Introduction to Psychology Gateways to Mind and Behavior 15th edition Coon Test Bank

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TRUE/FALSE

1 : The central nervous system is composed of the autonomic and somatic systems.
A : true
B : false

Correct Answer : B

2 : When the sympathetic nervous system is activated, ones salivation, digestion, and production of tears are inhibited.
A : true
B : false

Correct Answer : A

3 : The part of the neuron that specializes in receiving messages from other neurons is the axon.
A : true
B : false

Correct Answer : B

4 : The paralyzing effect of curare is caused by its ability to attach to receptor sites on muscles and block the action of acetylcholine.
A : true
B : false

Correct Answer : A

5 : The painkilling effect of placebos and acupuncture as well as the runners high and the euphoria associated with childbirth are explained by the release of endorphins.
A : true
B : false

Correct Answer : A

6 : Studies in which patients underwent cognitive behavioral therapy for depression produced improvements in their behaviors and also changed the patients brain activity.
A : true
B : false

Correct Answer : A

7 : A healthy 75-year-old brain has just as many neurons as it did when it was a healthy 25-year-old brain.
A : true
B : false

Correct Answer : A

8 : In order to determine if Marta had a stroke, the doctors used a computer-enhanced X-ray image of her brain, a technique known as an fMRI.

A : true
B : false

Correct Answer : B

9 : When Caleb fell out of his tree house and hit his head, the doctors placed Caleb in a magnetic field to get a three-dimensional image of any structural damage to his brain with this technique being known as electroencephalography.
A : true
B : false

Correct Answer : B

10 : The research strategy of linking specific structures in the brain with specific psychological or behavioral functions is known as structural analysis.
A : true
B : false

Correct Answer : B

11 : Dr. Kahn is able to detect the electrical activity of a single neuron by using the tip of an extremely thin glass tube filled with a salty fluid, which is known as an ablation tube.
A : true
B : false

Correct Answer : B

12 : Superior human intelligence is related to the fact that humans have brains with larger cerebellums.
A : true
B : false

Correct Answer : B

13 : The split-brain operation involves cutting the connections within the midbrain in order to control severe spatial neglect.
A : true
B : false

Correct Answer : B

14 : Concerning information processing, the left hemisphere utilizes simultaneous processing and tends to focus on the overall pattern.
A : true
B : false

Correct Answer : B

15 : If the right side of the brain is damaged, people lose their ability to understand jokes, irony, sarcasm, implications, and other nuances of language.
A : true
B : false

Correct Answer : A

16 : Unlike men, some women are able to use the right side of their brains to compensate for damage to Brocas area in the left hemisphere and resume speaking following a stroke.
A : true
B : false

Correct Answer : A

17 : Autism may arise in infants whose mirror neuron system has been damaged by genetic defects or environmental risk factors.
A : true
B : false

Correct Answer : A

18 : An arch of tissue at the rear of the temporal lobes, called the primary somatosensory area, directs the bodys muscles.
A : true
B : false

Correct Answer : B

19 : Visual images are accurately represented in miniature in the occipital lobes much like a little TV screen in the brain.
A : true
B : false

Correct Answer : B

20 : A person with locked-in syndrome is always in a persistent vegetative state or brain dead.
A : true
B : false

Correct Answer : B

21 : Musicians, who practice special motor skills throughout their lives, have larger than average cerebellums.
A : true
B : false

Correct Answer : A

22 : The reticular formation does not fully mature until adolescence, which may be why children have such short attention spans.
A : true
B : false

Correct Answer : A

23 : Damage to the thalamus will disrupt all of the senses EXCEPT for the sense of touch.
A : true
B : false

Correct Answer : B

24 : The master control center for hunger, thirst, and other basic motives is the hippocampus.
A : true
B : false

Correct Answer : B

25 : As you are walking down a dark street, you hear a noise directly behind you, and you immediately dart off the sidewalk because of the activation of your amygdala.
A : true
B : false

Correct Answer : A

26 : Hormones secreted during times of high emotion decrease memory formation.
A : true
B : false

Correct Answer : B

27 : A critical link between the chemical and neural information systems in humans is the link between the reticular formation and the pituitary gland.
A : true
B : false

Correct Answer : B

28 : Side effects of anabolic steroids include voice deepening or baldness in women and shrinkage of the testicles, sexual impotence, or breast enlargement in men.
A : true
B : false

Correct Answer : A

MULTIPLE CHOICE

29 : Brain activity is the source of
A : human consciousness.
B : behavior.
C : intelligence.
D : all of these.

Correct Answer : D

30 : Nervous system activities and structures are associated with which of the following?
A : actions and motives
B : sensations and feelings
C : thoughts and memories
D : all of these

Correct Answer : D

31 : Two-time Super Bowl winner Dave Duerson died of a self-inflicted gunshot wound to the stomach in February 2011. He shot himself in the stomach because he wanted to leave his brain to science. He blamed his post-football troubles, including memory loss, troubles spelling words, depression, and moodiness, on the repeated concussions he suffered while on the playing field. An autopsy of his brain did reveal the same signs of chronic traumatic brain injury that have been found in dozens of other retired NFL players, as well as in athletes from many other violent sports, such as hockey and boxing. The boxers name for this condition is
A : knockout.
B : punch-drunk.
C : counterpunch.
D : the bums rush.

