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| 1. The central principle to today’s psychology is that   |  |  |  | | --- | --- | --- | |  | a. | how we develop is determined only by our biology. | |  | b. | nature dominates nurture. | |  | c. | everything psychological is simultaneously biological. | |  | d. | nature and nurture do not interact. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 2. The ancient Greek physician Hippocrates located the mind in the   |  |  |  | | --- | --- | --- | |  | a. | brain. | |  | b. | heart. | |  | c. | stomach. | |  | d. | thyroid gland. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 3. Who proposed that phrenology could reveal mental abilities and character traits?   |  |  |  | | --- | --- | --- | |  | a. | Franz Gall | |  | b. | Marian Diamond | |  | c. | Aristotle | |  | d. | Daniel Kish |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 4. Phrenology highlighted the presumed functions of   |  |  |  | | --- | --- | --- | |  | a. | specific brain regions. | |  | b. | synaptic gaps. | |  | c. | endorphins. | |  | d. | the myelin sheath. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 5. The person most likely to suggest that the shape of a person's skull indicates the extent to which that individual is argumentative and aggressive would be a   |  |  |  | | --- | --- | --- | |  | a. | neurologist. | |  | b. | behavior geneticist. | |  | c. | biopsychologist. | |  | d. | phrenologist. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 6. Although phrenology incorrectly suggested that bumps on the skull revealed a person's character traits, phrenology did succeed in focusing attention on   |  |  |  | | --- | --- | --- | |  | a. | synaptic gaps. | |  | b. | action potentials. | |  | c. | the localization of function. | |  | d. | endorphins. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 7. The study of the links between biological and behavioral processes is called   |  |  |  | | --- | --- | --- | |  | a. | neurology. | |  | b. | neuroplasticity. | |  | c. | endocrinology. | |  | d. | biological psychology. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 8. Dr. Keo conducts research on the relationship between hormone levels and aggressive behaviors. Dr. Keo’s research focus is most characteristic of   |  |  |  | | --- | --- | --- | |  | a. | phrenology. | |  | b. | biological psychology. | |  | c. | neurology. | |  | d. | cognitive psychology. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 9. A biological psychologist would be most interested in conducting research on the relationship between   |  |  |  | | --- | --- | --- | |  | a. | neurotransmitters and depression. | |  | b. | age and bone density. | |  | c. | self-esteem and popularity. | |  | d. | genetics and eye color. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 10. We live in a family that resides in a community that is part of a larger society. This demonstrates that we are   |  |  |  | | --- | --- | --- | |  | a. | biological systems. | |  | b. | impressionable systems. | |  | c. | neurological systems. | |  | d. | biopsychosocial systems. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 11. Professor Miranda studies how evolution, culture, and daily experiences influence human behavior. He is applying   |  |  |  | | --- | --- | --- | |  | a. | the biopsychosocial approach. | |  | b. | the localization of function. | |  | c. | phrenology. | |  | d. | neuroplasticity. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 12. The capacity of a brain area to develop new neural pathways as it adjusts to good and bad experiences is known as   |  |  |  | | --- | --- | --- | |  | a. | phrenology. | |  | b. | dendrites. | |  | c. | an action potential. | |  | d. | neuroplasticity. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 13. Neuroplasticity refers to the brain's ability to change by reorganizing after damage or building new neural pathways based on   |  |  |  | | --- | --- | --- | |  | a. | refractory periods. | |  | b. | localization of function. | |  | c. | experience. | |  | d. | reuptake. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 14. Many years of intensive gymnastics practice have led to changes in Allysa’s motor cortex that enable her to perform routines requiring greater levels of skill. This best illustrates the value of   |  |  |  | | --- | --- | --- | |  | a. | reuptake. | |  | b. | echolocation. | |  | c. | neuroplasticity. | |  | d. | localization of function. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 15. Although Ray lost some manual dexterity following brain damage from a small stroke, the development of new neural pathways enabled him to regain most of the manual agility lost during the stroke. This best illustrates the value of   |  |  |  | | --- | --- | --- | |  | a. | action potentials. | |  | b. | phrenology. | |  | c. | neuroplasticity. | |  | d. | depolarization. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 16. Blind echolocation experts such as Daniel Kish, who use the brain's visual centers to navigate their surroundings, demonstrate the value of   |  |  |  | | --- | --- | --- | |  | a. | neuroplasticity. | |  | b. | reuptake. | |  | c. | endorphins. | |  | d. | refractory periods. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 17. London’s taxi drivers, who spend years learning all the city’s 25,000 street locations and connections, have been found to have \_\_\_\_\_\_\_\_, as compared with London’s bus drivers, who learn fewer roads.   |  |  |  | | --- | --- | --- | |  | a. | enlarged neurons | |  | b. | an enlarged hippocampus | |  | c. | enlarged dendrites | |  | d. | enlarged glial cells |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 18. Non-piano-playing participants in one study spent 45 minutes learning how to play the piano. As a result,   |  |  |  | | --- | --- | --- | |  | a. | they experienced growth in their motor learning-related brain areas. | |  | b. | they were able to smell a rose 50 feet away. | |  | c. | their neurons grew new dendrites. | |  | d. | their synapses grew wider. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 19. Spending one hour learning a new skill has been shown to   |  |  |  | | --- | --- | --- | |  | a. | have no detectable neural benefits. | |  | b. | produce subtle changes in the brain. | |  | c. | enlarge the hippocampus. | |  | d. | enable greater neural benefits than intensive practice. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 20. Neurons are best described as   |  |  |  | | --- | --- | --- | |  | a. | positively charged sodium and potassium ions. | |  | b. | chemical molecules that cross the synaptic gap. | |  | c. | nerve cells that function as the building blocks of the nervous system. | |  | d. | bundled axon cables that connect the CNS with muscles, glands, and sense organs. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 21. The part of the neuron that contains the nucleus is called the   |  |  |  | | --- | --- | --- | |  | a. | cell body. | |  | b. | dendrite. | |  | c. | axon. | |  | d. | myelin sheath. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 22. Dendrites are branching extensions of   |  |  |  | | --- | --- | --- | |  | a. | neurotransmitters. | |  | b. | endorphins. | |  | c. | neurons. | |  | d. | glial cells. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 23. The function of dendrites is to   |  |  |  | | --- | --- | --- | |  | a. | receive incoming signals from other neurons. | |  | b. | release neurotransmitters into the spatial junctions between neurons. | |  | c. | coordinate the activation of the parasympathetic and sympathetic nervous systems. | |  | d. | control pain through the release of opiate-like chemicals into the brain. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 24. An axon is   |  |  |  | | --- | --- | --- | |  | a. | a cell that serves as the basic building block of the nervous system. | |  | b. | a layer of fatty tissue that encases the fibers of many neurons. | |  | c. | a molecule that blocks neurotransmitter receptor sites. | |  | d. | the extension of a neuron that carries messages away from the cell body. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 25. Dendrite is to \_\_\_\_\_\_\_\_ as axon is to \_\_\_\_\_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | sensory neuron; motor neuron | |  | b. | sodium ion; potassium ion | |  | c. | signal reception; signal transmission | |  | d. | central nervous system; peripheral nervous system |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 26. In transmitting sensory information to the brain, an electrical signal travels from the \_\_\_\_\_\_\_\_ of a single neuron.   |  |  |  | | --- | --- | --- | |  | a. | dendrites to the axon to the cell body | |  | b. | axon to the cell body to the dendrites | |  | c. | dendrites to the cell body to the axon | |  | d. | axon to the dendrites to the cell body |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 27. The longest part of a motor neuron is likely to be the   |  |  |  | | --- | --- | --- | |  | a. | dendrite. | |  | b. | axon. | |  | c. | cell body. | |  | d. | synapse. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 28. A myelin sheath is a   |  |  |  | | --- | --- | --- | |  | a. | nerve network within the spinal cord that controls physical arousal. | |  | b. | large band of neural fibers connecting the two adrenal glands. | |  | c. | layer of fatty tissue encasing the axons of some nerve cells. | |  | d. | bushy extension of a neuron that conducts impulses toward the cell body. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 29. The speed at which a neural impulse travels is increased when the axon is encased by a(n)   |  |  |  | | --- | --- | --- | |  | a. | endorphin. | |  | b. | myelin sheath. | |  | c. | glial cell. | |  | d. | synaptic vesicle. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 30. Degeneration of the myelin sheath results in   |  |  |  | | --- | --- | --- | |  | a. | reuptake. | |  | b. | multiple sclerosis. | |  | c. | the fight-or-flight response. | |  | d. | an action potential. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 31. Andres has experienced increasing difficulties with muscle control and impaired cognition, which the doctor has diagnosed as multiple sclerosis. These symptoms are most likely to be directly linked with the degeneration of   |  |  |  | | --- | --- | --- | |  | a. | endorphins. | |  | b. | synaptic gaps. | |  | c. | the pituitary gland. | |  | d. | the myelin sheath. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 32. Clay is suffering from a disorder in which communication to muscles and brain regions slow down. Diminished muscle control and impaired cognition are also related to the disorder. Which disorder might he be experiencing?   |  |  |  | | --- | --- | --- | |  | a. | multiple sclerosis | |  | b. | depression | |  | c. | paralysis | |  | d. | Parkinson’s disease |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 33. Queen bees are to \_\_\_\_\_\_\_\_ as worker bees are to \_\_\_\_\_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | neurons; glial cells | |  | b. | cell bodies; dendrites | |  | c. | axons; glial cells | |  | d. | dendrites; axons |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 34. Neurons are surrounded by \_\_\_\_\_\_\_\_, which provide nutrients, guide neural connections, and clean up after neurons send messages to one another.   |  |  |  | | --- | --- | --- | |  | a. | endorphins | |  | b. | glial cells | |  | c. | hormones | |  | d. | agonists |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 35. One function of glial cells is to   |  |  |  | | --- | --- | --- | |  | a. | increase the speed of neural impulses. | |  | b. | mimic the effects of neurotransmitters. | |  | c. | provide nutrients to neurons. | |  | d. | stimulate the production of hormones. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 36. Glial cells provide \_\_\_\_\_\_\_\_, the layer of fatty tissue that insulates some neurons.   |  |  |  | | --- | --- | --- | |  | a. | synapses | |  | b. | myelin | |  | c. | dendrites | |  | d. | axons |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 37. Which brain cells play a role in learning, thinking, and memory by communicating with neurons?   |  |  |  | | --- | --- | --- | |  | a. | endorphins | |  | b. | glial cells | |  | c. | agonists | |  | d. | myelin cells |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 38. In more complex animal brains, the proportion of \_\_\_\_\_\_\_\_ increases.   |  |  |  | | --- | --- | --- | |  | a. | glutamate to dopamine | |  | b. | dendrites to axons | |  | c. | glia to neurons | |  | d. | synapses to neurotransmitters |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 39. Action potentials, or nerve impulses, are   |  |  |  | | --- | --- | --- | |  | a. | chemical messengers. | |  | b. | hormones. | |  | c. | dendrites. | |  | d. | electrical signals. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 40. A brief electrical charge that travels down the axon of a neuron is called the   |  |  |  | | --- | --- | --- | |  | a. | synapse. | |  | b. | agonist. | |  | c. | action potential. | |  | d. | refractory period. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 41. Compared to humans, computers more readily perform some tasks requiring great speed. This is because even the top speed of a neural impulse is about \_\_\_\_\_\_\_\_ times slower than the speed of electricity through a wire.   |  |  |  | | --- | --- | --- | |  | a. | 3 hundred | |  | b. | 3 thousand | |  | c. | 3 hundred thousand | |  | d. | 3 million |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 42. When comparing brain activity to computer activity, we can say that   |  |  |  | | --- | --- | --- | |  | a. | the brain is more complex than a computer, but it is slower at executing simple responses. | |  | b. | a computer is more complex than the brain, and it is faster at executing simple responses. | |  | c. | computers and brains are equally complex, but the brain is faster at executing simple responses. | |  | d. | computers and brains have similar complexity and response speeds. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 43. An ion is a(n)   |  |  |  | | --- | --- | --- | |  | a. | nerve cell. | |  | b. | layer of fatty tissue that insulates axons and speeds their impulses. | |  | c. | cell that provides nutrients. | |  | d. | electrically charged atom. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 44. Neurons generate electricity from a chemical process involving the exchange of   |  |  |  | | --- | --- | --- | |  | a. | ions. | |  | b. | enzymes. | |  | c. | cortisol. | |  | d. | oxytocin. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 45. An action potential is generated by the movement of \_\_\_\_\_\_\_\_ through an axon membrane.   |  |  |  | | --- | --- | --- | |  | a. | glial cells | |  | b. | glands | |  | c. | neurotransmitters | |  | d. | ions |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 46. Before an action potential, positively charged sodium ions are found in the fluid   |  |  |  | | --- | --- | --- | |  | a. | inside a dendrite. | |  | b. | outside an axon’s membrane. | |  | c. | in the cell body. | |  | d. | inside glial cells. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 47. A resting axon's fluid interior has a mostly negative charge thanks to the presence of large \_\_\_\_\_\_\_\_ ions.   |  |  |  | | --- | --- | --- | |  | a. | sodium | |  | b. | serotonin | |  | c. | protein | |  | d. | dopamine |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 48. A resting axon's fluid interior contains both large, negatively charged \_\_\_\_\_\_\_\_ ions and smaller, positively charged \_\_\_\_\_\_\_\_ ions.   |  |  |  | | --- | --- | --- | |  | a. | potassium; sodium | |  | b. | sodium; protein | |  | c. | potassium; protein | |  | d. | protein; potassium |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 49. The fluid outside a resting axon’s membrane contains mostly   |  |  |  | | --- | --- | --- | |  | a. | positively charged potassium ions. | |  | b. | positively charged sodium ions. | |  | c. | negatively charged protein ions. | |  | d. | large, negatively charged protein ions and small, positively charged potassium ions. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 50. The resting potential of an axon results from the fact that the axon's surface is   |  |  |  | | --- | --- | --- | |  | a. | encased by a myelin sheath. | |  | b. | selectively permeable. | |  | c. | sensitive to neurotransmitter molecules. | |  | d. | part of a larger neural network. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 51. A state in which the fluid outside an axon has a mostly positive charge and the fluid inside the axon has a mostly negative charge is called   |  |  |  | | --- | --- | --- | |  | a. | the action potential. | |  | b. | the resting potential. | |  | c. | the refractory period. | |  | d. | depolarization. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 52. The fact that only positively charged sodium ions enter the neuron when it fires demonstrates that neurons are   |  |  |  | | --- | --- | --- | |  | a. | resting. | |  | b. | selectively permeable. | |  | c. | depolarized. | |  | d. | inhibitory. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 53. The depolarization of a neural membrane creates a(n)   |  |  |  | | --- | --- | --- | |  | a. | action potential. | |  | b. | myelin sheath. | |  | c. | neural network. | |  | d. | interneuron. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 54. The loss of the inside/outside electrical charge difference is called   |  |  |  | | --- | --- | --- | |  | a. | selective permeability. | |  | b. | a resting potential. | |  | c. | depolarization. | |  | d. | an action potential. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 55. An action potential involves the temporary \_\_\_\_\_\_\_\_ through an axon membrane.   |  |  |  | | --- | --- | --- | |  | a. | inflow of positively charged ions | |  | b. | inflow of negatively charged ions | |  | c. | outflow of positively charged ions | |  | d. | outflow of negatively charged ions |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 56. An action potential would be triggered if neuron stimulation caused the electrical charge to go above which threshold?   |  |  |  | | --- | --- | --- | |  | a. | +40 mV | |  | b. | –55 mV | |  | c. | –70 mV | |  | d. | +20 mV |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 57. As positively charged sodium ions enter the axon, \_\_\_\_\_\_\_\_ flow(s) out to repolarize part of the axon.   |  |  |  | | --- | --- | --- | |  | a. | the action potential | |  | b. | potassium ions | |  | c. | a neural impulse | |  | d. | glial cells |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 58. Following depolarization, the sodium/potassium pump transports \_\_\_\_\_\_\_\_ ions \_\_\_\_\_\_\_\_ a neuron.   |  |  |  | | --- | --- | --- | |  | a. | positively charged; into | |  | b. | negatively charged; into | |  | c. | positively charged; out of | |  | d. | negatively charged; out of |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 59. Most signals that neurons receive from other neurons are \_\_\_\_\_\_\_\_, speeding up the neuron; some, however, are \_\_\_\_\_\_\_\_, slowing it down.   |  |  |  | | --- | --- | --- | |  | a. | refractory; reuptake | |  | b. | reuptake; refractory | |  | c. | inhibitory; excitatory | |  | d. | excitatory; inhibitory |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 60. The signals that a neuron receives are   |  |  |  | | --- | --- | --- | |  | a. | always excitatory. | |  | b. | always inhibitory. | |  | c. | mostly excitatory and sometimes inhibitory. | |  | d. | never excitatory nor inhibitory. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 61. An electrical current traveling down a wire is to \_\_\_\_\_\_\_\_ as an electrical current not moving is to \_\_\_\_\_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | excitatory; inhibitory | |  | b. | action potential; resting potential | |  | c. | inhibitory; excitatory | |  | d. | resting potential; action potential |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 62. The minimum level of stimulation required to trigger a neural impulse is called the   |  |  |  | | --- | --- | --- | |  | a. | reflex. | |  | b. | threshold. | |  | c. | synapse. | |  | d. | action potential. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 63. Jane is explaining how neurons communicate to a friend. How should Jane best define *threshold* for the friend?   |  |  |  | | --- | --- | --- | |  | a. | It is the tiny gap between neurons. | |  | b. | It is a nerve impulse. | |  | c. | It is the level of stimulation required to trigger a neural impulse. | |  | d. | It is a brief resting pause that occurs after a neuron has fired. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 64. To trigger an action potential, the excitatory signals must \_\_\_\_\_\_\_\_ the inhibitory signals by a minimum intensity, or \_\_\_\_\_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | exceed; threshold | |  | b. | exceed; synapse | |  | c. | be less than; threshold | |  | d. | be less than; synapse |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 65. Excitatory signals to a neuron must exceed inhibitory signals by a minimum intensity in order to trigger   |  |  |  | | --- | --- | --- | |  | a. | reuptake. | |  | b. | a refractory period. | |  | c. | an action potential. | |  | d. | selective permeability. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 66. With regard to the process of neural transmission, a refractory period refers to a time interval in which   |  |  |  | | --- | --- | --- | |  | a. | chemical messengers cross synaptic gaps between neurons. | |  | b. | a neurotransmitter is reabsorbed by a sending neuron. | |  | c. | an action potential cannot occur. | |  | d. | an organism reflexively withdraws from a pain stimulus. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 67. Increasing excitatory signals above the threshold for neural activation will not affect the intensity of an action potential. This indicates that a neuron's reaction is   |  |  |  | | --- | --- | --- | |  | a. | inhibited by the myelin sheath. | |  | b. | delayed by a refractory period. | |  | c. | an all-or-none response. | |  | d. | dependent on neurotransmitter molecules. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 68. A neuron's reaction of either firing at full strength or not firing at all is described as   |  |  |  | | --- | --- | --- | |  | a. | an all-or-none response. | |  | b. | a refractory period. | |  | c. | the resting potential. | |  | d. | a reflexive response. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 69. Justine believes that neurons fire whether they want to or not. Based on what you have learned about how neurons communicate, how would you describe the firing of a neuron?   |  |  |  | | --- | --- | --- | |  | a. | a refractory response | |  | b. | a reuptake response | |  | c. | an inhibitory response | |  | d. | an all-or-none response  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 70. A slap on the back is more painful than a pat on the back because a slap triggers   |  |  |  | | --- | --- | --- | |  | a. | the release of endorphins. | |  | b. | more intense neural impulses. | |  | c. | the release of GABA. | |  | d. | more neurons to fire, and to fire more often. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 71. If the \_\_\_\_\_\_\_\_ occurs at an electrical charge of about –70 millivolts, the \_\_\_\_\_\_\_\_ is most likely to occur at a charge of about +40 millivolts.   |  |  |  | | --- | --- | --- | |  | a. | action potential; resting potential | |  | b. | resting potential; threshold | |  | c. | threshold; resting potential | |  | d. | resting potential; action potential |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 72. Sir Charles Sherrington observed that impulses took an unexpectedly long time to travel a neural pathway. His observation provided evidence for the existence of   |  |  |  | | --- | --- | --- | |  | a. | antagonists. | |  | b. | synaptic gaps. | |  | c. | interneurons. | |  | d. | neural networks. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 73. A synapse is a(n)   |  |  |  | | --- | --- | --- | |  | a. | chemical messenger that triggers muscle contractions. | |  | b. | automatic response to sensory input. | |  | c. | junction between a sending neuron and a receiving neuron. | |  | d. | neural cable containing many axons. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 74. The axon of a sending neuron is separated from the dendrite of a receiving neuron by a   |  |  |  | | --- | --- | --- | |  | a. | myelin sheath. | |  | b. | neural network. | |  | c. | glial cell. | |  | d. | synaptic gap. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 75. When a neuron fires   |  |  |  | | --- | --- | --- | |  | a. | an impulse travels down its axon, carrying information to another cell. | |  | b. | the synaptic gap closes. | |  | c. | inhibitory signals are automatically sent to neighboring cells. | |  | d. | nothing happens. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 76. When a(n) \_\_\_\_\_\_\_\_ reaches the button-like terminals at an axon’s end, it triggers the release of chemical messengers.   |  |  |  | | --- | --- | --- | |  | a. | dendrite | |  | b. | action potential | |  | c. | glial cell | |  | d. | ion |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 77. When an action potential reaches the end of an axon, an electrical impulse is then converted into a   |  |  |  | | --- | --- | --- | |  | a. | myelin sheath. | |  | b. | reflexive response. | |  | c. | chemical message. | |  | d. | glial cell. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 78. Neuron-produced chemicals that carry messages to other neurons or to muscles and glands are called   |  |  |  | | --- | --- | --- | |  | a. | synapses. | |  | b. | interneurons. | |  | c. | dendrites. | |  | d. | neurotransmitters. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 79. The chemical messengers released into the spatial junctions between neurons are called   |  |  |  | | --- | --- | --- | |  | a. | hormones. | |  | b. | neurotransmitters. | |  | c. | synapses. | |  | d. | genes. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 80. Neurotransmitters are released from button-like terminals at the end of the   |  |  |  | | --- | --- | --- | |  | a. | dendrites. | |  | b. | cell body. | |  | c. | axon. | |  | d. | myelin sheath. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 81. Excess neurotransmitters are reabsorbed, drift away, or   |  |  |  | | --- | --- | --- | |  | a. | transferred to other neurons. | |  | b. | released into the bloodstream. | |  | c. | left in the sending sites. | |  | d. | are broken down by enzymes. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 82. Reuptake refers to the   |  |  |  | | --- | --- | --- | |  | a. | movement of neurotransmitter molecules across a synaptic gap. | |  | b. | release of hormones into the bloodstream. | |  | c. | inflow of positively charged ions through an axon membrane. | |  | d. | reabsorption of excess neurotransmitter molecules by a sending neuron. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 83. The number of neurotransmitter molecules located within a specific synaptic gap would most clearly be reduced by   |  |  |  | | --- | --- | --- | |  | a. | an action potential. | |  | b. | ACh-producing neurons. | |  | c. | acupuncture. | |  | d. | reuptake. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 84. Which neurotransmitter plays the most direct role in learning and memory?   |  |  |  | | --- | --- | --- | |  | a. | dopamine | |  | b. | acetylcholine | |  | c. | GABA | |  | d. | oxytocin |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 85. Acetylcholine is a neurotransmitter that   |  |  |  | | --- | --- | --- | |  | a. | causes sleepiness. | |  | b. | lessens physical pain. | |  | c. | reduces depressed moods. | |  | d. | triggers muscle contractions. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 86. Endorphins are   |  |  |  | | --- | --- | --- | |  | a. | neurotransmitters. | |  | b. | sex hormones. | |  | c. | endocrine glands. | |  | d. | glial cells. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 87. Opiate-like neurotransmitters linked to pain control and to feelings of pleasure are known as   |  |  |  | | --- | --- | --- | |  | a. | glia. | |  | b. | antagonists. | |  | c. | endorphins. | |  | d. | glutamates. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 88. Ricardo was the goalie in a long, bruising soccer game but feels little fatigue or discomfort. His lack of pain is most likely caused by the release of   |  |  |  | | --- | --- | --- | |  | a. | glutamate. | |  | b. | dopamine. | |  | c. | acetylcholine. | |  | d. | endorphins. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 89. Mathilda believes in the healing effects of acupuncture and frequently advocates for its use. Researchers have been able to confirm its effectiveness and credit \_\_\_\_\_\_\_\_ for its effects.   |  |  |  | | --- | --- | --- | |  | a. | GABA | |  | b. | endorphins | |  | c. | glutamate | |  | d. | ACh |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 90. The “runner's high” can be explained by the release of   |  |  |  | | --- | --- | --- | |  | a. | agonists. | |  | b. | neurons. | |  | c. | endorphins. | |  | d. | antagonists. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 91. Minerva has been running most days of the week for the last four years. The release of \_\_\_\_\_\_\_\_ can help explain why she feels good after running.   |  |  |  | | --- | --- | --- | |  | a. | glial cells | |  | b. | neurons | |  | c. | endorphins | |  | d. | antagonists |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 92. Opiate drugs occupy the same receptor sites as   |  |  |  | | --- | --- | --- | |  | a. | serotonin. | |  | b. | endorphins. | |  | c. | dopamine. | |  | d. | epinephrine. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 93. Which of the following is an opiate that elevates mood and eases pain?   |  |  |  | | --- | --- | --- | |  | a. | dopamine | |  | b. | acetylcholine | |  | c. | morphine | |  | d. | glutamate |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 94. Opiate drugs \_\_\_\_\_\_\_\_ mood and \_\_\_\_\_\_\_\_ pain.   |  |  |  | | --- | --- | --- | |  | a. | depress; decrease | |  | b. | improve; increase | |  | c. | elevate; ease | |  | d. | maintain; decrease |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 95. The body's natural production of endorphins is likely to be   |  |  |  | | --- | --- | --- | |  | a. | increased by heroin use and increased by vigorous exercise. | |  | b. | decreased by heroin use and decreased by vigorous exercise. | |  | c. | increased by heroin use and decreased by vigorous exercise. | |  | d. | decreased by heroin use and increased by vigorous exercise. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 96. Kevin is suffering intensely uncomfortable withdrawal symptoms following fentanyl use. His symptoms probably result in part from a reduction in his body’s normal production of   |  |  |  | | --- | --- | --- | |  | a. | dopamine. | |  | b. | epinephrine. | |  | c. | acetylcholine. | |  | d. | endorphins. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 97. A drug molecule that increases a neurotransmitter's action is called a(n)   |  |  |  | | --- | --- | --- | |  | a. | antagonist. | |  | b. | endorphin. | |  | c. | agonist. | |  | d. | steroid. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 98. Sophia has taken an opiate drug that makes her feel “high” by increasing her normal sensation of pleasure. The drug she took was a(n)   |  |  |  | | --- | --- | --- | |  | a. | acetylcholine. | |  | b. | endorphin. | |  | c. | agonist. | |  | d. | antagonist. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 99. Any drug molecule that blocks the reuptake of a neurotransmitter is a(n)   |  |  |  | | --- | --- | --- | |  | a. | steroid. | |  | b. | agonist. | |  | c. | endorphin. | |  | d. | antagonist. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 100. Any drug molecule that occupies a neurotransmitter receptor site and blocks the neurotransmitter's effect is a(n)   |  |  |  | | --- | --- | --- | |  | a. | glutamate. | |  | b. | agonist. | |  | c. | opiate. | |  | d. | antagonist. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 101. Endorphin agonists are likely to \_\_\_\_\_\_\_\_ one's immediate pain, and endorphin antagonists are likely to \_\_\_\_\_\_\_\_ one's immediate pain.   |  |  |  | | --- | --- | --- | |  | a. | decrease; increase | |  | b. | increase; decrease | |  | c. | increase; increase | |  | d. | decrease; decrease |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 102. Botulin poisoning from improperly canned food causes paralysis by blocking the release of   |  |  |  | | --- | --- | --- | |  | a. | endorphins. | |  | b. | epinephrine. | |  | c. | acetylcholine. | |  | d. | dopamine. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 103. Madison is experiencing symptoms of paralysis after eating food contaminated by botulin. Her paralysis is most likely to be relieved by a drug that functions as a(n)   |  |  |  | | --- | --- | --- | |  | a. | ACh agonist. | |  | b. | serotonin agonist. | |  | c. | ACh antagonist. | |  | d. | serotonin antagonist. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 104. Mr. Hernandez’s symptoms of confusion and memory loss have led his physicians to conclude that he suffers from Alzheimer’s disease. His symptoms are most likely to be linked with a deterioration of brain cells that produce the neurotransmitter   |  |  |  | | --- | --- | --- | |  | a. | dopamine. | |  | b. | acetylcholine. | |  | c. | epinephrine. | |  | d. | endorphin. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 105. Which neurotransmitter influences movement, learning, attention, and emotion?   |  |  |  | | --- | --- | --- | |  | a. | ACh | |  | b. | dopamine | |  | c. | serotonin | |  | d. | GABA |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 106. The neurotransmitter dopamine is responsible for all of the following EXCEPT   |  |  |  | | --- | --- | --- | |  | a. | learning. | |  | b. | hunger. | |  | c. | attention. | |  | d. | emotion. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 107. Mr. Tanaka, who has Parkinson's disease, experiences tremors and loss of motor control that make it difficult for him to feed or dress himself. His symptoms are most likely linked with an undersupply of the neurotransmitter   |  |  |  | | --- | --- | --- | |  | a. | cortisol. | |  | b. | dopamine. | |  | c. | serotonin. | |  | d. | norepinephrine. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 108. Schizophrenia is most closely linked to an oversupply of the neurotransmitter   |  |  |  | | --- | --- | --- | |  | a. | dopamine. | |  | b. | epinephrine. | |  | c. | acetylcholine. | |  | d. | serotonin. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 109. An undersupply of serotonin is most closely linked to   |  |  |  | | --- | --- | --- | |  | a. | Alzheimer's disease. | |  | b. | schizophrenia. | |  | c. | Parkinson's disease. | |  | d. | depression. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 110. Serotonin is NOT associated with   |  |  |  | | --- | --- | --- | |  | a. | attention. | |  | b. | hunger. | |  | c. | sleepiness. | |  | d. | arousal. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 111. Which of the following would NOT be affected by the level of norepinephrine in our body?   |  |  |  | | --- | --- | --- | |  | a. | mood | |  | b. | memory | |  | c. | alertness | |  | d. | arousal |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 112. Corrine has been depressed for the last few months. Her doctor believes that the neurotransmitter that helps control alertness and arousal is the root of her depression. Which neurotransmitter may be the culprit?   |  |  |  | | --- | --- | --- | |  | a. | dopamine | |  | b. | acetylcholine | |  | c. | GABA | |  | d. | norepinephrine |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 113. An undersupply of the major inhibitory neurotransmitter known as \_\_\_\_\_\_\_\_ is linked to seizures.   |  |  |  | | --- | --- | --- | |  | a. | glutamate | |  | b. | GABA | |  | c. | serotonin | |  | d. | ACh |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 114. Christopher has experienced a seizure, which his doctor believes is neurotransmitter-related. Christopher’s seizure was most likely linked to an   |  |  |  | | --- | --- | --- | |  | a. | undersupply of GABA. | |  | b. | undersupply of serotonin. | |  | c. | oversupply of glutamate. | |  | d. | undersupply of acetylcholine. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 115. Insomnia is to \_\_\_\_\_\_\_\_ as depression is to \_\_\_\_\_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | ACh; dopamine | |  | b. | GABA; serotonin | |  | c. | glutamate; endorphins | |  | d. | norepinephrine; GABA  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 116. Tuyet has been experiencing severe migraine headaches, which her doctor believes are neurotransmitter-related. Her symptoms are most likely linked to an   |  |  |  | | --- | --- | --- | |  | a. | oversupply of GABA. | |  | b. | undersupply of serotonin. | |  | c. | oversupply of glutamate. | |  | d. | undersupply of acetylcholine. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 117. The nervous system is the   |  |  |  | | --- | --- | --- | |  | a. | complete set of glands that secrete hormones into the bloodstream. | |  | b. | collection of bundled axons that form neural cables carrying information to body muscles. | |  | c. | an organism's complete set of automatic reflex responses. | |  | d. | electrochemical communication network that includes all the body's neurons. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 118. The two major divisions of the nervous system are the central and the \_\_\_\_\_\_\_\_ nervous systems.   |  |  |  | | --- | --- | --- | |  | a. | autonomic | |  | b. | sympathetic | |  | c. | somatic | |  | d. | peripheral |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 119. The central nervous system consists of   |  |  |  | | --- | --- | --- | |  | a. | sensory and motor neurons. | |  | b. | somatic and autonomic systems. | |  | c. | the brain and the spinal cord. | |  | d. | sympathetic and parasympathetic branches. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 120. Which nervous system is responsible for gathering information and transmitting decisions from the CNS to other parts of the body?   |  |  |  | | --- | --- | --- | |  | a. | sympathetic nervous system | |  | b. | peripheral nervous system | |  | c. | somatic nervous system | |  | d. | autonomic nervous system |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 121. Information travels through axons that are bundled into the cables we call   |  |  |  | | --- | --- | --- | |  | a. | interneurons. | |  | b. | action potentials. | |  | c. | nerves. | |  | d. | reflex pathways. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 122. You feel the pain of a sprained ankle when \_\_\_\_\_\_\_\_ relay(s) messages from your ankle to your central nervous system.   |  |  |  | | --- | --- | --- | |  | a. | the myelin sheath | |  | b. | interneurons | |  | c. | motor neurons | |  | d. | sensory neurons |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 123. Sensory neurons are located in the   |  |  |  | | --- | --- | --- | |  | a. | synaptic gaps. | |  | b. | endocrine system. | |  | c. | peripheral nervous system. | |  | d. | myelin sheath. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 124. Sanjay was bitten by fire ants when he stepped on a dome-shaped mound of soil. Messages about the ant bites on his foot were sent inward to the brain and spinal cord for processing by   |  |  |  | | --- | --- | --- | |  | a. | sensory neurons. | |  | b. | motor neurons. | |  | c. | interneurons. | |  | d. | spinal neurons. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 125. Sensory neurons are \_\_\_\_\_\_\_\_ neurons, and motor neurons are \_\_\_\_\_\_\_\_ neurons.   |  |  |  | | --- | --- | --- | |  | a. | agonist; antagonist | |  | b. | afferent; efferent | |  | c. | antagonist; agonist | |  | d. | efferent; afferent |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 126. Information is carried from the central nervous system to the body's muscles and glands by   |  |  |  | | --- | --- | --- | |  | a. | interneurons. | |  | b. | sensory neurons. | |  | c. | motor neurons. | |  | d. | adrenal glands. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 127. Some neurons enable you to grasp objects by relaying outgoing messages to the muscles in your arms and hands. These neurons are called   |  |  |  | | --- | --- | --- | |  | a. | interneurons. | |  | b. | sensory neurons. | |  | c. | neurotransmitters. | |  | d. | motor neurons. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 128. Motor neurons transmit signals to   |  |  |  | | --- | --- | --- | |  | a. | glands. | |  | b. | interneurons. | |  | c. | sensory neurons. | |  | d. | all of these parts. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 129. Thomas is playing soccer. Instructions about where and how to move are carried from his CNS to his muscles by   |  |  |  | | --- | --- | --- | |  | a. | the myelin sheath. | |  | b. | interneurons. | |  | c. | motor neurons. | |  | d. | sensory neurons. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 130. Neurons that function within the brain and spinal cord are called   |  |  |  | | --- | --- | --- | |  | a. | sensory neurons. | |  | b. | interneurons. | |  | c. | endorphins. | |  | d. | motor neurons. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 131. Central nervous system neurons that process information between sensory inputs and motor outputs are called   |  |  |  | | --- | --- | --- | |  | a. | neurotransmitters. | |  | b. | interneurons. | |  | c. | synapses. | |  | d. | dendrites. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 132. The complexity of humans is related mostly to \_\_\_\_\_\_\_\_, which are far more numerous than other types of neurons.   |  |  |  | | --- | --- | --- | |  | a. | sensory neurons | |  | b. | motor neurons | |  | c. | interneurons | |  | d. | spinal neurons |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 133. The two divisions of the peripheral nervous system are the   |  |  |  | | --- | --- | --- | |  | a. | brain and spinal cord. | |  | b. | sympathetic nervous system and parasympathetic nervous system. | |  | c. | endocrine system and circulatory system. | |  | d. | somatic nervous system and the autonomic nervous system. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 134. The somatic nervous system is a component of the \_\_\_\_\_\_\_\_ nervous system.   |  |  |  | | --- | --- | --- | |  | a. | peripheral | |  | b. | central | |  | c. | sympathetic | |  | d. | parasympathetic |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 135. Messages are transmitted from your spinal cord to muscles in your hands by the \_\_\_\_\_\_\_\_ nervous system.   |  |  |  | | --- | --- | --- | |  | a. | somatic | |  | b. | parasympathetic | |  | c. | sympathetic | |  | d. | autonomic |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 136. As you are sitting in the library reading a book, a friend approaches you from behind, places her hand on your shoulder, and says “Hi.” Which part of your nervous system transfers this information to your brain and then gives you instructions to turn your head?   |  |  |  | | --- | --- | --- | |  | a. | autonomic | |  | b. | sympathetic | |  | c. | parasympathetic | |  | d. | somatic |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 137. The part of the peripheral nervous system that controls your heartbeat is called the   |  |  |  | | --- | --- | --- | |  | a. | somatic nervous system. | |  | b. | central nervous system. | |  | c. | endocrine system. | |  | d. | autonomic nervous system. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 138. The part of the peripheral nervous system that controls the glands and the muscles of the internal organs is called the   |  |  |  | | --- | --- | --- | |  | a. | somatic nervous system. | |  | b. | endocrine system. | |  | c. | sensory nervous system. | |  | d. | autonomic nervous system. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 139. Messages are transmitted from your spinal cord to your stomach and pancreas by the   |  |  |  | | --- | --- | --- | |  | a. | sensory nervous system. | |  | b. | somatic nervous system. | |  | c. | central nervous system. | |  | d. | autonomic nervous system. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 140. Which nervous system is self-regulating and named as such?   |  |  |  | | --- | --- | --- | |  | a. | autonomic | |  | b. | sympathetic | |  | c. | parasympathetic | |  | d. | somatic |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 141. Irishe is having lunch in the school cafeteria while checking messages on her iPhone. Which part of the nervous system is responsible for stimulating digestion?   |  |  |  | | --- | --- | --- | |  | a. | autonomic | |  | b. | sympathetic | |  | c. | somatic | |  | d. | peripheral |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 142. Which division of the autonomic nervous system arouses the body and mobilizes its energy in stressful situations?   |  |  |  | | --- | --- | --- | |  | a. | the parasympathetic nervous system | |  | b. | the sympathetic nervous system | |  | c. | the somatic nervous system | |  | d. | the central nervous system |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 143. You’re awakened one night by the sound of a window breaking in your home. Your heart begins to race and you start sweating. These physical reactions are triggered by the   |  |  |  | | --- | --- | --- | |  | a. | somatic nervous system. | |  | b. | sympathetic nervous system. | |  | c. | parasympathetic nervous system. | |  | d. | sensory nervous system. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 144. The parasympathetic nervous system   |  |  |  | | --- | --- | --- | |  | a. | stimulates digestion and slows heartbeat. | |  | b. | inhibits digestion and accelerates heartbeat. | |  | c. | stimulates digestion and accelerates heartbeat. | |  | d. | inhibits digestion and slows heartbeat. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 145. When James finally realizes that the noises he hears are simply the creaking of boards in an old house, his blood pressure decreases and his heartbeat slows. These physical reactions were most directly regulated by his   |  |  |  | | --- | --- | --- | |  | a. | parasympathetic nervous system. | |  | b. | sympathetic nervous system. | |  | c. | somatic nervous system. | |  | d. | sensory nervous system. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 146. An accelerated heartbeat is to a slowed heartbeat as the \_\_\_\_\_\_\_\_ nervous system is to the \_\_\_\_\_\_\_\_ nervous system.   |  |  |  | | --- | --- | --- | |  | a. | somatic; autonomic | |  | b. | autonomic; somatic | |  | c. | sympathetic; parasympathetic | |  | d. | parasympathetic; sympathetic |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 147. When a black bear suddenly appears in his front yard, Barry’s \_\_\_\_\_\_\_\_ nervous system arouses and energizes him. When the bear is gone and the perceived threat is over, Barry’s \_\_\_\_\_\_\_\_ nervous system calms him and conserves his energy.   |  |  |  | | --- | --- | --- | |  | a. | autonomic; somatic | |  | b. | sympathetic; parasympathetic | |  | c. | somatic; autonomic | |  | d. | parasympathetic; sympathetic |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 148. The sympathetic and parasympathetic nervous systems work together to keep you in a steady internal state called   |  |  |  | | --- | --- | --- | |  | a. | depolarization. | |  | b. | reuptake. | |  | c. | homeostasis. | |  | d. | the resting potential. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 149. Neural networks refer to   |  |  |  | | --- | --- | --- | |  | a. | the branching extensions of a neuron. | |  | b. | interrelated clusters of neurons in the central nervous system. | |  | c. | neural cables containing many axons. | |  | d. | junctions between sending and receiving neurons. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 150. The part of the central nervous system that carries information from your senses to your brain and motor-control information to your body parts is the   |  |  |  | | --- | --- | --- | |  | a. | pituitary gland. | |  | b. | pancreas. | |  | c. | spinal cord. | |  | d. | myelin sheath. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 151. The part of the \_\_\_\_\_\_\_\_ that carries information from your senses to your brain and motor-control information to your body parts is the spinal cord.   |  |  |  | | --- | --- | --- | |  | a. | central nervous system | |  | b. | peripheral nervous system | |  | c. | parasympathetic nervous system | |  | d. | somatic nervous system |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 152. While Javier is sitting in class, he is taking in information from what his professor says and does. This information is then carried from his sensory neurons to the spinal cord and brain, or \_\_\_\_\_\_\_\_, for processing.   |  |  |  | | --- | --- | --- | |  | a. | central nervous system | |  | b. | peripheral nervous system | |  | c. | somatic nervous system | |  | d. | autonomic nervous system |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 153. Simple reflexes are controlled by the   |  |  |  | | --- | --- | --- | |  | a. | cerebral cortex. | |  | b. | spinal cord. | |  | c. | amygdala. | |  | d. | pons. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 154. A simple, automatic, inborn response to a sensory stimulus is called a(n)   |  |  |  | | --- | --- | --- | |  | a. | neural network. | |  | b. | action potential. | |  | c. | neurotransmitter. | |  | d. | reflex. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 155. As Becky tries to remove the cookies she is baking from the stove, she accidentally touches the side of the stove with her hand, burning it. Becky instinctively moves her hand from the stove before realizing that she has burned her hand. This illustrates   |  |  |  | | --- | --- | --- | |  | a. | the importance of the parasympathetic nervous system. | |  | b. | the relevance of interneurons. | |  | c. | the all-or-none response. | |  | d. | the importance of reflexive responses. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 156. The knee-jerk reflex is controlled by interneurons in the   |  |  |  | | --- | --- | --- | |  | a. | synaptic gap. | |  | b. | spinal cord. | |  | c. | sympathetic nervous system. | |  | d. | parasympathetic nervous system. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 157. Isaac damaged his spinal cord in a car accident, paralyzing his legs. Isaac's injury was located in his   |  |  |  | | --- | --- | --- | |  | a. | somatic nervous system. | |  | b. | autonomic nervous system. | |  | c. | sympathetic nervous system. | |  | d. | central nervous system. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 158. Following a serious accident, Edric consistently exhibits a knee-jerk response without feeling the doctor tapping on his knees. Edric most likely has   |  |  |  | | --- | --- | --- | |  | a. | botulin poisoning. | |  | b. | a severed spinal cord. | |  | c. | a sympathetic nervous system injury. | |  | d. | a refractory period. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 159. The endocrine system consists of the   |  |  |  | | --- | --- | --- | |  | a. | communication network that includes all the body's neurons. | |  | b. | regions of the brain that regulate emotion. | |  | c. | interneurons within the spinal cord. | |  | d. | glands and fat tissue that secrete hormones. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 160. Hormones are the chemical messengers of the   |  |  |  | | --- | --- | --- | |  | a. | autonomic nervous system. | |  | b. | somatic nervous system. | |  | c. | endocrine system. | |  | d. | central nervous system. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 161. The speedy nervous system zips messages by way of neurotransmitters. Endocrine messages, however, are delivered more slowly because hormones travel through   |  |  |  | | --- | --- | --- | |  | a. | myelinated neurons. | |  | b. | the bloodstream. | |  | c. | glial cells. | |  | d. | interneurons. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 162. The \_\_\_\_\_\_\_\_ is similar to the nervous system in that both produce molecules that act on receptors elsewhere in the body.   |  |  |  | | --- | --- | --- | |  | a. | central nervous system | |  | b. | endocrine system | |  | c. | peripheral nervous system | |  | d. | autonomic nervous system |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 163. The effects of \_\_\_\_\_\_\_\_ last longer than neural messages.   |  |  |  | | --- | --- | --- | |  | a. | hormones | |  | b. | neurotransmitters | |  | c. | the nervous system | |  | d. | reflexes |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 164. Zoe and her roommate had an argument over dinner. Although they made up, Zoe still feels angry hours later. Why is this?   |  |  |  | | --- | --- | --- | |  | a. | Central nervous system messages last an extended period. | |  | b. | Peripheral nervous system messages last an extended period. | |  | c. | Endocrine system messages last an extended period. | |  | d. | Parasympathetic nervous system messages last an extended period. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 165. The ovaries in females and the testes in males are part of the   |  |  |  | | --- | --- | --- | |  | a. | somatic nervous system. | |  | b. | endocrine system. | |  | c. | autonomic nervous system. | |  | d. | central nervous system. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 166. The release of hormones by the adrenal glands is most likely to trigger   |  |  |  | | --- | --- | --- | |  | a. | depression. | |  | b. | the fight-or-flight response. | |  | c. | the pain reflex. | |  | d. | a refractory period. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 167. If your boss accused you of pocketing money from the cash register, your adrenal glands would probably release \_\_\_\_\_\_\_\_ into your bloodstream.   |  |  |  | | --- | --- | --- | |  | a. | endorphins | |  | b. | acetylcholine | |  | c. | epinephrine | |  | d. | insulin |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 168. The release of epinephrine into the bloodstream is most likely to   |  |  |  | | --- | --- | --- | |  | a. | increase blood sugar. | |  | b. | lower blood pressure. | |  | c. | stimulate digestion. | |  | d. | decrease perspiration. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 169. A growth hormone that stimulates physical development is released by the   |  |  |  | | --- | --- | --- | |  | a. | adrenal glands. | |  | b. | pituitary gland. | |  | c. | parathyroids. | |  | d. | pancreas. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 170. At the age of 22, Mrs. LaBlanc was less than 4 feet tall. Her short stature was probably influenced by the lack of a growth hormone produced by the   |  |  |  | | --- | --- | --- | |  | a. | pancreas. | |  | b. | thyroid. | |  | c. | adrenal gland. | |  | d. | pituitary gland. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 171. Elena and some friends from class are studying for midterms. As they talk, levels of oxytocin in Elena’s bloodstream begin to rise. This is most likely to lead Elena to experience increased feelings of social   |  |  |  | | --- | --- | --- | |  | a. | irritation. | |  | b. | envy. | |  | c. | bonding. | |  | d. | anxiety. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 172. Oxytocin is secreted by the   |  |  |  | | --- | --- | --- | |  | a. | pancreas. | |  | b. | thyroid gland. | |  | c. | pituitary gland. | |  | d. | adrenal gland. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 173. Darleen is in labor with her first child. Which hormone is responsible for the contractions that she feels as part of labor?   |  |  |  | | --- | --- | --- | |  | a. | ACh | |  | b. | glutamate | |  | c. | oxytocin | |  | d. | GABA |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 174. The fact that oxytocin aids both milk flow in nursing and orgasm suggests that oxytocin   |  |  |  | | --- | --- | --- | |  | a. | is important for survival. | |  | b. | facilitates pleasurable sensations. | |  | c. | aids pair bonding. | |  | d. | promotes social bonding. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 175. Oxytocin does all of the following EXCEPT   |  |  |  | | --- | --- | --- | |  | a. | enabling communities to act cooperatively. | |  | b. | enabling contractions during labor. | |  | c. | enabling milk flow while nursing. | |  | d. | enabling the hypothalamus to influence the pituitary gland. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 176. The hypothalamus influences the \_\_\_\_\_\_\_\_ to send messages to the \_\_\_\_\_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | adrenal glands; pancreas | |  | b. | pituitary; endocrine glands | |  | c. | motor neurons; sensory neurons | |  | d. | somatic nervous system; autonomic nervous system |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 177. The master gland of the endocrine system is the   |  |  |  | | --- | --- | --- | |  | a. | thyroid gland. | |  | b. | adrenal gland. | |  | c. | pituitary gland. | |  | d. | pancreas. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 178. The pituitary gland is referred to as the *master gland* because it   |  |  |  | | --- | --- | --- | |  | a. | directs other endocrine glands to release their hormones. | |  | b. | directs the hypothalamus to release its hormones. | |  | c. | is directed by the hypothalamus. | |  | d. | directs other adrenal glands to release their hormones. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 179. Surgical destruction of brain tissue is called a(n)   |  |  |  | | --- | --- | --- | |  | a. | EEG. | |  | b. | diffusion tensor. | |  | c. | lesion. | |  | d. | MRI. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 180. During surgery, Sofia's surgeon destroys a cluster of abnormal cells in Sofia’s brain. Which technique did the surgeon use?   |  |  |  | | --- | --- | --- | |  | a. | lesioning | |  | b. | EEG | |  | c. | MEG | |  | d. | PET |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 181. An amplified recording of the waves of electrical activity that sweep across the surface of the brain is called a(n)   |  |  |  | | --- | --- | --- | |  | a. | fMRI. | |  | b. | EEG. | |  | c. | PET scan. | |  | d. | MRI. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 182. Zeynep volunteers for a study in which she meditates while wearing a shower-cap-like hat that is filled with electrodes covered with a conductive gel. Which brain imaging technique is being used?   |  |  |  | | --- | --- | --- | |  | a. | lesioning | |  | b. | EEG | |  | c. | MEG | |  | d. | PET |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 183. Which technique measures magnetic fields from the brain's natural electrical activity?   |  |  |  | | --- | --- | --- | |  | a. | lesioning | |  | b. | PET | |  | c. | EEG | |  | d. | MEG |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 184. By measuring magnetic fields from the brain's natural electrical activity, researchers are able to understand how certain tasks influence brain activity. This technique is called a(n)   |  |  |  | | --- | --- | --- | |  | a. | EEG. | |  | b. | MEG. | |  | c. | PET. | |  | d. | MRI. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 185. When participating in a research study, Hye-young performed various tasks while researchers measured the magnetic fields from the brain's neural electrical activity. Which technique did the researchers use?   |  |  |  | | --- | --- | --- | |  | a. | lesioning | |  | b. | EEG | |  | c. | MEG | |  | d. | PET |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 186. Professor Costellese is interested in learning how reading influences brain activity. Which technique is he likely to use to aid his research on the brain?   |  |  |  | | --- | --- | --- | |  | a. | fMRI | |  | b. | PET | |  | c. | EEG | |  | d. | MEG |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 187. The release of gamma rays from radioactive blood sugar in different regions of the brain is detected by a(n)   |  |  |  | | --- | --- | --- | |  | a. | MRI. | |  | b. | EEG. | |  | c. | PET scan. | |  | d. | fMRI. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 188. Professor Schittone is studying the specific brain areas that become active when people perform math computations. Which technique would be most helpful for this research?   |  |  |  | | --- | --- | --- | |  | a. | lesioning | |  | b. | PET scan | |  | c. | EEG | |  | d. | MEG |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 189. To identify which area of Heather’s brain is most active during daydreams, neuroscientists administer a temporarily radioactive form of glucose and a(n)   |  |  |  | | --- | --- | --- | |  | a. | fMRI. | |  | b. | PET scan. | |  | c. | EEG. | |  | d. | MRI. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 190. An MRI is a(n)   |  |  |  | | --- | --- | --- | |  | a. | amplified recording of the waves of electrical activity sweeping across the brain's surface. | |  | b. | technique that uses magnetic fields and radio waves to produce computer-generated images of soft tissue. | |  | c. | brain-imaging technique that measures magnetic fields from the brain's natural electrical activity. | |  | d. | visual display of brain activity that detects where a radioactive form of glucose goes while the brain performs a given task. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 191. Magnetic resonance imaging uses magnetic fields and \_\_\_\_\_\_\_\_ to produce computer-generated images of soft tissue.   |  |  |  | | --- | --- | --- | |  | a. | radio waves | |  | b. | brain lesions | |  | c. | a radioactive form of glucose | |  | d. | electrodes placed on the scalp |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 192. To study a larger-than-average neural area in practiced musicians, researchers are most likely to use   |  |  |  | | --- | --- | --- | |  | a. | EEG. | |  | b. | MRI. | |  | c. | brain lesioning. | |  | d. | PET. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 193. Fluid-filled brain areas are called   |  |  |  | | --- | --- | --- | |  | a. | ventricles. | |  | b. | electrodes. | |  | c. | gamma rays. | |  | d. | lesions. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 194. The best way to detect enlarged fluid-filled brain regions in some patients who have schizophrenia is to use a(n)   |  |  |  | | --- | --- | --- | |  | a. | EEG. | |  | b. | MRI. | |  | c. | PET scan. | |  | d. | brain lesion. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 195. To detect Mr. Wagner’s loss of brain tissue from a type of dementia, his physicians are most likely to request that he receive a(n)   |  |  |  | | --- | --- | --- | |  | a. | EEG. | |  | b. | MRI scan. | |  | c. | fNIRS. | |  | d. | PET scan. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 196. To identify which specific brain areas are most active while a person is solving algebra problems, researchers would be most likely to make use of a(n)   |  |  |  | | --- | --- | --- | |  | a. | fMRI. | |  | b. | EEG. | |  | c. | MRI. | |  | d. | brain lesion. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 197. Wayne’s doctor performed a test to reveal both the function and structure of his brain. Which brain scan was used?   |  |  |  | | --- | --- | --- | |  | a. | lesion | |  | b. | EEG | |  | c. | fMRI | |  | d. | PET scan |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 198. Jessica and her mother are arguing over Jessica’s daily chores. She has forgotten to do them again. The brain imaging technique that would show which areas of Jessica’s brain are active as she argues with her mother is the   |  |  |  | | --- | --- | --- | |  | a. | fMRI. | |  | b. | EEG. | |  | c. | lesioning. | |  | d. | MRI. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 199. The \_\_\_\_\_\_\_\_ uses infrared light that shines onto blood molecules to identify brain activity.   |  |  |  | | --- | --- | --- | |  | a. | fNIRS | |  | b. | EEG | |  | c. | PET scan | |  | d. | fMRI |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 200. Researchers who found that symptoms of depression and anxiety correlated with increased activity in the right frontal lobe used the \_\_\_\_\_\_\_\_ to examine the brain.   |  |  |  | | --- | --- | --- | |  | a. | EEG | |  | b. | MEG | |  | c. | PET | |  | d. | MRI |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 201. Studies have found that people with a history of violent behavior tend to have smaller frontal lobes than people without such a history. What neural measure did researchers use to study this difference?   |  |  |  | | --- | --- | --- | |  | a. | EEG | |  | b. | MEG | |  | c. | PET | |  | d. | MRI |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 202. Which of the following does NOT represent a significant current study dedicated to providing new insights into the brain?   |  |  |  | | --- | --- | --- | |  | a. | a project exploring brain aging from early childhood to late adulthood | |  | b. | The Human Brain Project | |  | c. | a project exploring how the size of certain neural structures can predict criminality | |  | d. | The Human Connectome Project |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 203. The \_\_\_\_\_\_\_\_ harnesses diffusion tensor imaging MRI methods to map neural connections in the brain.   |  |  |  | | --- | --- | --- | |  | a. | Brain Exposure Project | |  | b. | Positron Emission Tomography Scan | |  | c. | Human Connectome Project | |  | d. | Human Brain Project |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 204. In vertebrates, the \_\_\_\_\_\_\_\_ contains brainstem structures that direct essential survival functions such as breathing and sleeping.   |  |  |  | | --- | --- | --- | |  | a. | forebrain | |  | b. | midbrain | |  | c. | hindbrain | |  | d. | thalamus |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 205. Bears are known to hibernate during the winter months. Their sleeping is controlled by the   |  |  |  | | --- | --- | --- | |  | a. | pons. | |  | b. | forebrain. | |  | c. | midbrain. | |  | d. | hindbrain. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 206. The \_\_\_\_\_\_\_\_ connects the hindbrain and the forebrain.   |  |  |  | | --- | --- | --- | |  | a. | forebrain | |  | b. | midbrain | |  | c. | hindbrain | |  | d. | thalamus |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 207. In vertebrates, the \_\_\_\_\_\_\_\_ controls some movement and transmits information that enables seeing and hearing.   |  |  |  | | --- | --- | --- | |  | a. | medulla | |  | b. | forebrain | |  | c. | midbrain | |  | d. | hindbrain |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 208. Yesenia loves to walk through the woods, seeing and listening to the wildlife. Yesenia’s seeing and hearing are enabled by the   |  |  |  | | --- | --- | --- | |  | a. | pons. | |  | b. | forebrain. | |  | c. | midbrain. | |  | d. | hindbrain. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 209. In vertebrates, the \_\_\_\_\_\_\_\_ manages complex cognitive activities, sensory and associative functions, and voluntary motor activities.   |  |  |  | | --- | --- | --- | |  | a. | pons | |  | b. | forebrain | |  | c. | midbrain | |  | d. | hindbrain |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 210. Humans have well-developed forebrains, which allow us to excel at making complex decisions and judgments. Predatory sharks have complex hindbrains, which allow them to excel at hunting prey. These differences indicate that   |  |  |  | | --- | --- | --- | |  | a. | humans and sharks rival one another in intelligence. | |  | b. | humans are not known for their excellence in hunting prey. | |  | c. | complex development in one brain region occurs at the expense of other brain regions. | |  | d. | organisms’ brains have evolved to best suit their environment. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 211. A brain structure that is NOT part of the forebrain is the   |  |  |  | | --- | --- | --- | |  | a. | cerebral cortex. | |  | b. | pons. | |  | c. | thalamus. | |  | d. | hypothalamus. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 212. Susan, a mathematician, experienced a small stroke that affected her ability to analyze complex problems. The stroke most likely occurred in Susan’s   |  |  |  | | --- | --- | --- | |  | a. | forebrain. | |  | b. | midbrain. | |  | c. | hindbrain. | |  | d. | spinal cord. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 213. Basic automatic survival functions, such as heartbeat and breathing, are controlled by the   |  |  |  | | --- | --- | --- | |  | a. | pons. | |  | b. | brainstem. | |  | c. | thalamus. | |  | d. | reticular formation. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 214. The part of the brainstem that controls heartbeat and breathing is called the   |  |  |  | | --- | --- | --- | |  | a. | cerebellum. | |  | b. | medulla. | |  | c. | amygdala. | |  | d. | thalamus. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 215. Abigail has realized that both her heartbeat and breathing are automatic functions that she does not have to consciously think about. The part of her brain that regulates these functions is her   |  |  |  | | --- | --- | --- | |  | a. | thalamus. | |  | b. | reticular formation. | |  | c. | cerebellum. | |  | d. | medulla. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 216. The part of the brainstem that serves to coordinate movements and control sleep is the   |  |  |  | | --- | --- | --- | |  | a. | nucleus accumbens. | |  | b. | hippocampus. | |  | c. | amygdala. | |  | d. | pons. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 217. Brandon has trouble sleeping regularly. He has difficulty falling asleep and then staying asleep. On average, he gets 4 hours of sleep each night. His \_\_\_\_\_\_\_\_ may not be functioning properly.   |  |  |  | | --- | --- | --- | |  | a. | thalamus | |  | b. | hypothalamus | |  | c. | reticular formation | |  | d. | pons |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 218. Harry often struggles with coordinating his gross motor movements. Researchers have determined that the \_\_\_\_\_\_\_\_ is responsible for this function.   |  |  |  | | --- | --- | --- | |  | a. | medulla | |  | b. | pons | |  | c. | cerebellum | |  | d. | thalamus |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 219. Which part of the brain is considered a crossover point, where most nerves to and from each side of the brain connect with the body’s opposite side?   |  |  |  | | --- | --- | --- | |  | a. | brainstem | |  | b. | hippocampus | |  | c. | amygdala | |  | d. | hypothalamus |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 220. If your \_\_\_\_\_\_\_\_ is destroyed, the right side of your brain could not control the movements of your left arm.   |  |  |  | | --- | --- | --- | |  | a. | brainstem | |  | b. | hippocampus | |  | c. | amygdala | |  | d. | hypothalamus |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 221. The brain structure that acts as a sensory control center is the   |  |  |  | | --- | --- | --- | |  | a. | medulla. | |  | b. | cerebellum. | |  | c. | thalamus. | |  | d. | hippocampus. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 222. Which pair of egg-shaped brain structures receives information from all the senses except smell?   |  |  |  | | --- | --- | --- | |  | a. | hippocampus | |  | b. | amygdala | |  | c. | pons | |  | d. | thalamus |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 223. Aziz was unable to feel the touch of his mother because a tumor caused damage to the pair of egg-shaped structures located on top of his brainstem. This structure is known as the   |  |  |  | | --- | --- | --- | |  | a. | amygdala. | |  | b. | thalamus. | |  | c. | medulla. | |  | d. | hippocampus. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 224. Information from brain regions associated with seeing, hearing, tasting, and touching is transmitted to the medulla and the cerebellum via the   |  |  |  | | --- | --- | --- | |  | a. | hypothalamus. | |  | b. | hippocampus. | |  | c. | amygdala. | |  | d. | thalamus. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 225. The \_\_\_\_\_\_\_\_ receives replies regarding the senses from various brain regions and directs the information to the medulla and the cerebellum.   |  |  |  | | --- | --- | --- | |  | a. | thalamus | |  | b. | hypothalamus | |  | c. | reticular formation | |  | d. | pons |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 226. The reticular formation is a nerve network that travels from the spinal cord through the \_\_\_\_\_\_\_\_ into the thalamus.   |  |  |  | | --- | --- | --- | |  | a. | brainstem | |  | b. | amygdala | |  | c. | hypothalamus | |  | d. | cerebellum |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 227. Jazmine is making breakfast while simultaneously packing her son’s lunch and reviewing her notes for a class presentation. Which brain area is involved in this multitasking?   |  |  |  | | --- | --- | --- | |  | a. | reticular formation | |  | b. | medulla | |  | c. | pons | |  | d. | cerebellum |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 228. Which region of your brainstem plays a role in arousing you to a state of alertness when you trip your roommate’s shoes and nearly fall?   |  |  |  | | --- | --- | --- | |  | a. | reticular formation | |  | b. | hypothalamus | |  | c. | amygdala | |  | d. | hippocampus |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 229. Severing a cat's reticular formation causes the cat to   |  |  |  | | --- | --- | --- | |  | a. | become violently aggressive. | |  | b. | cower in fear. | |  | c. | experience convulsive seizures. | |  | d. | lapse into a coma. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 230. Who discovered that the reticular formation controlled arousal in the 1949 study involving electrically stimulating the reticular formation of cats?   |  |  |  | | --- | --- | --- | |  | a. | Moruzzi and Magoun | |  | b. | Klüver | |  | c. | Bucy | |  | d. | Milner |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 231. The \_\_\_\_\_\_\_\_ at the back of the brain enables nonverbal learning and skill memory.   |  |  |  | | --- | --- | --- | |  | a. | amygdala | |  | b. | cerebellum | |  | c. | hypothalamus | |  | d. | nucleus accumbens |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 232. The baseball-sized structure at the rear of the brainstem that coordinates voluntary movement, with assistance from the pons is the   |  |  |  | | --- | --- | --- | |  | a. | amygdala. | |  | b. | cerebellum. | |  | c. | hippocampus. | |  | d. | basal ganglia. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 233. Along with the \_\_\_\_\_\_\_\_, deep brain structures involved in motor movement, the cerebellum enables nonverbal learning and skill memory.   |  |  |  | | --- | --- | --- | |  | a. | reticular formation | |  | b. | thalamus | |  | c. | basal ganglia | |  | d. | medulla |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 234. With assistance from the \_\_\_\_\_\_\_\_, the cerebellum \_\_\_\_\_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | hypothalamus; regulates hunger and thirst | |  | b. | amygdala; controls heartbeat and breathing | |  | c. | pons; coordinates voluntary movement | |  | d. | medulla; controls fear and rage |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 235. As Cloe sends a text to a friend, the \_\_\_\_\_\_\_\_ aids in coordinating her finger movements on the iPhone.   |  |  |  | | --- | --- | --- | |  | a. | medulla | |  | b. | pons | |  | c. | cerebellum | |  | d. | thalamus |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 236. After Todd collided with a friend on a bicycle, doctors detected damage to Todd’s cerebellum. Todd is most likely to have difficulty   |  |  |  | | --- | --- | --- | |  | a. | doing mathematical computations. | |  | b. | understanding what others are saying. | |  | c. | tasting the flavors of foods. | |  | d. | playing his guitar. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 237. Conscious information processing is LEAST likely to be required for the automatic physical survival functions regulated by the   |  |  |  | | --- | --- | --- | |  | a. | hippocampus. | |  | b. | thalamus. | |  | c. | brainstem. | |  | d. | amygdala.  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 238. By managing life-sustaining functions outside of our awareness, the brainstem frees conscious brain regions to think, talk, dream, or remember. This best illustrates the value of   |  |  |  | | --- | --- | --- | |  | a. | the all-or-none response. | |  | b. | two-track processing. | |  | c. | neural plasticity. | |  | d. | the split brain. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 239. A neural system associated with emotions and drives is known as the   |  |  |  | | --- | --- | --- | |  | a. | pons. | |  | b. | limbic system. | |  | c. | reticular formation. | |  | d. | medulla. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 240. The limbic system consists of the   |  |  |  | | --- | --- | --- | |  | a. | amygdala, hypothalamus, and hippocampus. | |  | b. | cerebral hemispheres and frontal lobes. | |  | c. | all four frontal lobes. | |  | d. | motor cortex and somatosensory cortex. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 241. The amygdala consists of emotion-linked neural clusters in the   |  |  |  | | --- | --- | --- | |  | a. | brainstem. | |  | b. | reticular formation. | |  | c. | limbic system. | |  | d. | cerebellum. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 242. Carolyn, who is terrified of insects, discovers that the cake she left overnight on the kitchen counter is now overrun with ants. Which brain area is involved in her fear response?   |  |  |  | | --- | --- | --- | |  | a. | amygdala | |  | b. | hypothalamus | |  | c. | medulla | |  | d. | hippocampus |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 243. After removing the amygdala of a rhesus monkey, \_\_\_\_\_\_\_\_\_\_\_ found that the normally ill-tempered animal had become the most mellow of creatures.   |  |  |  | | --- | --- | --- | |  | a. | Olds and Milner | |  | b. | Moruzzi and Magoun | |  | c. | Klüver and Bucy | |  | d. | Fritsch and Hitzig |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 244. S. M. is a patient who has been called “the woman with no fear,” even of being threatened with a gun. Her fearlessness is best attributed to damage to her   |  |  |  | | --- | --- | --- | |  | a. | pons. | |  | b. | cerebellum. | |  | c. | hypothalamus. | |  | d. | amygdala. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 245. The amygdala is responsible for the regulation of   |  |  |  | | --- | --- | --- | |  | a. | survival mechanisms. | |  | b. | hunger. | |  | c. | balance. | |  | d. | emotion. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 246. A neuroscientist wants to show that stimulating a brain region of a normally calm dog could make it act aggressively. The neuroscientist should stimulate the dog’s   |  |  |  | | --- | --- | --- | |  | a. | reticular formation. | |  | b. | cerebellum. | |  | c. | medulla. | |  | d. | amygdala. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 247. Although the amygdala plays a major role in aggression and fear, we cannot attribute all fearful and aggressive behavior to the amygdala because   |  |  |  | | --- | --- | --- | |  | a. | there is neural activity in many areas of our brain when we are fearful or act aggressively. | |  | b. | aggression and fear are not the only emotions regulated by the amygdala. | |  | c. | the limbic system is the only system that regulates emotions. | |  | d. | the amygdala works closely with the hypothalamus and hippocampus. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 248. Electrically stimulating different parts of an animal’s amygdala can make the animal behave fearfully or aggressively. What does this suggest?   |  |  |  | | --- | --- | --- | |  | a. | Multiple brain areas are involved in our feeling afraid or acting aggressively. | |  | b. | Aggression and fear are localized in the amygdala. | |  | c. | The limbic system is the only system that regulates emotions. | |  | d. | The amygdala plays a role in fear and aggression. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 249. Which limbic system structure regulates hunger and thirst?   |  |  |  | | --- | --- | --- | |  | a. | medulla | |  | b. | amygdala | |  | c. | hippocampus | |  | d. | hypothalamus |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 250. The brain structure that provides a major link between the nervous system and the endocrine system is the   |  |  |  | | --- | --- | --- | |  | a. | cerebellum. | |  | b. | amygdala. | |  | c. | reticular formation. | |  | d. | hypothalamus. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 251. Based on signals it receives from your blood chemistry or other brain parts, your hypothalamus   |  |  |  | | --- | --- | --- | |  | a. | secretes hormones. | |  | b. | intensifies thought. | |  | c. | seeks further stimulation. | |  | d. | provides pleasurable rewards. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 252. As Bryson thinks about having sex with his partner, his hypothalamus secretes hormones that trigger the pituitary gland to   |  |  |  | | --- | --- | --- | |  | a. | influence the hippocampus to release hormones. | |  | b. | activate a reward deficiency syndrome. | |  | c. | activate the cerebellum. | |  | d. | influence the sex glands to release their hormones. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 253. Mr. Roller’s hypothalamus was seriously damaged by a stroke. It is most likely that Mr. Roller may experience a loss of   |  |  |  | | --- | --- | --- | |  | a. | visual perception. | |  | b. | muscular coordination. | |  | c. | sexual motivation. | |  | d. | language comprehension. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 254. James Olds and Peter Milner located reward centers in the brain structure known as the   |  |  |  | | --- | --- | --- | |  | a. | hypothalamus. | |  | b. | cerebellum. | |  | c. | medulla. | |  | d. | amygdala. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 255. A limbic system reward center located in front of the hypothalamus is called the   |  |  |  | | --- | --- | --- | |  | a. | amygdala. | |  | b. | reticular formation. | |  | c. | pons. | |  | d. | nucleus accumbens. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 256. Underneath Harriette's car windshield wiper is a note that reads “You are the light in someone’s world!” What part of the brain is likely to be activated when Harriette reads the note?   |  |  |  | | --- | --- | --- | |  | a. | reward center | |  | b. | hippocampus | |  | c. | thalamus | |  | d. | frontal lobe  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 257. Animal research has revealed a general reward system related to the release of the neurotransmitter   |  |  |  | | --- | --- | --- | |  | a. | acetylcholine. | |  | b. | GABA. | |  | c. | dopamine. | |  | d. | epinephrine. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 258. The pleasure we feel when meeting a likable person is facilitated by   |  |  |  | | --- | --- | --- | |  | a. | cerebral cortex signals. | |  | b. | reward center activity. | |  | c. | reticular formation multitasking. | |  | d. | frontal lobe stimulation. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 259. The neural center in the limbic system that processes explicit memories for storage is called the   |  |  |  | | --- | --- | --- | |  | a. | hypothalamus. | |  | b. | thalamus. | |  | c. | hippocampus. | |  | d. | medulla. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 260. Those who survive a hippocampal brain tumor in childhood are likely to have difficulty \_\_\_\_\_\_\_\_ in adulthood.   |  |  |  | | --- | --- | --- | |  | a. | getting adequate sleep | |  | b. | remembering new information | |  | c. | maintaining body balance while walking | |  | d. | experiencing feelings of fear |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 261. After suffering several head injuries during a long professional soccer career, Jacob has begun struggling to recall the names of friends and family members. This is most likely due to damage to the   |  |  |  | | --- | --- | --- | |  | a. | hippocampus. | |  | b. | medulla. | |  | c. | amygdala. | |  | d. | hypothalamus. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 262. With age, Judy has noticed a gradual cognitive decline. This is likely partly attributable to a(n)   |  |  |  | | --- | --- | --- | |  | a. | increase in hypothalamus functioning. | |  | b. | decrease in the size of the frontal lobe. | |  | c. | decrease in hippocampus functioning. | |  | d. | increasingly large limbic system. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 263. About 85 percent of human brain weight comes from the   |  |  |  | | --- | --- | --- | |  | a. | hippocampus. | |  | b. | cerebrum. | |  | c. | corpus callosum. | |  | d. | frontal lobes. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 264. The cerebral cortex is the covering layer of the   |  |  |  | | --- | --- | --- | |  | a. | brainstem. | |  | b. | corpus callosum. | |  | c. | hippocampus. | |  | d. | cerebrum. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 265. The thin surface layer of interconnected neural cells in the brain, which serves as your body’s ultimate control and information-processing center, is the   |  |  |  | | --- | --- | --- | |  | a. | limbic system. | |  | b. | cerebellum. | |  | c. | corpus callosum. | |  | d. | cerebral cortex. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 266. The brain’s left and right hemispheres are filled mainly with axons that   |  |  |  | | --- | --- | --- | |  | a. | control the motor and somatosensory areas. | |  | b. | connect the cortex to other areas of the brain. | |  | c. | control the association areas of the brain. | |  | d. | monitor the various lobes of the brain. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 267. What is it about humans that allows us to adapt to our ever-changing environment?   |  |  |  | | --- | --- | --- | |  | a. | our larger cortex | |  | b. | our frontal lobe | |  | c. | our motor cortex | |  | d. | our association areas |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 268. Which portion of the cerebral cortex lies directly behind the forehead and is involved in speaking and muscle movements and in making plans and judgments?   |  |  |  | | --- | --- | --- | |  | a. | temporal lobes | |  | b. | frontal lobes | |  | c. | parietal lobes | |  | d. | occipital lobes |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 269. Claudine just started the semester and is now working on her schedule for the term. Which area of her brain is involved in her ability to plan her semester?   |  |  |  | | --- | --- | --- | |  | a. | temporal lobes | |  | b. | frontal lobes | |  | c. | parietal lobes | |  | d. | occipital lobes |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 270. Which of the following is the portion of the cerebral cortex that lies at the top of the head and toward the rear and receives sensory input for touch and body position?   |  |  |  | | --- | --- | --- | |  | a. | occipital lobes | |  | b. | hippocampus | |  | c. | parietal lobes | |  | d. | temporal lobes |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 271. The parietal lobes are to \_\_\_\_\_\_\_\_ as the occipital lobes are to \_\_\_\_\_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | hearing; speaking | |  | b. | sensing touch; seeing | |  | c. | tasting; smelling | |  | d. | speaking; seeing |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 272. The occipital lobes of the cerebral cortex   |  |  |  | | --- | --- | --- | |  | a. | lie at the top of the head and toward the rear and receive sensory input for touch and body position. | |  | b. | lie at the back of the head and receive information from the visual fields. | |  | c. | lie roughly above the ear and include auditory areas. | |  | d. | lie just behind the forehead and are involved in making plans and judgments. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 273. Which portion of the cerebral cortex is roughly above the ears and includes areas that receive information from the ears?   |  |  |  | | --- | --- | --- | |  | a. | parietal lobes | |  | b. | temporal lobes | |  | c. | occipital lobes | |  | d. | frontal lobes |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 274. The occipital lobes are to \_\_\_\_\_\_\_\_ as the temporal lobes are to \_\_\_\_\_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | hearing; sensing movement | |  | b. | seeing; sensing touch | |  | c. | seeing; hearing | |  | d. | speaking; hearing |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 275. The parietal lobes are to \_\_\_\_\_\_\_\_ as the temporal lobes are to \_\_\_\_\_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | speaking; sensing movement | |  | b. | seeing; sensing touch | |  | c. | sensing touch; hearing | |  | d. | speaking; hearing |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 276. By applying mild electrical stimulation to parts of an animal's cortex, Gustav Fritsch and Eduard Hitzig triggered body movements. They discovered what is now called the   |  |  |  | | --- | --- | --- | |  | a. | motor cortex. | |  | b. | visual cortex. | |  | c. | auditory cortex. | |  | d. | somatosensory cortex. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 277. The motor cortex is   |  |  |  | | --- | --- | --- | |  | a. | an area at the rear of the frontal lobes that controls voluntary movements. | |  | b. | an area at the front of the parietal lobes that registers and processes body touch and movement sensations. | |  | c. | areas of the cerebral cortex that are not involved in primary motor or sensory functions. | |  | d. | the portion of the cerebral cortex lying at the back of the head. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 278. The motor cortex is located at the rear of the \_\_\_\_\_\_\_\_ lobes.   |  |  |  | | --- | --- | --- | |  | a. | occipital | |  | b. | temporal | |  | c. | frontal | |  | d. | parietal |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 279. A laboratory cat could be made to twitch its whiskers by direct stimulation of the \_\_\_\_\_\_\_\_ lobes of its cerebral cortex.   |  |  |  | | --- | --- | --- | |  | a. | temporal | |  | b. | occipital | |  | c. | frontal | |  | d. | parietal |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 280. Stimulating an area on the right side of the brain will cause movement of the left hand. This indicates that the   |  |  |  | | --- | --- | --- | |  | a. | somatosensory cortex is responsible for limb movements. | |  | b. | motor cortex on the right side of the brain controls movements of the left hand. | |  | c. | association areas of the brain control the movements of all body parts. | |  | d. | motor cortex on the right side of the brain controls movements of the left hand. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 281. During brain surgery, the toes on Frank’s right foot twitched whenever the surgeon electrically stimulated a specific area within Frank’s   |  |  |  | | --- | --- | --- | |  | a. | left frontal lobe. | |  | b. | right frontal lobe. | |  | c. | left parietal lobe. | |  | d. | right parietal lobe. