
 - B) autonomic nervous system.
 - C) parasympathetic division.
 - D) somatic nervous system.
233. Dr. Gould is the doctor for a college football team. Before members of the team are given permission to play, Dr. Gould conducts a physical examination. Part of Dr. Gould's examination involves checking players' heartbeat, pulse, and blood pressure, which are controlled by the:
- A) autonomic nervous system.
 - B) central nervous system.
 - C) endocrine system.
 - D) somatic nervous system.
234. The autonomic nervous system is responsible for _____, whereas the somatic nervous system is responsible for _____.
- A) stimulating the body in response to stressors; calming the body when stressors decrease
 - B) voluntary movement; involuntary movement
 - C) involuntary movement; voluntary movement
 - D) calming the body when stressors decrease; stimulating the body in response to stressors

235. The _____ is the part of the autonomic nervous system that stimulates the body in response to stressors.
- A) somatic nervous system
 - B) sympathetic division
 - C) parasympathetic division
 - D) central nervous system
236. One day you are sitting in the library studying when your friend unexpectedly taps your shoulder. This startles you and causes you to jump although you quickly calm down when you see who it is. Which of your behaviors was controlled by the sympathetic division of your autonomic nervous system?
- A) sitting
 - B) studying
 - C) jumping
 - D) becoming calm
237. A large dog runs towards you, and your heart and breathing rates increase. Which division of your autonomic nervous system has been activated?
- A) somatic
 - B) central
 - C) sympathetic
 - D) parasympathetic
238. The _____ is the part of the autonomic nervous system that calms the body once a stressor has been removed.
- A) somatic nervous system
 - B) sympathetic division
 - C) parasympathetic division
 - D) central nervous system
239. One day your friend is sitting in the library studying when you unexpectedly tap them on the shoulder. This startles your friend and causes them to jump although they quickly calm down when they see who it is. Which of your friend's behaviors was controlled by the parasympathetic division of their autonomic nervous system?
- A) sitting
 - B) studying
 - C) jumping
 - D) becoming calm

240. When you were driving to school, another car pulled out in front of you unexpectedly. At first you were startled, but then became calm when the other car moved out of your way. The part of your autonomic nervous system that was responsible for you calming down was the:
- A) somatic nervous system.
 - B) sympathetic division.
 - C) parasympathetic division.
 - D) central nervous system.
241. You just came home after a long day in class and put your feet up on the couch. Soon, your heart and breathing rates decreased. Which division of your autonomic nervous system was active while you relaxed?
- A) peripheral
 - B) central
 - C) sympathetic
 - D) parasympathetic
242. The _____ is made up of the glands which send hormones throughout the body via the bloodstream.
- A) sympathetic division
 - B) parasympathetic division
 - C) peripheral nervous system
 - D) endocrine system
243. The endocrine system:
- A) sends hormones throughout the body.
 - B) breaks down into the parasympathetic and sympathetic divisions.
 - C) specifically controls voluntary movement.
 - D) consists of the brain and spinal cord.
244. Which statement about the endocrine systems is NOT true? The endocrine system:
- A) is made up of many glands.
 - B) sends hormones through the blood.
 - C) operates as quickly as the nervous system.
 - D) influences sexual development.

245. The chemicals made by the glands of the endocrine system are called:
- A) neurotransmitters.
 - B) hormones.
 - C) agonists.
 - D) antagonists.
246. Hormones are:
- A) signaling chemicals made by the endocrine system.
 - B) what neurotransmitters are called after reuptake.
 - C) synonymous with action potentials.
 - D) support materials made by glial cells.
247. Max sent a wedding invitation to his friend Brenda, which took three days to reach her. When she received the invitation, Brenda texted Max to say she would attend his wedding. Max received the text almost immediately after Brenda sent it. In this example, Max's approach to communication is similar to the _____ and Brenda's is similar to the _____.
- A) central nervous system; peripheral nervous system
 - B) peripheral nervous system; central nervous system
 - C) nervous system; endocrine system
 - D) endocrine system; nervous system
248. The _____ glands are located on top of the kidneys and produce hormones to arouse the body in response to stress.
- A) thyroid
 - B) pineal
 - C) adrenal
 - D) pituitary
249. Sharon often feels stressed. The gland that is MOST likely for Sharon's stress is the:
- A) pituitary.
 - B) pineal.
 - C) thyroid.
 - D) adrenal.
250. The _____ glands produce adrenaline and the “stress hormone” cortisol.
- A) adrenal
 - B) pituitary
 - C) pineal
 - D) thyroid