Correct Answer : B

32 : Almost instantly, patients who have had a stroke realize that something is wrong. However, many brain injuries are less dramatic but involve equally disabling changes in personality, thinking, judgment, or emotions that can take years to become apparent. This type of brain injury that has been found in dozens of retired NFL players, hockey players, and boxers is called
A : comprehensive aphasic brain injury.
B : neuroplastic cerebral trauma.
C : chronic traumatic encephalopathy.
D : comprehensive traumatic corticalization.

Correct Answer : C

33 : When an artery in a persons brain becomes blocked or bursts open, we say that the person has experienced
A : a stroke.
B : neural induction.
C : neural congestion.
D : spatial neglect.

Correct Answer : A

34 : An artery carrying blood to Derricks brain has become blocked and caused some brain tissue to die. Derrick has suffered
A : edema.
B : an epileptic seizure.
C : a stroke.
D : virilism.

Correct Answer : C

35 : Although playing catch and flying a kite in the park appear to be simple activities, in reality, each of these activities requires the work of many billions of individual nerve cells called
A : synapses.
B : neuropeptides.
C : neurons.
D : neurotransmitters.

Correct Answer : C

36 : The two main divisions of the human nervous system are the peripheral nervous system and the _____ nervous system.
A : central
B : autonomic
C : sympathetic
D : somatic

Correct Answer : C

37 : The two main divisions of the human nervous system are the central nervous system and the _____ nervous system.
A : autonomic
B : sympathetic
C : somatic
D : peripheral

Correct Answer : D

38 : The central and peripheral are the two main divisions of the _____ system.
A : nervous
B : endocrine
C : cardiovascular
D : limbic

Correct Answer : A

39 : The central nervous system is composed of the
A : brain and spinal cord.
B : sympathetic and parasympathetic systems.
C : autonomic and somatic systems.
D : brain and somatic system.

Correct Answer : A

40 : The brain carries out most of the computing in the nervous system and communicates with the rest of the body through the large bundle of nerves called the
A : parietal branch.
B : spinal cord.
C : occipital cord.
D : temporal branch.

Correct Answer : B

41 : Axons leaving the spinal cord
A : form the cranial nerves.
B : carry sensory and motor messages.
C : make a total of 22 pairs of nerves.
D : are characterized by all of these.

Correct Answer : B

42 : Nerves that leave the brain directly are called _____ nerves.
A : spinal
B : cranial
C : sympathetic
D : peripheral

Correct Answer : B

43 : How many pairs of spinal nerves do humans have?
A : 31
B : 22
C : 12
D : six

Correct Answer : A

44 : How many pairs of cranial nerves do humans have?
A : 31
B : 22
C : 12
D : six

Correct Answer : C

45 : An individual nerve cell is known as a
A : nerve.
B : neuron.
C : synaptic vesicle.
D : neurotransmitter.

Correct Answer : B

46 : Large bundles of many axons, which are visible to the unaided eye, are called
A : neurons.
B : neurilemmas.
C : nerves.
D : neurotransmitters.

Correct Answer : C

47 : Messages flow from the brain to the spinal cord and then to other parts of the body through the _____ nervous system.
A : central
B : peripheral
C : parietal
D : temporal

Correct Answer : B

48 : The peripheral system is the intricate network of nerves that carries information to and from the _____ nervous system.
A : central

B : occipital
C : parietal
D : temporal

Correct Answer : A

49 : The peripheral nervous system is composed of the
A : brain and spinal cord.
B : central and sympathetic systems.
C : somatic and autonomic systems.
D : spinal cord and 12 thoracic nerves.

Correct Answer : C

50 : Which nervous system controls the voluntary function of the limbs and the sense organs?
A : sympathetic
B : autonomic
C : parasympathetic
D : somatic

Correct Answer : D

51 : During a lecture when students receive information through their eyes from the notes on the screen and information through their ears as the instructor lectures, the information will first travel through neurons within which nervous system?
A : sympathetic
B : autonomic
C : somatic
D : parasympathetic

Correct Answer : C

52 : Aaron flexes his muscles as he shoots a basketball into the goal. His voluntary use of his muscles is controlled by which nervous system?
A : sympathetic
B : autonomic
C : somatic
D : parasympathetic

Correct Answer : C

53 : When you are playing a video game, your hand and eye movements are under the influence of the _____ nervous system.
A : sympathetic
B : parasympathetic
C : autonomic
D : somatic

Correct Answer : D

54 : The autonomic system carries messages to and from
A : the sense organs.
B : the internal organs and glands.

C : the skeletal muscles.
D : all of these.

Correct Answer : B

55 : The autonomic system is
A : self-governing.
B : in control of the sense organs.
C : responsible for muscle movement.
D : mainly in control of voluntary actions.