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 282. Maggie was in a skiing accident and suffered damage to the left side of her brain. Yet, she has difficulty moving her right arm, not her left arm. This indicates that the   |  |  |  | | --- | --- | --- | |  | a. | somatosensory cortex is responsible for phantom limb movements. | |  | b. | motor cortex on the right side of the brain controls movements of specific body parts on the right side of the body. | |  | c. | association areas of the brain control movements of all body parts. | |  | d. | motor cortex on the right side of the brain controls movements of specific body parts on the opposite side of the body. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 283. During the 1930s, who mapped the motor cortex by stimulating different cortical areas and observing the body’s responses?   |  |  |  | | --- | --- | --- | |  | a. | Gage | |  | b. | Foerster and Penfield | |  | c. | Fritsch and Hitzig | |  | d. | Delgado |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 284. The brain devotes cortical tissue to body parts on the basis of   |  |  |  | | --- | --- | --- | |  | a. | their size. | |  | b. | the amount of control they require. | |  | c. | their location. | |  | d. | their frequency of use. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 285. Which of the following body parts is associated with the greatest amount of brain tissue in the motor cortex?   |  |  |  | | --- | --- | --- | |  | a. | arms | |  | b. | face | |  | c. | trunk | |  | d. | knees |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 286. Who stimulated a spot on a patient’s left motor cortex, triggering the right hand to make a fist?   |  |  |  | | --- | --- | --- | |  | a. | José Delgado | |  | b. | Otfrid Foerster | |  | c. | Wilder Penfield | |  | d. | Eduard Hitzig |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 287. Scientists can predict a monkey’s arm motion \_\_\_\_\_\_\_\_ by repeatedly measuring motor cortex activity preceding specific arm movements.   |  |  |  | | --- | --- | --- | |  | a. | just before it moves | |  | b. | during the movement | |  | c. | long before it moves | |  | d. | only after it moves |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 288. In one clinical trial, a man with paralysis was able to mentally control a TV and play video games thanks to implanted microelectrodes in his   |  |  |  | | --- | --- | --- | |  | a. | somatosensory cortex. | |  | b. | occipital lobes. | |  | c. | motor cortex. | |  | d. | hippocampus. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 289. By implanting a device that detects an individual’s \_\_\_\_\_\_\_\_, scientists have created a prosthetic voice.   |  |  |  | | --- | --- | --- | |  | a. | motor cortex activity. | |  | b. | association area signals. | |  | c. | somatosensory cortex stimuli. | |  | d. | hippocampal enlargement. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 290. Which part of the brain specializes in receiving information from the skin senses and from the movement of body parts?   |  |  |  | | --- | --- | --- | |  | a. | motor cortex | |  | b. | frontal lobes | |  | c. | somatosensory cortex | |  | d. | association areas |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 291. The \_\_\_\_\_\_\_\_ is at the front of the parietal lobes and registers and processes body touch and movement sensations.   |  |  |  | | --- | --- | --- | |  | a. | motor cortex | |  | b. | occipital lobe | |  | c. | temporal lobe | |  | d. | somatosensory cortex |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 292. The somatosensory cortex is most critical for our sense of   |  |  |  | | --- | --- | --- | |  | a. | sight. | |  | b. | hearing. | |  | c. | touch. | |  | d. | smell. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 293. Which part of your brain is essential for receiving information that you are moving your legs?   |  |  |  | | --- | --- | --- | |  | a. | corpus callosum | |  | b. | hippocampus | |  | c. | somatosensory cortex | |  | d. | temporal lobes |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 294. Which lobes of the brain receive the input that enables you to feel someone scratching your back?   |  |  |  | | --- | --- | --- | |  | a. | parietal | |  | b. | temporal | |  | c. | occipital | |  | d. | frontal |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 295. Calphus is racing his motorcycle. Which area of his brain registers and processes information related to the movement sensations he feels while riding?   |  |  |  | | --- | --- | --- | |  | a. | motor cortex | |  | b. | somatosensory cortex | |  | c. | frontal lobe | |  | d. | temporal lobe |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 296. Which of the following body parts is associated with the greatest amount of brain tissue in the somatosensory cortex?   |  |  |  | | --- | --- | --- | |  | a. | toes | |  | b. | knees | |  | c. | neck | |  | d. | lips |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 297. Falsely hearing a sound in the absence of any external stimulus is called   |  |  |  | | --- | --- | --- | |  | a. | neurogenesis. | |  | b. | a split-brain condition. | |  | c. | a hallucination. | |  | d. | an fMRI. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 298. The removal of a large tumor from Mateo's occipital lobe resulted in significant loss of brain tissue in that area. This will most likely affect Mateo’s   |  |  |  | | --- | --- | --- | |  | a. | muscular coordination. | |  | b. | visual perception. | |  | c. | speaking ability. | |  | d. | pain sensations. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 299. Auditory stimulation is processed in the \_\_\_\_\_\_\_\_ lobes.   |  |  |  | | --- | --- | --- | |  | a. | occipital | |  | b. | temporal | |  | c. | frontal | |  | d. | parietal |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 300. The auditory hallucinations experienced by people with schizophrenia are most closely linked with the activation of areas in their   |  |  |  | | --- | --- | --- | |  | a. | motor cortex. | |  | b. | parietal lobes. | |  | c. | temporal lobes. | |  | d. | somatosensory cortex. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 301. The association areas are located in the   |  |  |  | | --- | --- | --- | |  | a. | brainstem. | |  | b. | thalamus. | |  | c. | hippocampus. | |  | d. | cerebral cortex. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 302. The largest regions of the brain that are involved in higher mental functions such as learning, remembering, thinking, and speaking are called the   |  |  |  | | --- | --- | --- | |  | a. | somatosensory cortex. | |  | b. | hippocampus. | |  | c. | corpus callosum. | |  | d. | association areas. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 303. After suffering a stroke, Mr. Smith’s ability to play golf quickly returned to normal. However, Mr. Smith could no longer figure out how to get from the bedroom to the kitchen. It is most likely that Mr. Smith suffered damage to the   |  |  |  | | --- | --- | --- | |  | a. | amygdala. | |  | b. | somatosensory cortex. | |  | c. | motor cortex. | |  | d. | association areas. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 304. What led to the myth that humans use only 10 percent of our brains?   |  |  |  | | --- | --- | --- | |  | a. | Scientists electrically probed the association areas and received no response. | |  | b. | Scientists noticed that when they severed the corpus callosum of most patients, it had no effect on their behavior. | |  | c. | Phineas Gage’s horrible accident had no detectable effect on his brain. | |  | d. | This is not a myth; humans use only 10 percent of the brain. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 305. The fact that the ability to interpret and integrate sensory information with stored memories is lost following damage to the \_\_\_\_\_\_\_\_ disconfirms the claim that we really use only 10 percent of our brain.   |  |  |  | | --- | --- | --- | |  | a. | motor cortex | |  | b. | amygdala | |  | c. | hypothalamus | |  | d. | association areas |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 306. Which of the following is NOT true of the brain's association areas?   |  |  |  | | --- | --- | --- | |  | a. | More intelligent animals have larger association areas. | |  | b. | Less intelligent animals have smaller association areas. | |  | c. | The association areas link sensory information with stored memories. | |  | d. | More intelligent animals have smaller association areas. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 307. Which of the following would have the largest motor areas in the brain?   |  |  |  | | --- | --- | --- | |  | a. | a rat | |  | b. | a chimpanzee | |  | c. | a dog | |  | d. | a human |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 308. Cedric and Adriana are studying for a sociology exam when Adriana wonders, “What would it be like if we used all of our brain, instead of only 10 percent of it?” Which of the following would be the best response by Cedric?   |  |  |  | | --- | --- | --- | |  | a. | “I completely agree. It is similar to how humans use lungs. We use only 20 percent of our lungs.” | |  | b. | “Scientists may never know how much of our brain we actually use.” | |  | c. | “I know. It is amazing. There is a 90 percent chance that head trauma would not impact parts of the brain that we actually use.” | |  | d. | “That is actually a myth. We use all of our brain.” |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 309. Which of the following brain areas enables judgment, planning, social interactions, and processing of new memories?   |  |  |  | | --- | --- | --- | |  | a. | frontal lobes | |  | b. | prefrontal cortex | |  | c. | temporal lobes | |  | d. | parietal lobes |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 310. Jessica knows that if she takes her little sister’s toys, there will be consequences. This knowledge is a function of the   |  |  |  | | --- | --- | --- | |  | a. | somatosensory cortex. | |  | b. | corpus callosum. | |  | c. | association areas. | |  | d. | motor cortex. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 311. Janet is planning a birthday party for her friend. This behavior is regulated by her   |  |  |  | | --- | --- | --- | |  | a. | frontal lobes. | |  | b. | occipital lobes. | |  | c. | parietal lobes. | |  | d. | temporal lobes. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 312. Tammy is talking with a group of friends at another friend’s house party. This behavior is regulated by her   |  |  |  | | --- | --- | --- | |  | a. | frontal lobes. | |  | b. | occipital lobes. | |  | c. | parietal lobes. | |  | d. | temporal lobes. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 313. Melinda is a returning college student. She took 10 years off when she had her first child and is now finishing course requirements for her bachelor’s degree. She has noticed that many of her classmates are much younger than she is and that they miss many classes and talk about “partying” frequently. This may be because their \_\_\_\_\_\_\_\_ are not yet completely developed.   |  |  |  | | --- | --- | --- | |  | a. | frontal lobes | |  | b. | occipital lobes | |  | c. | parietal lobes | |  | d. | temporal lobes |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 314. The classic case of railroad worker Phineas Gage best illustrated that frontal lobe damage can   |  |  |  | | --- | --- | --- | |  | a. | trigger muscle spasms. | |  | b. | enhance moral reasoning skills. | |  | c. | alter one's personality. | |  | d. | facilitate neurogenesis. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 315. People’s moral judgments are most likely to seem unrestrained by normal emotions if they have suffered damage to their   |  |  |  | | --- | --- | --- | |  | a. | hippocampus. | |  | b. | somatosensory cortex. | |  | c. | corpus callosum. | |  | d. | frontal lobes.  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 316. Cecil Clayton displayed increased impulsivity and lowered intelligence test performance following damage to his left \_\_\_\_\_\_\_\_ lobe in a sawmill accident.   |  |  |  | | --- | --- | --- | |  | a. | parietal | |  | b. | occipital | |  | c. | frontal | |  | d. | temporal |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 317. Mathematical and spatial reasoning capacities are especially likely to be linked with association areas in the   |  |  |  | | --- | --- | --- | |  | a. | parietal lobes. | |  | b. | temporal lobes. | |  | c. | occipital lobes. | |  | d. | frontal lobes. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 318. Jeroen does extremely well in classes involving mathematical and spatial reasoning. He can thank the association areas in his \_\_\_\_\_\_\_\_ for this ability.   |  |  |  | | --- | --- | --- | |  | a. | temporal lobes | |  | b. | frontal lobes | |  | c. | parietal lobes | |  | d. | occipital lobes |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 319. The inability to recognize familiar faces even though one can clearly see and describe features of the faces is associated with damage to the right \_\_\_\_\_\_\_\_ lobe.   |  |  |  | | --- | --- | --- | |  | a. | frontal | |  | b. | parietal | |  | c. | occipital | |  | d. | temporal |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 320. Communication that takes place among distinct brain areas and neural networks is referred to as   |  |  |  | | --- | --- | --- | |  | a. | functional connectivity. | |  | b. | constraint-induced connectivity. | |  | c. | associative connectivity. | |  | d. | somatosensory communication. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 321. Dr. Jones and colleagues conduct research to better understand how different regions of the brain work together. They are also interested in the causes of psychological disorders. Which of the following techniques are they likely to implement in their research?   |  |  |  | | --- | --- | --- | |  | a. | analyses of functional connectivity | |  | b. | cortex mapping | |  | c. | homeostasis | |  | d. | splitting the corpus callosum |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 322. Which of the following abilities is NOT directly related to functional connectivity?   |  |  |  | | --- | --- | --- | |  | a. | memory | |  | b. | language | |  | c. | hearing | |  | d. | attention |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 323. Marvin, a football quarterback, can simultaneously make calculations of receiver distances, player movements, and the force of the arm movements needed to effectively throw a pass. This best illustrates the activity of   |  |  |  | | --- | --- | --- | |  | a. | the midbrain. | |  | b. | the medulla. | |  | c. | multiple neural networks. | |  | d. | acetylcholine antagonists.  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 324. The capacity of a brain area to develop new \_\_\_\_\_\_\_\_ as it adjusts to damage is known as neuroplasticity.   |  |  |  | | --- | --- | --- | |  | a. | association areas | |  | b. | information-processing abilities | |  | c. | axons | |  | d. | neural pathways |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 325. The capacity of a brain area to \_\_\_\_\_\_\_\_ as it adjusts to damage is known as neuroplasticity.   |  |  |  | | --- | --- | --- | |  | a. | communicate with other areas | |  | b. | improve its information-processing abilities | |  | c. | develop new axons | |  | d. | reorganize |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 326. The benefits of brain neuroplasticity are most clearly demonstrated in   |  |  |  | | --- | --- | --- | |  | a. | children who have had a cerebral hemisphere surgically removed. | |  | b. | people paralyzed by a severed spinal cord. | |  | c. | individuals with Alzheimer's disease. | |  | d. | split-brain patients. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 327. Areas of the visual cortex that normally help people to see may aid blind people to read Braille by processing tactile sensations from the fingers. This best illustrates the value of   |  |  |  | | --- | --- | --- | |  | a. | neuroplasticity. | |  | b. | brain fissures. | |  | c. | lateralization. | |  | d. | neurogenesis. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 328. If a slow-growing left-hemisphere tumor disrupts language, the right hemisphere may take over this language functioning. This best illustrates the value of   |  |  |  | | --- | --- | --- | |  | a. | the split brain. | |  | b. | neurogenesis. | |  | c. | brain fissures. | |  | d. | neuroplasticity. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 329. Among deaf people, a temporal lobe area normally dedicated to hearing may begin to process visual signals. This best illustrates the impact of   |  |  |  | | --- | --- | --- | |  | a. | neuroplasticity. | |  | b. | neurogenesis. | |  | c. | lateralization. | |  | d. | brain fissures. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 330. At the age of 10 months, Jane suffered brain damage as a result of a serious auto accident. Fortunately, Jane’s brain recovered because \_\_\_\_\_\_\_\_ is strongest in early childhood.   |  |  |  | | --- | --- | --- | |  | a. | cerebral cortex maturation | |  | b. | neuroplasticity | |  | c. | folding of the four lobes | |  | d. | localization of simple brain functions |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 331. After Spiro’s index finger was amputated, he discovered that the other fingers on that hand became more sensitive. This illustrates the results of   |  |  |  | | --- | --- | --- | |  | a. | neurogenesis. | |  | b. | neuroplasticity. | |  | c. | lateralization. | |  | d. | the split brain. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 332. The process of forming new neurons within the brain is called   |  |  |  | | --- | --- | --- | |  | a. | lateralization. | |  | b. | hemispherectomy. | |  | c. | neurogenesis. | |  | d. | neuroplasticity. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 333. Scientists hope that \_\_\_\_\_\_\_\_, which can develop into different types of cells, can someday be used to generate replacements for damaged neurons in the brain.   |  |  |  | | --- | --- | --- | |  | a. | gene fragments | |  | b. | somatosensory neurons | |  | c. | optic nerves | |  | d. | stem cells |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 334. Surgically removing most of an entire hemisphere of the brain is called   |  |  |  | | --- | --- | --- | |  | a. | a hemispherectomy. | |  | b. | neurogenesis. | |  | c. | neuroplasticity. | |  | d. | lateralization. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 335. A tendency for the brain's left and right hemispheres to serve different functions is called   |  |  |  | | --- | --- | --- | |  | a. | hemispherectomy. | |  | b. | lateralization. | |  | c. | neurogenesis. | |  | d. | neuroplasticity. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 336. The control of speech production by the left rather than the right hemisphere of the brain best illustrates   |  |  |  | | --- | --- | --- | |  | a. | neurogenesis. | |  | b. | lateralization. | |  | c. | brain fissures. | |  | d. | neuroplasticity. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 337. Left cerebral hemisphere damage is most likely to reduce a person’s ability to   |  |  |  | | --- | --- | --- | |  | a. | write. | |  | b. | copy drawings. | |  | c. | recognize faces. | |  | d. | recognize familiar melodies.  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 338. Barbara has recently suffered a left hemisphere stroke. Barbara can expect impairment in all of the following areas EXCEPT   |  |  |  | | --- | --- | --- | |  | a. | reading. | |  | b. | writing. | |  | c. | speaking. | |  | d. | intuition. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 339. The corpus callosum is a wide band of axon fibers that   |  |  |  | | --- | --- | --- | |  | a. | enables the left hemisphere to control the right side of the body. | |  | b. | transmits information between the cerebral hemispheres. | |  | c. | sends information from the left half of your field of vision to your right cerebral hemisphere. | |  | d. | transfers neural impulses from the somatosensory cortex to the motor cortex. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 340. Those whose corpus callosum is surgically severed are said to be patients with   |  |  |  | | --- | --- | --- | |  | a. | brain neuroplasticity. | |  | b. | brain fissures. | |  | c. | neurogenesis. | |  | d. | split brains. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 341. Neurosurgeons have severed the corpus callosum in human patients in order to reduce   |  |  |  | | --- | --- | --- | |  | a. | lateralization. | |  | b. | epileptic seizures. | |  | c. | neuroplasticity. | |  | d. | neurogenesis. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 342. When psychologists Roger Sperry, Ronald Myers, and Michael Gazzaniga divided the brains of cats and monkeys,   |  |  |  | | --- | --- | --- | |  | a. | the cats and monkeys could no longer use their limbs. | |  | b. | the cats but not the monkeys could no longer make sounds. | |  | c. | there were no serious ill effects. | |  | d. | both the cats and monkeys suffered from vertigo. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 343. Sensory information is transmitted from the \_\_\_\_\_\_\_\_ visual field of \_\_\_\_\_\_\_\_ to the left cerebral hemisphere.   |  |  |  | | --- | --- | --- | |  | a. | left; only the left eye | |  | b. | right; only the right eye | |  | c. | left; only the right eye | |  | d. | right; both the right and left eyes |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 344. A picture of a cat is briefly flashed in the right visual field of Anna, a split-brain patient. At the same time, a picture of a baby is flashed in the left visual field. In identifying what she saw, Anna would be most likely to   |  |  |  | | --- | --- | --- | |  | a. | use her left hand to point to a picture of a cat. | |  | b. | verbally report that she saw a cat. | |  | c. | use her left hand to point to a picture of a baby. | |  | d. | verbally report that she saw a baby. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 345. The ability to simultaneously copy different figures with the right and left hand is most characteristic of those whose \_\_\_\_\_\_\_\_ has been cut.   |  |  |  | | --- | --- | --- | |  | a. | somatosensory cortex | |  | b. | hippocampus | |  | c. | corpus callosum | |  | d. | motor cortex |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 346. Gazzaniga (2006) concluded that the brain often runs on autopilot, acting first and then explaining our actions later. These explanations derive from   |  |  |  | | --- | --- | --- | |  | a. | both hemispheres acting simultaneously. | |  | b. | action of the left hemisphere. | |  | c. | the corpus callosum. | |  | d. | action of the right hemisphere. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 347. Although most people have undivided brains, the two hemispheres perform distinct functions. For example, the \_\_\_\_\_\_\_\_ is active when a person performs a perceptual task, and the \_\_\_\_\_\_\_\_ is active when a person speaks.   |  |  |  | | --- | --- | --- | |  | a. | left hemisphere; right hemisphere | |  | b. | right hemisphere; left hemisphere | |  | c. | association area; somatosensory cortex | |  | d. | somatosensory cortex; association area |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 348. Juan is studying pre-algebra, and Amanda is trying to match artists with their artwork. Based on their current activities, it is likely that Juan’s \_\_\_\_\_\_\_\_ is active, and Amanda’s \_\_\_\_\_\_\_\_ is active.   |  |  |  | | --- | --- | --- | |  | a. | left hemisphere; right hemisphere | |  | b. | right hemisphere; left hemisphere | |  | c. | association area; somatosensory cortex | |  | d. | somatosensory cortex; association area |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 349. In a recent car accident, Tamiko sustained damage to the right cerebral hemisphere. This injury is most likely to reduce Tamiko’s ability to   |  |  |  | | --- | --- | --- | |  | a. | perceive emotions. | |  | b. | solve arithmetic problems. | |  | c. | understand simple verbal requests. | |  | d. | correctly pronounce familiar words.  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 350. When Lanae does math homework, the area of Lanae’s brain that is most active is the   |  |  |  | | --- | --- | --- | |  | a. | amygdala. | |  | b. | left hemisphere. | |  | c. | temporal lobe. | |  | d. | right hemisphere. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 351. When a person speaks, a brain scan often reveals increased activity in brain waves, blood flow, and glucose consumption in the   |  |  |  | | --- | --- | --- | |  | a. | cerebellum. | |  | b. | left hemisphere. | |  | c. | hippocampus. | |  | d. | right hemisphere. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 352. Deaf people who use sign language typically   |  |  |  | | --- | --- | --- | |  | a. | demonstrate greater mathematical competence than hearing persons. | |  | b. | process language in their left cerebral hemisphere. | |  | c. | have better communication skills than hearing persons. | |  | d. | have a smaller corpus callosum than hearing persons. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 353. People who suffer partial paralysis as a result of damage to the \_\_\_\_\_\_\_\_will sometimes claim they can move a paralyzed limb.   |  |  |  | | --- | --- | --- | |  | a. | right cerebral hemisphere | |  | b. | corpus callosum | |  | c. | left cerebral hemisphere | |  | d. | occipital lobes |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 354. Which of the following best describes the relationship between the left and right brain hemispheres?   |  |  |  | | --- | --- | --- | |  | a. | They work together. | |  | b. | They are not aware of each other. | |  | c. | The right brain hemisphere controls most of human functioning. | |  | d. | The left brain hemisphere is not required. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 355. Characteristics that are genetically transferred from parents to their offspring are said to be a product of   |  |  |  | | --- | --- | --- | |  | a. | epigenetics. | |  | b. | heredity. | |  | c. | shared family environments. | |  | d. | behavior genetics. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 356. Physical traits such as eye color transferred from parents to offspring are a result of   |  |  |  | | --- | --- | --- | |  | a. | the environment. | |  | b. | heredity. | |  | c. | adaptation. | |  | d. | the genome. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 357. Mark and Janice recently had their first child. Like Mark, the child has blue eyes. This is a result of   |  |  |  | | --- | --- | --- | |  | a. | heredity. | |  | b. | environmental influences. | |  | c. | epigenetics. | |  | d. | maternal nutrition. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 358. Nongenetic influences are known as   |  |  |  | | --- | --- | --- | |  | a. | environmental influences. | |  | b. | biological influences. | |  | c. | heredity. | |  | d. | behavior genetics. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 359. Every nongenetic influence, from prenatal nutrition to the people and things around us, is an aspect of our   |  |  |  | | --- | --- | --- | |  | a. | natural selection. | |  | b. | genome. | |  | c. | environment. | |  | d. | heredity. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 360. What Hilda eats while pregnant is an example of a(n) \_\_\_\_\_\_\_\_ influence on fetal development.   |  |  |  | | --- | --- | --- | |  | a. | genetic | |  | b. | environmental | |  | c. | chromosomal | |  | d. | behavioral |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 361. The impact of our cultural backgrounds on the development of our personal values best illustrates the influence of   |  |  |  | | --- | --- | --- | |  | a. | our shared human genome. | |  | b. | epigenetic marks. | |  | c. | natural selection. | |  | d. | the environment. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 362. You are curious about why you are who you are. Thinking about your life thus far, which of the following would be an environmental influence on your development?   |  |  |  | | --- | --- | --- | |  | a. | your eye color | |  | b. | your height | |  | c. | your chromosomes | |  | d. | your elementary school |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 363. The study of the relative power and limits of genetic and environmental influences on behavior is known as   |  |  |  | | --- | --- | --- | |  | a. | genomics. | |  | b. | epigenetics. | |  | c. | behavior genetics. | |  | d. | evolutionary psychology. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 364. Professor Macmillan studies how heredity and environment interact. He is most likely a(n)   |  |  |  | | --- | --- | --- | |  | a. | evolutionary psychologist. | |  | b. | behavior geneticist. | |  | c. | social psychologist. | |  | d. | clinical psychologist. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 365. A behavior geneticist would be most interested in studying hereditary influences on   |  |  |  | | --- | --- | --- | |  | a. | skin color. | |  | b. | sexual anatomy. | |  | c. | physical attractiveness. | |  | d. | personality traits. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 366. Combined, we inherit \_\_\_\_\_\_\_\_ chromosomes from our parents.   |  |  |  | | --- | --- | --- | |  | a. | 12 | |  | b. | 23 | |  | c. | 46 | |  | d. | 52 |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 367. A human sperm cell contains   |  |  |  | | --- | --- | --- | |  | a. | 23 chromosomes. | |  | b. | 23 genes. | |  | c. | 46 chromosomes. | |  | d. | 46 genes. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 368. Chromosomes are threadlike structures made of   |  |  |  | | --- | --- | --- | |  | a. | serotonin molecules. | |  | b. | epigenetic molecules. | |  | c. | DNA molecules. | |  | d. | dizygotic molecules. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 369. Chromosomes are contained within   |  |  |  | | --- | --- | --- | |  | a. | brain cells. | |  | b. | sperm cells. | |  | c. | blood cells. | |  | d. | all of these types of cells. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 370. DNA is a complex \_\_\_\_\_\_\_\_ made up of two strands connected in a double helix.   |  |  |  | | --- | --- | --- | |  | a. | sex hormone | |  | b. | genome | |  | c. | molecule | |  | d. | epigenetic mark  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 371. DNA is a molecule made up of two strands connected in a   |  |  |  | | --- | --- | --- | |  | a. | teratogen. | |  | b. | epigenetic mark. | |  | c. | chromosome. | |  | d. | double helix. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 372. The biochemical units of heredity that make up the chromosomes are called   |  |  |  | | --- | --- | --- | |  | a. | genes. | |  | b. | genomes. | |  | c. | epigenetic molecules. | |  | d. | neurotransmitters. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 373. A small segment of a DNA molecule that provides the code for creating protein molecules is called a(n)   |  |  |  | | --- | --- | --- | |  | a. | organic methyl molecule. | |  | b. | epigenetic mark. | |  | c. | chromosome. | |  | d. | gene. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 374. Environmental events can “turn on” genes, ensuring that they are   |  |  |  | | --- | --- | --- | |  | a. | expressed. | |  | b. | inactive. | |  | c. | dormant. | |  | d. | permitted. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 375. Depending on environmental conditions, specific genes can be either   |  |  |  | | --- | --- | --- | |  | a. | monozygotic or dizygotic. | |  | b. | active or inactive. | |  | c. | identical or fraternal. | |  | d. | structured or unstructured. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 376. As an infant, Andreas was isolated and had no physical contact with his caregivers. As a result, he failed to form proper attachments with others in adulthood. This demonstrates that   |  |  |  | | --- | --- | --- | |  | a. | there is no genetic predisposition for us to be social animals. | |  | b. | social connectedness is not necessary for human survival. | |  | c. | life experiences have little impact on social relationships during childhood and adulthood. | |  | d. | our genetic predisposition to form attachments can be “turned off” by life experiences. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 377. The biochemical code for determining whether our hair is curly or straight is transmitted from parents to offspring by   |  |  |  | | --- | --- | --- | |  | a. | neurotransmitters. | |  | b. | natural selection. | |  | c. | epigenetic molecules. | |  | d. | genes. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 378. Which of the following is considered the body's building blocks?   |  |  |  | | --- | --- | --- | |  | a. | protein molecules | |  | b. | chromosomes | |  | c. | DNA | |  | d. | genes |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 379. The genome refers to an organism's complete set of   |  |  |  | | --- | --- | --- | |  | a. | epigenetic marks. | |  | b. | genetic material. | |  | c. | protein molecules. | |  | d. | zygotic cells. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 380. Which of the following is true of most human traits?   |  |  |  | | --- | --- | --- | |  | a. | They are influenced by a single gene. | |  | b. | They may be influenced by different genes interacting with your specific environment. | |  | c. | They are directly related to your individual environment. | |  | d. | They are influenced by a specific group of genes only. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 381. A person’s height reflects multiple aspects of who they are, such as the size of their face, leg bones, and vertebrae. This demonstrates that most of our traits   |  |  |  | | --- | --- | --- | |  | a. | have complex genetic roots. | |  | b. | are influenced by the environment. | |  | c. | are based on molecular genetics. | |  | d. | result from an interaction among genetics inherited from both parents. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 382. Gene analyses of more than 800,000 people have identified 269 genes that are associated with   |  |  |  | | --- | --- | --- | |  | a. | depression. | |  | b. | anxiety. | |  | c. | stress. | |  | d. | gender identity. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 383. Who we are is determined by traits that are   |  |  |  | | --- | --- | --- | |  | a. | inherited from our parents. | |  | b. | polygenetic. | |  | c. | influenced minimally by the environment. | |  | d. | limited by the environment. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 384. Twin and adoption studies have been most helpful for teasing apart the influences of   |  |  |  | | --- | --- | --- | |  | a. | genetic mutations and epigenetic marks. | |  | b. | extraversion and agreeableness. | |  | c. | genes and protein molecules. | |  | d. | heredity and environment. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 385. Identical twins originate from the fertilization of   |  |  |  | | --- | --- | --- | |  | a. | a single egg cell by a single sperm cell. | |  | b. | two egg cells by a single sperm cell. | |  | c. | a single egg cell by two sperm cells. | |  | d. | two egg cells by two sperm cells. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 386. Twins who develop from separate fertilized eggs are called \_\_\_\_\_\_\_\_ twins.   |  |  |  | | --- | --- | --- | |  | a. | epigenetic | |  | b. | monozygotic | |  | c. | identical | |  | d. | fraternal |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 387. Unlike identical twins, fraternal twins are described as   |  |  |  | | --- | --- | --- | |  | a. | epigenetic. | |  | b. | dizygotic. | |  | c. | extraverted. | |  | d. | monozygotic. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 388. Twin studies suggest that the risk of having autism spectrum disorder is influenced by   |  |  |  | | --- | --- | --- | |  | a. | epigenetics. | |  | b. | free-floating stress hormones. | |  | c. | heredity. | |  | d. | organic methyl molecules. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 389. Compared with identical twins, fraternal twins are \_\_\_\_\_\_\_\_ similar in their personality and \_\_\_\_\_\_\_\_ similar in their politics.   |  |  |  | | --- | --- | --- | |  | a. | more; less | |  | b. | less; less | |  | c. | more; more | |  | d. | less; more  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 390. Who are likely to show the greatest similarity in personality?   |  |  |  | | --- | --- | --- | |  | a. | Ruth and Ramona, identical twins | |  | b. | Philip and Paul, fraternal twins | |  | c. | Larry and Laura, brother and sister | |  | d. | Vincent Sr. and Vincent Jr., father and son |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 391. Juan and Alonzo are fraternal twin brothers, whereas Jake and Alex are identical twin brothers. The similarities between Jake and Alex with respect to \_\_\_\_\_\_\_\_ are likely to be greater than the similarities between Juan and Alonzo.   |  |  |  | | --- | --- | --- | |  | a. | personality | |  | b. | political leanings | |  | c. | physical appearance | |  | d. | all of these characteristics |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 392. Compared with fraternal twins, identical twins are \_\_\_\_\_\_\_\_ similar in physical appearance. Compared with unrelated look-alike pairs of individuals, identical twins report \_\_\_\_\_\_\_\_ similar personalities.   |  |  |  | | --- | --- | --- | |  | a. | no more; more | |  | b. | more; no more | |  | c. | no more; no more | |  | d. | more; more |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 393. Environmental influences on personality traits are most clearly highlighted by comparing   |  |  |  | | --- | --- | --- | |  | a. | identical twins raised together with fraternal twins raised apart. | |  | b. | identical twins raised together with fraternal twins raised together. | |  | c. | identical twins raised apart with fraternal twins raised together. | |  | d. | identical twins raised together with identical twins raised apart. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 394. Identical twins have been shown to have some amazing psychological similarities. But we should be cautious about attributing these similarities to shared genes because   |  |  |  | | --- | --- | --- | |  | a. | the twins may have been raised in completely different environments. | |  | b. | genetic factors influence physical, not psychological, characteristics. | |  | c. | any two strangers are likely to share many coincidental similarities. | |  | d. | many fraternal twins have been shown to be psychologically different from each other. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 395. Differences between men and women in personality traits that are highly heritable cannot necessarily be attributed to genetic differences between the two groups because   |  |  |  | | --- | --- | --- | |  | a. | physical growth proceeds at different rates for males than for females. | |  | b. | natural selection contributes to humans' common genetic endowment. | |  | c. | heritable traits can be influenced by environmental factors. | |  | d. | genes influence the production of sex hormones. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 396. The personalities of adopted children   |  |  |  | | --- | --- | --- | |  | a. | are very similar to the personalities of the other children in their adoptive families. | |  | b. | are very similar to the personalities of their biologically related siblings. | |  | c. | are not very similar to the personalities of their adoptive parents. | |  | d. | are more similar to the personalities of their caregiving adoptive parents than to the personalities of their biological parents. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 397. Craig and Josh are biologically unrelated teenagers who were adopted as infants and raised together. For which of the following are Craig and Josh LEAST likely to resemble each other any more than they resemble a stranger?   |  |  |  | | --- | --- | --- | |  | a. | extraversion | |  | b. | faith | |  | c. | table manners | |  | d. | values |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 398. Macaque monkeys have been found to have personalities that resemble their biological mother, rather than their foster mother. This demonstrates that   |  |  |  | | --- | --- | --- | |  | a. | heredity shapes personality. | |  | b. | environment shapes personality. | |  | c. | nurture shapes personality. | |  | d. | temperament lays the foundation for personality. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 399. Juan and Raul are biologically related nontwin siblings raised in the same home. Patty and Alice are biologically unrelated children adopted at birth and raised as siblings in the same home. People are likely to \_\_\_\_\_\_\_\_ the personality similarities of Juan and Raul and \_\_\_\_\_\_\_\_ the personality similarities of Patty and Alice.   |  |  |  | | --- | --- | --- | |  | a. | overestimate; underestimate | |  | b. | underestimate; overestimate | |  | c. | underestimate; underestimate | |  | d. | overestimate; overestimate |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 400. Parents have a greater influence on their children's \_\_\_\_\_\_\_\_ than on their children’s \_\_\_\_\_\_\_\_.   |  |  |  | | --- | --- | --- | |  | a. | temperament; political attitudes | |  | b. | extraversion; table manners | |  | c. | faith; personality traits | |  | d. | neuroticism; religious beliefs |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 401. Children in adoptive homes are \_\_\_\_\_\_\_\_ likely than average to experience parental neglect and abuse. They have typically grown up to be \_\_\_\_\_\_\_\_ altruistic than average.   |  |  |  | | --- | --- | --- | |  | a. | more; less | |  | b. | more; more | |  | c. | less; less | |  | d. | less; more |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 402. Agnes was adopted at 2 years of age. Agnes’ adoptive parents were very loving and supportive. It can be expected that Agnes would be more \_\_\_\_\_\_\_\_ as an adult compared with those who may not have been adopted.   |  |  |  | | --- | --- | --- | |  | a. | intelligent | |  | b. | reserved | |  | c. | self-giving and altruistic | |  | d. | sociable and extraverted |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 403. While you develop callused feet when you go barefoot for a summer, your neighbor remains a tenderfoot by protecting her feet with shoes. The differences in skin toughness between you and your neighbor are best attributed to   |  |  |  | | --- | --- | --- | |  | a. | the molecular structure of genes. | |  | b. | person-to-person genetic variations. | |  | c. | the impact of epigenetic marks on gene expression. | |  | d. | the interaction of genetic and environmental influences. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 404. An African butterfly that is green in the summer turns brown in the fall thanks to a temperature-controlled genetic switch. This best illustrates that genes are   |  |  |  | | --- | --- | --- | |  | a. | dizygotic. | |  | b. | self-regulating. | |  | c. | epigenetic marks. | |  | d. | protein molecules. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 405. When the effect of one factor depends on the presence of another factor, outcomes are said to reflect   |  |  |  | | --- | --- | --- | |  | a. | an epigenetic mark. | |  | b. | an interaction. | |  | c. | natural selection. | |  | d. | adaptive flexibility. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 406. The unique genetically influenced traits of children often evoke predictable responses from their caregivers. This best illustrates the \_\_\_\_\_\_\_\_ of nature and nurture.   |  |  |  | | --- | --- | --- | |  | a. | heritability | |  | b. | interaction | |  | c. | epigenetics | |  | d. | independence |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 407. Claudine, who is naturally athletic, is always a top performer on sports teams and is beloved by coaches and teammates. As a result, she has developed a socially confident and outgoing personality. This best illustrates the interaction of   |  |  |  | | --- | --- | --- | |  | a. | genes and chromosomes. | |  | b. | evolution and natural selection. | |  | c. | nature and nurture. | |  | d. | behavior genetics and evolutionary psychology. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 408. The study of influences on gene expression that occur without a DNA change is called   |  |  |  | | --- | --- | --- | |  | a. | genomics. | |  | b. | epigenetics. | |  | c. | behavior genetics. | |  | d. | evolutionary psychology. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 409. An organic methyl molecule attached to part of a DNA strand has been identified as a(n)   |  |  |  | | --- | --- | --- | |  | a. | genome. | |  | b. | double helix. | |  | c. | epigenetic mark. | |  | d. | self-regulating gene. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 410. The molecules that can block genetic expression are called   |  |  |  | | --- | --- | --- | |  | a. | genomes. | |  | b. | chromosomes. | |  | c. | stress hormones. | |  | d. | epigenetic marks. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 411. Infant rats deprived of their mothers' normal licking had more \_\_\_\_\_\_\_\_ that block access to the “on” switch for developing the brain's stress hormone receptors.   |  |  |  | | --- | --- | --- | |  | a. | self-regulating genes | |  | b. | neurotransmitters | |  | c. | genomes | |  | d. | epigenetic molecules |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 412. If chronic child abuse alters a victim's gene expression in such a fashion as to trigger depression, this would be said to illustrate   |  |  |  | | --- | --- | --- | |  | a. | natural selection. | |  | b. | an epigenetic effect. | |  | c. | high serotonin levels. | |  | d. | a genetic mutation. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 413. In studies, survivors of extremely traumatic events have been shown to share epigenetic alterations with their offspring. To some psychologists, this suggests that   |  |  |  | | --- | --- | --- | |  | a. | fetal trauma may cause genetic damage. | |  | b. | inheritance occurs exclusively through gene transmission. | |  | c. | inheritance may occur through environmental influences. | |  | d. | genetic mutations generally occur by chance. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 414. Evolutionary psychology studies the evolution of behavior and the mind using principles of   |  |  |  | | --- | --- | --- | |  | a. | behavior genetics. | |  | b. | epigenetics. | |  | c. | genomics. | |  | d. | natural selection. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 415. The principle of natural selection was first advanced by   |  |  |  | | --- | --- | --- | |  | a. | Dmitry Belyaev. | |  | b. | Sigmund Freud. | |  | c. | Charles Darwin. | |  | d. | Thomas Bouchard. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 416. Inherited trait variations that contribute to reproduction and survival will most likely be passed on to succeeding generations. This best illustrates   |  |  |  | | --- | --- | --- | |  | a. | adaptive flexibility. | |  | b. | behavior genetics. | |  | c. | natural selection. | |  | d. | self-regulation. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 417. Several organisms from a strain of bacteria infecting hospital patients inherited a mutation that increased their resistance to the hospital's antibacterial drugs. Over time, the drug-resistant bacteria increasingly outnumbered the bacteria without the mutation. This best illustrates   |  |  |  | | --- | --- | --- | |  | a. | domestication. | |  | b. | an epigenetic mark. | |  | c. | natural selection. | |  | d. | behavior genetics. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 418. Dmitry Belyaev and his successor, Lyudmila Trut, used selective mating to domesticate wild foxes and thus demonstrate   |  |  |  | | --- | --- | --- | |  | a. | natural selection. | |  | b. | epigenetics. | |  | c. | mutations. | |  | d. | adaptation. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 419. A random error in gene replication is known as a(n)   |  |  |  | | --- | --- | --- | |  | a. | epigenetic mark. | |  | b. | genome. | |  | c. | mutation. | |  | d. | selected trait. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 420. Vikas has a rare type of leukemia as a result of a random alteration in the DNA sequence within one of his genes. His difficulty best illustrates the impact of   |  |  |  | | --- | --- | --- | |  | a. | an epigenetic mark. | |  | b. | a mutation. | |  | c. | free-floating stress hormones. | |  | d. | an organic methyl molecule. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 421. Evolutionary psychology is most likely to emphasize that human adaptiveness to a variety of different environments has contributed to   |  |  |  | | --- | --- | --- | |  | a. | the second Darwinian revolution. | |  | b. | genetic mutations. | |  | c. | epigenetic marks. | |  | d. | reproductive success. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 422. Our adaptive flexibility in responding to different environments contributes to our fitness, which refers to   |  |  |  | | --- | --- | --- | |  | a. | random errors in the replication of genes. | |  | b. | epigenetic marks that regulate gene expression. | |  | c. | our ability to survive and reproduce. | |  | d. | the interaction of our genes with the environment. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 423. Evolutionary psychology is most likely to emphasize that our adaptive flexibility in responding to different environments contributes to our   |  |  |  | | --- | --- | --- | |  | a. | social scripts. | |  | b. | genetic inheritance. | |  | c. | genetic legacy. | |  | d. | fitness. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 424. Our shared human genome is   |  |  |  | | --- | --- | --- | |  | a. | the complete collection of sexual characteristics common to both women and men. | |  | b. | the range of biological and behavioral traits that contribute to reproductive success. | |  | c. | our common genetic profile. | |  | d. | the complete set of interactions between our shared genes and our shared environments. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 425. Both Victor and Leslie are afraid of heights, as are many others. This common fear is likely related to   |  |  |  | | --- | --- | --- | |  | a. | mutations. | |  | b. | heritability. | |  | c. | behavioral variations. | |  | d. | our shared human genome.  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 426. If a genetically based aversion to the bitter taste of rhubarb leaves contributes to survival, that trait will more likely be passed on from parents to offspring. This best illustrates   |  |  |  | | --- | --- | --- | |  | a. | behavior genetics. | |  | b. | domestication. | |  | c. | natural selection. | |  | d. | an epigenetic mark. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 427. Mark believes that humans have a genetically based attraction to beautiful people in order to aid survival. As such, he believes that this trait will be passed on to subsequent generations. This best illustrates   |  |  |  | | --- | --- | --- | |  | a. | domestication. | |  | b. | natural selection. | |  | c. | epigenetics. | |  | d. | the human genome. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 428. According to evolutionary psychologists, behaviors that promote reproductive success are likely to be   |  |  |  | | --- | --- | --- | |  | a. | socially prohibited. | |  | b. | genetically predisposed. | |  | c. | ecologically disruptive. | |  | d. | disease-producing. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 429. According to evolutionary psychologists, our tendency to crave sweet foods illustrates that we are biologically prepared to behave in ways that promoted the \_\_\_\_\_\_\_\_ of our ancestors.   |  |  |  | | --- | --- | --- | |  | a. | hunting skills | |  | b. | epigenetic marks | |  | c. | reproductive success | |  | d. | neuroticism |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 430. Professor Terrone is teaching about the second Darwinian revolution, which refers to   |  |  |  | | --- | --- | --- | |  | a. | the use of epigenetics to influence environmental conditions. | |  | b. | genetic determinism. | |  | c. | the application of evolutionary principles to psychology. | |  | d. | the rejection of natural selection. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 431. Evolutionary psychologists would be most likely to predict that   |  |  |  | | --- | --- | --- | |  | a. | more people are biologically predisposed to fear guns than to fear snakes. | |  | b. | children are more likely to be valued by their biological fathers than by their stepfathers. | |  | c. | people are the most romantically attracted to those who are the most genetically dissimilar to themselves. | |  | d. | genetic predispositions have little effect on our social relationships. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 432. Professor Wignes is interested in why people are more likely to develop specific phobias about certain things that kill few people, such as spiders, than about other things that kill many people, such as guns. She is likely interested in   |  |  |  | | --- | --- | --- | |  | a. | epigenetics. | |  | b. | gene-environment interactions. | |  | c. | behavior genetics. | |  | d. | evolutionary psychology. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 433. When an action potential reaches the end of an axon, \_\_\_\_\_\_\_\_ is converted into a chemical message.   |  |  |  | | --- | --- | --- | |  | a. | the myelin sheath | |  | b. | a sodium ion | |  | c. | the electrical impulse | |  | d. | a glial cell |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 434. Mike suffers from Parkinson’s disease and experiences tremors and loss of motor control. This is likely related to   |  |  |  | | --- | --- | --- | |  | a. | too much serotonin. | |  | b. | too little dopamine. | |  | c. | too little ACh. | |  | d. | too much GABA. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 435. Gazzaniga (2006) concluded that \_\_\_\_\_\_\_\_ resembles an interpreter that instantly constructs explanations for why events occur.   |  |  |  | | --- | --- | --- | |  | a. | the spinal cord | |  | b. | the conscious left hemisphere | |  | c. | the corpus callosum | |  | d. | the perceptive right hemisphere |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 436. Alfonso is an electrical engineer, and Magnus is a museum curator. When at work, it is likely that Alfonso’s \_\_\_\_\_\_\_\_ is more active, and Magnus’ \_\_\_\_\_\_\_\_ is more active.   |  |  |  | | --- | --- | --- | |  | a. | left hemisphere; right hemisphere | |  | b. | right hemisphere; left hemisphere | |  | c. | association area; somatosensory cortex | |  | d. | somatosensory cortex; association area |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 437. To say that traits are polygenetic means that they are   |  |  |  | | --- | --- | --- | |  | a. | inherited from both parents. | |  | b. | influenced by many genes of small effect. | |  | c. | influenced minimally by the environment. | |  | d. | limited by the environment. |  |  |  | | --- | --- | | *ANSWER:* | b | |