251. The _____ gland plays an important role in sleeping and waking.
- A) adrenal
 - B) pituitary
 - C) pineal
 - D) thyroid
252. Anthony is having trouble staying asleep at night and waking up in the morning. The gland that is MOST likely affecting Anthony's sleep is the _____ gland.
- A) adrenal
 - B) pituitary
 - C) pineal
 - D) thyroid
253. Garret has gained a lot of weight despite no change in his diet or activity level. Garret is concerned because in addition to his unusual weight gain, his blood pressure is fluctuating. Garret plans to see his doctor because he suspects that his _____ gland is not working properly.
- A) adrenal
 - B) pituitary
 - C) pineal
 - D) thyroid
254. The _____ gland plays an important role in sleeping and waking, whereas the _____ gland influences metabolism, blood pressure, and body temperature.
- A) pineal; thyroid
 - B) pituitary; adrenal
 - C) adrenal; pituitary
 - D) thyroid; pineal
255. The _____ gland is considered the “master gland” of the endocrine system.
- A) adrenal
 - B) pituitary
 - C) pineal
 - D) thyroid

256. The _____ gland produces human growth hormone and also controls all of the other glands in the body.
- A) adrenal
 - B) pituitary
 - C) pineal
 - D) thyroid
257. If a person has below expected growth during childhood, their doctor may suspect that their _____ gland is not functioning properly.
- A) pituitary
 - B) adrenal
 - C) pineal
 - D) thyroid
258. The supervisor at a fast food restaurant controls the schedule and tasks assigned to employees. This supervisor is functioning MOST similarly to the _____ gland.
- A) adrenal
 - B) pineal
 - C) pituitary
 - D) thyroid
259. _____ is a technique in which sensors are placed on the scalp to record activity in the brain.
- A) Electroencephalography
 - B) Computed tomography
 - C) Magnetic resonance imaging
 - D) Positron emission tomography
260. _____ measures the difference in the activity of neurons between two points on the brain via sensors placed on the scalp.
- A) Computed tomography
 - B) Electroencephalography
 - C) Magnetic resonance imaging
 - D) Positron emission tomography
261. _____ is best suited for assessing seizure-based disorders like epilepsy.
- A) Computed tomography
 - B) Magnetic resonance imaging
 - C) Electroencephalography
 - D) Positron emission tomography

262. Which technique would NOT be suited for assessing damaged brain tissue or larger-than-normal spaces in the brain?
- A) Computed tomography
 - B) Magnetic resonance imaging
 - C) Positron emission tomography
 - D) Electroencephalography
263. Which technique does NOT produce a picture of the brain?
- A) Electroencephalography
 - B) Computed tomography
 - C) Magnetic resonance imaging
 - D) Positron emission tomography
264. _____ produces images of the brain whereas _____ does not.
- A) Electroencephalography; computed tomography
 - B) Computed tomography; electroencephalography
 - C) Magnetic resonance imaging; positron emission tomography
 - D) Positron emission tomography; magnetic resonance imaging
265. _____ is a technique in which multiple x-rays are combined to make a 3D image of the brain.
- A) Electroencephalography
 - B) Computed tomography
 - C) Magnetic resonance imaging
 - D) Positron emission tomography
266. The first brain imaging procedure developed that allowed psychologists to detect brain lesions and other diseases was:
- A) electroencephalography
 - B) computed tomography
 - C) magnetic resonance imaging
 - D) positron emission tomography
267. Computed tomography takes _____ time than magnetic resonance imaging and produces brain images with _____ resolution.
- A) more; higher
 - B) more; lower
 - C) less; higher
 - D) less; lower

268. The _____ technique uses x-rays whereas the _____ technique uses magnetic fields and radio waves to image the brain.
- A) MRI; CT
 - B) MRI; PET
 - C) PET; MRI
 - D) CT; MRI
269. _____ is a technique in which magnetic fields and radio waves are used to make images of brain structure.
- A) EEG
 - B) CT
 - C) MRI
 - D) PET
270. _____ is a technique in which activity in various brain structures is illustrated by a radioactive sugar injected into the body.
- A) Electroencephalography
 - B) Computed tomography
 - C) Magnetic resonance imaging
 - D) Positron emission tomography
271. Which technique is best suited for making connections between particular activities and specific parts of the brains?
- A) electroencephalography
 - B) computed tomography
 - C) positron emission tomography
 - D) magnetic resonance imaging
272. _____ and _____ are techniques that show both brain activity and the location of parts of the brain.
- A) EEG; CT
 - B) fMRI; PET
 - C) PET; EEG
 - D) fMRI; CT

273. _____ is a technique in which magnetic fields are used to make images of brain activity.