Correct Answer : A

56 : The involuntary physical changes that occur in the body, such as increases and decreases in heart rate, blood pressure, perspiration, and glandular secretions are controlled by the
A : occipital lobe.
B : parietal lobe.
C : somatic nervous system.
D : autonomic nervous system.

Correct Answer : D

57 : Which of the following functions is NOT controlled by the autonomic nervous system?
A : utilization of the sense organs
B : heart rate and respiration
C : secretion of hormones
D : digestion

Correct Answer : A

58 : Immediate emotional responses to a traumatic event are most directly under the control of the
A : somatic nervous system.
B : central nervous system.
C : autonomic nervous system.
D : cerebral cortex.

Correct Answer : C

59 : Which part of the nervous system plays such a central role in our emotional lives that without it, a person would feel very little emotion?
A : autonomic
B : somatic
C : parietal
D : temporal

Correct Answer : A

60 : When you see an attractive person sit down next to you on the bus, the mad pounding of your heart is under the influence of which part of the nervous system?
A : central
B : diathesis
C : autonomic

D : somatic

Correct Answer : C

61 : Regarding the workings of your nervous system, which of the following statements is FALSE?
A : The autonomic nervous system and the somatic nervous system work together to coordinate the bodys internal reactions to events in the outside world.
B : The two branches of the autonomic nervous system are always active.
C : The somatic nervous system is made up of the sympathetic and parasympathetic branches.
D : The combined action of the sympathetic and parasympathetic branches determines if your body is more or less relaxed or aroused.

Correct Answer : C

62 : The autonomic nervous system contains two branches called the
A : sympathetic and parasympathetic systems.
B : somatic and spinal systems.
C : spinal nerves and cranial nerves.
D : parasympathetic and spinal systems.

Correct Answer : A

63 : The part of the nervous system that is known as the fight or flight system because it arouses the body to meet emergencies and respond to emotional events is the _____ branch.
A : pineal
B : endocrine
C : sympathetic
D : parasympathetic

Correct Answer : C

64 : The part of the nervous system that quiets the body after arousal and helps maintain vital functions (like breathing) at moderate levels is the _____ branch.
A : sympathetic
B : parasympathetic
C : central
D : peripheral

Correct Answer : B

65 : After successfully running into the cabin from the large, snarling, drooling grizzly bear that was headed in your direction, you pause to catch your breath and collect your wits. The physical symptoms you now experience are controlled by the
A : sympathetic branch.
B : parasympathetic branch.
C : central nervous system.
D : neurotransmitter acetylcholine.

Correct Answer : B

66 : After rushing to catch the bus, when you find a seat and begin to relax, the return to your

normal heart rate is under the influence of the
A : central nervous system.
B : parasympathetic branch.
C : sympathetic branch.
D : somatic nervous system.

Correct Answer : B

67 : Your instructor announces a pop quiz. You have not read the chapter yet. Your heart and breathing rate increases, and your mouth becomes dry. Which branch of the nervous system was responsible for this reaction?
A : sympathetic
B : parasympathetic
C : somatic
D : central

Correct Answer : A

68 : Your instructor has just decided not to give the pop test that was announced at the beginning of class. The class breathes a collective sigh of relief. This relief is best explained by which branch of the nervous system?
A : somatic
B : central
C : parasympathetic
D : sympathetic

Correct Answer : C

69 : You are watching a horror movie. The music changes to the familiar tune you recognize as a prelude to danger. You tense up, your heart rate increases, your breathing becomes shallow, and your mouth is dry. Which branch of the nervous system has been activated?
A : somatic
B : central
C : parasympathetic
D : sympathetic

Correct Answer : D

70 : Viewed under a microscope, the nervous system is a large network of about 85 billion interlinked nerve cells, or
A : neurilemmas.
B : neuropeptides.
C : neurotransmitters.
D : neurons.

Correct Answer : D

71 : The individual nerve cells specialized to carry and process information are called
A : neurotransmitters.
B : synapses.
C : ions.
D : neurons.

Correct Answer : D

72 : The billions of neurons in the brain are accompanied by other cells whose function is to support the neurons in a variety of ways. These cells are called
A : effector cells.
B : glial cells or glia.
C : vesicles.
D : myelins.

Correct Answer : B

73 : Glial cells are the
A : chemicals released by a neuron that alters activity in other neurons.
B : electrically charged molecules found inside each neuron.
C : cells that support neurons in a variety of ways.
D : thin layer of cells that form a tunnel that damaged neuron fibers can follow as they repair themselves.

Correct Answer : C

74 : Which of the following carry information from the senses to the brain, activate muscles and glands, and form vast networks that produce intelligence and consciousness?
A : neurons
B : glial cells
C : synapses
D : nuclei ions

Correct Answer : A

75 : Regarding neurons, which of the following statements is FALSE?
A : Neurons carry information from the senses to the brain and also activate muscles and glands.
B : When neurons form vast networks, they produce intelligence and consciousness.
C : The axons are the tree-root like parts of neurons that are specially designed to receive the messages from other neurons.
D : While neurons come in very different shapes and sizes, most have four basic parts: dendrites, soma, axon, and axon terminals.

Correct Answer : C

76 : A neuron is made up of dendrites, a soma, and a(n)
A : axon.
B : synapse.
C : diaton.
D : peptide.

Correct Answer : A

77 : Once information is received at the dendrites, it next flows into the
A : soma.
B : axon.
C : myelin sheath.
D : glial cell.

Correct Answer : A

78 : The cell body of a neuron is also called the
A : dendrite.
B : axon.
C : myelin.
D : soma.

Correct Answer : D

79 : Which part of the neuron receives and collects information from other neurons, combines this information, and sends it down the axon?
A : neuropeptide
B : glial cell
C : ion channel
D : soma

Correct Answer : D

80 : The part of the nerve cell that carries information away from the cell body to other neurons is the
A : axon.
B : dendrite.
C : soma.
D : synapse.

Correct Answer : A

81 : When the neuron sends information to other neurons, it branches out into smaller fibers, which end in bulb-shaped parts known as
A : myelin sheaths.
B : ion channels.
C : dendrite arcs.
D : axon terminals.

Correct Answer : D

82 : The bulb-shaped structures found at the end of neurons form connections with the dendrites and somas of other neurons and allow information to pass from neuron to neuron. These bulb-shaped structures are called the
A : myelin sheaths.
B : ion channels.
C : dendrite arcs.
D : axon terminals.

Correct Answer : D

83 : Regarding axons, which of the following statements is FALSE?
A : Some axons are only 0.1 millimeter long.
B : Some axons stretch for several feet through the nervous system.
C : Axons branch out into slightly larger fibers, which end in several bulb-shaped somas.
D : Large bundles of axons comprise most of the spinal cord and the nerves of the peripheral

nervous system.

Correct Answer : C

84 : Most of the spinal cord and the nerves of the peripheral nervous system are composed of large bundles of
A : axons.
B : neuropeptides.
C : glial cells.
D : somas.

Correct Answer : A

85 : Which of the following is NOT a part of a neuron?
A : axon
B : axon terminal
C : synapse
D : soma

Correct Answer : C

86 : The electrically charged molecules that are involved in a nerve impulse are called
A : axons.
B : dendrites.
C : ampules.
D : ions.

Correct Answer : D

87 : Regarding ions, which of the following statements is TRUE?
A : Ions are found only on the outside of the neuron until it is activated.
B : Ions have a neutral charge, neither positive nor negative, until they are activated.
C : When a neuron is inactive (or resting), more plus charges exist outside the neuron and more minus charges exist inside.
D : Ions can be found only inside the neuron, which creates in your brain an electronic charge of about -10 millivolts.

Correct Answer : C

88 : The charge that exists across the nerve cell membrane is a result of differing
A : amounts of DNA and RNA.
B : types of neurotransmitters on either side of the nerve cell membrane.
C : types of neurons inside and outside the nerve cell membrane.
D : concentrations of ions on either side of the nerve cell membrane.

Correct Answer : D

89 : When a neuron is inactive, more of which of the following exist OUTSIDE the neuron?
A : positive ions
B : negative ions
C : myelin sheaths
D : neuropeptides

Correct Answer : A

90 : When a neuron is inactive, more of which of the following exist INSIDE the neuron?
A : negative ions
B : positive ions
C : neuropeptides
D : myelin sheaths

Correct Answer : A

91 : Since the inside of each resting neuron in your brain has an electrical charge of about -60 to -70 millivolts at the axon compared to the outside of the cell, every neuron in your brain acts as a(n)
A : tiny biological battery.
B : chemical reactor.
C : ion channel booster.
D : electrical shock absorber.

Correct Answer : A

92 : The inside of each resting neuron in your brain has an electrical charge of how many millivolts at the axon?
A : -5 to -10 millivolts
B : -20 to -40 millivolts
C : -60 to -70 millivolts
D : -90 to -110 millivolts

Correct Answer : C

93 : In the nervous system, the electrical charge of an inactive neuron is called its
A : depolarized state.
B : resting potential.
C : action potential.
D : ionic state.

Correct Answer : B

94 : A resting potential occurs when a neuron
A : reaches -50 millivolts.
B : is inactive.
C : reaches its threshold.
D : reaches its trigger point for firing.

Correct Answer : B

95 : A neurons resting potential is raised and lowered
A : by messages arriving from other neurons.
B : by the occurrence of neurogenesis.
C : through a process known as neuroplasticity.
D : when lateralization occurs.

Correct Answer : A

96 : If the electrical charge of the neuron changes to about minus 50 millivolts, the neuron will reach its
A : synaptic potential.
B : negative after-potential.
C : threshold for firing.
D : fusion level for firing.

Correct Answer : C

97 : A neurons threshold is
A : another name for its synaptic potential.
B : another name for its negative after-potential
C : when a neuron is inactive.
D : its trigger point for firing.