- A) EEG
- B) CT
- C) fMRI
- D) PET

274. What is NOT a limitation of functional magnetic resonance imaging?

- A) The fMRI technique has poor resolution in comparison to other techniques.
- B) Research using fMRI is more exploratory than hypothesis-based
- C) Many fMRI results are not stable across time and/or are due to chance
- D) Conclusions from fMRI results are often exaggerated and oversimplified

Answer Key

1. A
2. C
3. B
4. A
5. A
6. B
7. A
8. B
9. C
10. D
11. A
12. B
13. C
14. B
15. A
16. A
17. B
18. B
19. A
20. B
21. C
22. B
23. C
24. A
25. C
26. A
27. D
28. C
29. B
30. C
31. A
32. A
33. D
34. D
35. B
36. B
37. A
38. B
39. A
40. B
41. D
42. D
43. D
44. D

45. C
46. A
47. C
48. D
49. A
50. D
51. C
52. C
53. A
54. C
55. A
56. D
57. C
58. C
59. C
60. B
61. C
62. B
63. C
64. B
65. C
66. D
67. B
68. A
69. D
70. D
71. C
72. C
73. B
74. B
75. B
76. D
77. D
78. B
79. A
80. B
81. A
82. C
83. B
84. C
85. B
86. B
87. A
88. A
89. C
90. A

- 91. B
- 92. A
- 93. B
- 94. A
- 95. D
- 96. C
- 97. D
- 98. A
- 99. A
- 100. C
- 101. A
- 102. A
- 103. A
- 104. A
- 105. B
- 106. D
- 107. C
- 108. C
- 109. C
- 110. B
- 111. A
- 112. B
- 113. A
- 114. D
- 115. B
- 116. B
- 117. C
- 118. C
- 119. C
- 120. D
- 121. D
- 122. D
- 123. C
- 124. B
- 125. C
- 126. D
- 127. A
- 128. B
- 129. C
- 130. B
- 131. A
- 132. D
- 133. D
- 134. B
- 135. C
- 136. C

- 137. A
- 138. D
- 139. A
- 140. D
- 141. C
- 142. C
- 143. A
- 144. B
- 145. B
- 146. C
- 147. C
- 148. B
- 149. A
- 150. C
- 151. C
- 152. D
- 153. C
- 154. B
- 155. A
- 156. A
- 157. A
- 158. B
- 159. B
- 160. A
- 161. B
- 162. B
- 163. C
- 164. C
- 165. D
- 166. C
- 167. C
- 168. B
- 169. D
- 170. D
- 171. A
- 172. C
- 173. A
- 174. A
- 175. A
- 176. D
- 177. D
- 178. C
- 179. B
- 180. C
- 181. C
- 182. A

- 183. B
- 184. A
- 185. B
- 186. C
- 187. A
- 188. A
- 189. A
- 190. A
- 191. B
- 192. B
- 193. B
- 194. C
- 195. D
- 196. C
- 197. A
- 198. C
- 199. C
- 200. A
- 201. D
- 202. B
- 203. A
- 204. A
- 205. A
- 206. C
- 207. A
- 208. C
- 209. C
- 210. C
- 211. B
- 212. B
- 213. C
- 214. B
- 215. D
- 216. A
- 217. D
- 218. A
- 219. B
- 220. D
- 221. A
- 222. B
- 223. D
- 224. A
- 225. A
- 226. A
- 227. D
- 228. B

- 229. B
- 230. C
- 231. B
- 232. B
- 233. A
- 234. C
- 235. B
- 236. C
- 237. C
- 238. C
- 239. D
- 240. C
- 241. D
- 242. D
- 243. A
- 244. C
- 245. B
- 246. A
- 247. D
- 248. C
- 249. D
- 250. A
- 251. C
- 252. C
- 253. D
- 254. A
- 255. B
- 256. B
- 257. A
- 258. C
- 259. A
- 260. B
- 261. C
- 262. D
- 263. A
- 264. B
- 265. B
- 266. B
- 267. D
- 268. D
- 269. C
- 270. D
- 271. C
- 272. B
- 273. C
- 274. A