Correct Answer : D

98 : The threshold for firing occurs when the electrical charge within the nerve cell reaches about
A : -10 millivolts.
B : -50 millivolts.
C : +100 millivolts.
D : +10 millivolts.

Correct Answer : B

99 : The fastest neurons can send impulses at about _____ miles per hour.
A : 200
B : 425
C : 150
D : 45

Correct Answer : A

100 : The conduction of a nerve impulse down the axon is called a(n)
A : ion potential.
B : action potential.
C : resting discharge.
D : synapse.

Correct Answer : B

101 : When the threshold for firing within a neuron occurs, we say that which of the following is taking place?
A : volume gradient
B : myelination
C : action potential
D : resting discharge

Correct Answer : C

102 : During an action potential, the gates covering the axons ion channels pop open to allow which ions to rush into the axon?

A : sodium
B : potassium
C : chlorine
D : iodine

Correct Answer : A

103 : During an action potential, which of the following occurs?
A : Sodium ions are pumped out of the neuron into the synaptic cleft.
B : The molecular gates open to allow sodium ions into the neuron.
C : The electrical stimulation of the neuron must dip below -70 millivolts and remain so during the action potential.
D : Neurotransmitters enter the axon through gaps in the myelin sheath.

Correct Answer : B

104 : The all or nothing event refers to the fact that
A : nerve cells are continually in an action potential.
B : action potentials occur completely or not at all.
C : synaptic transmissions occur completely or not at all.
D : all the neurons in the brain fire or none of them fire.

Correct Answer : B

105 : Which of the following statements best describes an action potential?
A : The action potential is strongest when neurilemma is present.
B : The action potential starts near the synapse.
C : The action potential occurs when neurotransmitters enter the axon.
D : The action potential is an all-or-nothing event.

Correct Answer : D

106 : Electrically charged particles of which two elements are crucial in the transmission of the nerve impulse?
A : iron and sodium
B : iron and potassium
C : sodium and nickel
D : sodium and potassium

Correct Answer : D

107 : A neuron is less willing to fire when it is in a(n)
A : action potential.
B : resting potential.
C : negative after-potential.
D : depolarized state.

Correct Answer : C

108 : During a negative after-potential, there is an outward flow of which of the following from the axon?
A : negative charges
B : potassium ions

C : neurotransmitters
D : sodium ions

Correct Answer : B

109 : The whitish, fatty substance that surrounds some axons and aids conduction of a nerve impulse down the axon is called
A : myelin.
B : neurilemma.
C : synaptic vesicles.
D : neurotransmitters.

Correct Answer : A

110 : Myelin covers which part(s) of some neurons?
A : soma
B : dendrite
C : axon
D : all of these parts

Correct Answer : C

111 : Area of the brain containing mainly neuron cell bodies is commonly referred to as
A : gray matter.
B : white matter.
C : neurilemma.
D : reflex arcs.

Correct Answer : A

112 : Area of the brain containing mainly myelinated axons is commonly referred to as
A : gray matter.
B : white matter.
C : neurilemma.
D : reflex arcs.

Correct Answer : B

113 : Small gaps in the myelin result in nerve impulses jumping from gap to gap, which causes these nerve impulses to move
A : faster.
B : slower.
C : at a normal speed.
D : at a declining rate of speed.

Correct Answer : A

114 : The small gaps in the myelin covering of a nerve act to
A : decrease the speed of transmission of nerve impulses.
B : increase the speed of transmission of nerve impulses.
C : decrease or increase the transmission of nerve impulses, depending on the state of the firing neurons.
D : stimulate the repair of damaged nerve cells.

Correct Answer : B

115 : The process by which nerve impulses are conducted down an axon by jumping from gap to gap in the myelin layer is known as
A : neuroplasticity.
B : synaptic transmission.
C : saltatory conduction.
D : positive after-potential.

Correct Answer : C

116 : Saltatory conduction refers to
A : a drop in electrical charge below the resting potential.
B : the capacity of our brains to change in response to experience.
C : the simplest behavior, in which a stimulus provokes an automatic response.
D : a nerve impulse jumping from gap to gap in the myelin layer.

Correct Answer : D

117 : When a car suddenly brakes in front of you,
A : neurilemma repair the myelin layer so that you can stop.
B : myelin slows your response time.
C : small gaps in the myelin speed reaction time.
D : nerve impulses move faster through the tunnel formed by the myelin.

Correct Answer : C

118 : The purpose of the myelin that surrounds the axon is to
A : keep nerve cells continually active.
B : help electrical currents cross the synapse completely.
C : repair neurons within the peripheral nervous system.
D : speed the transmission of an impulse down the axon.

Correct Answer : D

119 : Multiple sclerosis is a disease in which the immune system attacks and destroys
A : the nucleus of nerve cells.
B : neurilemma.
C : the receptor sites.
D : myelin.

Correct Answer : D

120 : Which of the following is a disease in which the immune system attacks and destroys the myelin in a persons body, causing the person to experience numbness, weakness, or paralysis?
A : rheumatoid arthritis
B : multiple sclerosis
C : Huntingtons disease
D : muscular dystrophy

Correct Answer : B

121 : Miriam has been suffering from numbness, weakness, and partial paralysis. Miriams doctor told her that her immune system has attacked and destroyed the myelin in her body, because she has
A : rheumatoid arthritis.
B : multiple sclerosis.
C : Huntingtons disease.
D : muscular dystrophy.

Correct Answer : B

122 : The action potential is an all or nothing event that
A : takes place within the synapse.
B : takes place at the dendrite receptor sites.
C : is primarily an electrical process.
D : is primarily a chemical process.

Correct Answer : C

123 : The passage of information within a single neuron would better be described as
A : chemical.
B : electrical.
C : synaptic.
D : retroactive.

Correct Answer : B

124 : The communication between neurons would better be described as
A : chemical.
B : electrical.
C : proactive.
D : retroactive.

Correct Answer : A

125 : Communication between neurons would be considered a chemical change involving
A : sodium ions.
B : neurilemmas.
C : neurotransmitters.
D : potassium ions.

Correct Answer : C

126 : Neurons talk to each other chemically when which of the following are released?
A : neurilemmas
B : neurotransmitters
C : somas
D : ion channels

Correct Answer : B

127 : The microscopic space separating neurons from one another and across which information must be transmitted is known as a(n)
A : synapse.

B : synaptic vesicle.
C : receptor site.
D : ion channel.

Correct Answer : A

128 : Neurotransmitters are released at the
A : axon hillock.
B : myelin sheath.
C : axon terminals.
D : teleodendria.

Correct Answer : C

129 : When a nerve impulse reaches the end of the axon, the tiny sacs that store the neurotransmitters move to the surface and release these chemicals. These tiny sacs are called
A : synaptic vesicles.
B : myelin sheaths.
C : neurilemmas.
D : ion channels.

Correct Answer : A

130 : Communication is carried out between neurons when neurotransmitters are released into the
A : neurilemma tunnel.
B : synaptic gap.
C : dendritic furrow.
D : ion channels.

Correct Answer : B

131 : Tiny areas on the surfaces of neurons and other cells that are sensitive to neurotransmitters or hormones are called
A : axon terminals.
B : somatic retention areas.
C : dendritic retention areas.
D : receptor sites.

Correct Answer : D

132 : Receptor sites for neurotransmitters are found in large numbers
A : on the axon terminals.
B : on dendrites and cell bodies.
C : within the ion channels.
D : on the myelin sheath and neurilemma.

Correct Answer : B

133 : Neurotransmitters bind to which of the following located on dendrites and cell bodies?
A : synaptic vesicles
B : neurilemmas
C : receptor sites

D : myelin sheaths

Correct Answer : C

134 : Nerve cell bodies and dendrites are not the only locations sensitive to neurotransmitters. Receptor sites can also be found on
A : muscles and glands.
B : skeletal joints.
C : axon terminals.
D : all vital organs.

Correct Answer : A

135 : Which of the following best describes the means by which neurons communicate with each other?
A : Sodium ions from one neuron flow into a second neuron, and potassium ions flow out.
B : Potassium ions from one neuron flow into a second neuron, and sodium ions flow out.
C : Neurotransmitters flow across the synapse and attach to receptor sites.
D : Electrical charges cross the synapse.

Correct Answer : C

136 : The chemicals that are released at an axon terminal and can either excite or inhibit other neurons are called
A : synapses.
B : synaptic vesicles.
C : neurilemmas.
D : neurotransmitters.

Correct Answer : D

137 : What effect do neurotransmitters from one neuron have on the next neuron?
A : They have no effect.
B : They excite it.
C : They inhibit it.
D : They may excite or inhibit it.

Correct Answer : D

138 : How many different transmitter chemicals are found in the brain?
A : fewer than 10
B : approximately 25
C : approximately 50
D : more than 100

Correct Answer : D

139 : Acetylcholine, norepinephrine, dopamine, and GABA are examples of
A : neurotransmitters.
B : negative after-potentials.
C : synaptic ions.
D : neurilemmas.

Correct Answer : A

140 : Which of the following is an excitatory neurotransmitter that participates in movement, autonomic function, learning, and memory with a deficiency in this neurotransmitter playing a role in Alzheimers disease?
A : norepinephrine
B : acetylcholine
C : serotonin
D : glutamate

Correct Answer : B

141 : A deficiency in acetylcholine appears to play a major role in the development of
A : Alzheimers disease.
B : Parkinsons disease.
C : schizophrenia.
D : multiple sclerosis.

Correct Answer : A

142 : Which of the following is an excitatory neurotransmitter that participates in motivation, reward, and the planning of behavior with a deficiency leading to Parkinsons disease and an excess leading to schizophrenia?
A : dopamine
B : acetylcholine
C : serotonin
D : glutamate

Correct Answer : A

143 : Gerald has developed Parkinsons disease due to deficiency of a neurotransmitter, while Al developed schizophrenia due to an excess of the same neurotransmitter. The neurotransmitter that appears responsible for both of these conditions is
A : glutamate.
B : acetylcholine.
C : serotonin.
D : dopamine.

Correct Answer : D

144 : Motivation, reward, and the planning of behavior are influenced by this neurotransmitter with deficiencies resulting in reduced feelings of pleasure as well as Parkinsons disease. This excitatory neurotransmitter is
A : dopamine.
B : GABA.
C : serotonin.
D : glutamate.

Correct Answer : A

145 : An excess of dopamine has been linked with the development of which of the following?
A : multiple sclerosis
B : schizophrenia

C : Alzheimers disease
D : spatial neglect

Correct Answer : B

146 : Dopamine deficiency has been linked with the development of which of the following?
A : multiple sclerosis
B : schizophrenia
C : Alzheimers disease
D : Parkinsons disease

Correct Answer : D

147 : Which of the following neurotransmitters causes a major inhibitory effect in the central nervous system?
A : glutamate
B : acetylcholine
C : GABA
D : dopamine

Correct Answer : C

148 : GABA deficiency may lead to
A : anxiety.
B : spatial neglect.
C : multiple sclerosis.
D : Parkinsons disease.

Correct Answer : A

149 : LaShonda has been experiencing a great deal of anxiety. Which inhibitory neurotransmitter deficiency could be producing her feelings of anxiety?
A : acetylcholine
B : GABA
C : glutamate
D : dopamine

Correct Answer : B

150 : Which excitatory neurotransmitter is involved with learning and memory and, in excess, leads to neuron death and autism and, in deficiency, leads to tiredness?
A : glutamate
B : acetylcholine
C : GABA
D : dopamine

Correct Answer : A

151 : An excess of glutamate has been linked to
A : tiredness and depression.
B : Alzheimers disease.
C : autism and neuron death.
D : multiple sclerosis.

Correct Answer : C

152 : Autism has been linked to an excess of which neurotransmitter?
A : acetylcholine
B : GABA
C : serotonin
D : glutamate

Correct Answer : D

153 : Which of the following is an excitatory neurotransmitter that is involved with arousal and vigilance and mood with an excess leading to anxiety problems?
A : glutamate
B : acetylcholine
C : norepinephrine
D : dopamine

Correct Answer : C

154 : Having an excess of norepinephrine can lead to
A : anxiety.
B : neuron death.
C : the development of Parkinsons disease.
D : the development of schizophrenia.

Correct Answer : A

155 : Ian has been experiencing extreme anxiety for the last month. He might well have an excess of which neurotransmitter?
A : acetylcholine
B : GABA
C : norepinephrine
D : glutamate

Correct Answer : C

156 : Which of the following is an inhibitory neurotransmitter that plays a role in mood, appetite, and sleep with a deficiency leading to depression?
A : dopamine
B : acetylcholine
C : serotonin
D : glutamate

Correct Answer : C

157 : Fallon has been diagnosed with a major depression. She is most likely deficient in which neurotransmitter?
A : acetylcholine
B : serotonin
C : GABA
D : glutamate

Correct Answer : B

158 : Serotonin deficiency can lead to
A : the development of multiple sclerosis.
B : neuron death.
C : the development of Parkinsons disease.
D : depression.

Correct Answer : D

159 : Although other neurotransmitters are present, the brains reward or pleasure system has a predominance of which neurotransmitter?
A : norepinephrine
B : acetylcholine
C : histamine
D : dopamine

Correct Answer : D

160 : Regarding neurotransmitters, which of the following statements is FALSE?
A : Slight variations in neurotransmitter function may be related to temperament differences in infancy and personality differences in adulthood.
B : Too much acetylcholine may cause schizophrenia.
C : Too little serotonin may underlie depression.
D : Some neurotransmitters are used by specific pathways that interlink regions of the brain, which prevents the intermixing of messages.

Correct Answer : B

161 : Many of the mind-altering drugs affect the brain by
A : absorbing neural impulses.
B : imitating, duplicating, or blocking neurotransmitters.
C : changing the sodium balance in the synapse.
D : duplicating the effect of potassium in the nuclei.

Correct Answer : B

162 : The chemical structure of cocaine is similar to which neurotransmitter?
A : dopamine
B : acetylcholine
C : GABA
D : serotonin

Correct Answer : A

163 : Cocaine triggers an increase in which neurotransmitter resulting in a drug high in the reward system of the brain?
A : serotonin
B : acetylcholine
C : dopamine
D : histamine

Correct Answer : C

164 : Jeffs drug addiction to cocaine occurred because cocaine overstimulated the reward system in his brain and disturbed the function of which neurotransmitter?
A : serotonin
B : acetylcholine
C : dopamine
D : histamine

Correct Answer : C

165 : Which neurotransmitter normally activates muscles?
A : acetylcholine
B : serotonin
C : curare
D : histamine

Correct Answer : A

166 : A person would not be able to walk nor a musician move his or her fingers to play an instrument without the neurotransmitter
A : curare.
B : serotonin.
C : acetylcholine.
D : histamine.

Correct Answer : C

167 : When curare blocks the action of acetylcholine it
A : prevents muscle activation, causing paralysis.
B : stimulates muscle activity, causing convulsions.
C : slows cell growth, causing paralysis.
D : causes neurotransmitters to both inhibit and excite activity.

Correct Answer : A

168 : The paralyzing effect of curare is caused by its ability to
A : block the action of acetylcholine at neuron-muscle synapses.
B : create an imbalance in the sodium content in the dendrite.
C : produce an overproduction of acetylcholine in the neural soma.
D : produce a disintegration at the synapse.

Correct Answer : A

169 : Ricardo was given curare and suffered paralysis. By attaching to receptor sites on his muscles, curare competes with
A : dopamine.
B : acetylcholine.
C : serotonin.
D : enkephalins.

Correct Answer : B

170 : Chemicals that regulate the activity of other neurons but do not carry messages directly

are called
A : brain deregulators.
B : neural inductors.
C : neuropeptides.
D : ion channeling agents.

Correct Answer : C

171 : Enkephalins and endorphins are examples of
A : brain disregulators.
B : neural inductors.
C : neuropeptides.
D : ion channeling agents.

Correct Answer : C

172 : The brain produces opiate-like neural regulators that help relieve stress and pain and are referred to as
A : acetylcholine inhibitors.
B : somatic ions.
C : enkephalins.
D : neurilemmas.

Correct Answer : C

173 : When you touch a hot stove, neurotransmitters cause you to jerk your hand away, while the pain produced causes your brain to release
A : acetylcholines.
B : histamines.
C : enkephalins.
D : neurilemmas.

Correct Answer : C

174 : Endorphins are released by the _____ gland.
A : adrenal
B : pituitary
C : pineal
D : thyroid

Correct Answer : B

175 : Santana steps on a tack and jerks her foot back. This pain will
A : raise her endorphin levels.
B : lower her endorphin levels.
C : cause depolarization of her pain receptors.
D : cause a repolarization of her pain receptors.

Correct Answer : A

176 : Needles inserted into the body during the acupuncture procedure may relieve pain because the pain
A : results in the release of neuropeptides.

B : blocks the functioning of pain-relieving neurons.
C : paralyzes the central nervous system.
D : suppresses the production of all neurotransmitters.

Correct Answer : A

177 : Feelings of pleasure or euphoria similar to being high on morphine occur when which of the following are released in the brain?
A : acetylcholines
B : endorphins
C : synaptic vesicles
D : neurilemmas

Correct Answer : B

178 : In an experiment to test the effects of a new pain killing drug, the control group was given a placebo, which initially reduced their pain because the placebo
A : raised their endorphin levels.
B : lowered their endorphin levels.
C : activated the neurilemmas in their receptor sites.
D : deactivated the neurilemmas in the receptor sites.

Correct Answer : A

179 : The runners high and the euphoria sometimes associated with childbirth, painful initiation rites, and sports parachuting are due to the release of
A : acetylcholine.
B : endorphins.
C : neurilemma.
D : epinephrine.

Correct Answer : B

180 : Interlinked collections of neurons that process information in our nervous system are called
A : neural networks.
B : synaptic vesicles.
C : neurilemmas.
D : ion channels.

Correct Answer : A

181 : The processing of information within our nervous system occurs because of the cooperation of large numbers of neurons connected together in
A : neurilemmas.
B : synaptic vesicles.
C : neural networks.
D : neural nodes.

Correct Answer : C

182 : The simplest neural network that is organized within the spinal cord is the
A : reflex arc.

B : autonomic reflex.
C : somatic reflex.
D : central synapse.

Correct Answer : A

183 : The behavior sequence resulting from the actions of a sensory neuron, a connector neuron, a motor neuron, and an effector cell is a(n)
A : autonomic chain.
B : cranial arc.
C : effector reflex.
D : reflex arc.

Correct Answer : D

184 : As Molly is cutting roses, a thorn pricks her finger, and Molly automatically withdraws her hand. This simple protective mechanism of the body is known as a(n)
A : inductor arc.
B : conditioned behavior.
C : neuro-conductor response.
D : reflex arc.

Correct Answer : D

185 : The reflex arc occurs when a stimulus provokes a(n)
A : automatic response within the spinal cord without brain involvement.
B : automatic response from the brain.
C : somatic response from the brain.
D : automatic response from a cranial nerve.

Correct Answer : A

186 : A barefoot child steps on a bee, then jerks his or her foot back in response to the sting. This response has likely involved all parts of the nervous system EXCEPT
A : the brain.
B : the spinal cord.
C : motor neurons.
D : connector neurons.

Correct Answer : A

187 : As Molly is cutting roses, a thorn pricks her finger, and Molly automatically withdraws her hand. This simple response involved all of the following EXCEPT
A : the spinal cord.
B : a sensory neuron.
C : the brain.
D : a motor neuron.

Correct Answer : C

188 : A nerve cell carrying information from your eyes, ears, fingers, etc. toward the CNS is called a(n)
A : motor neuron.

B : effector cell.
C : connector neuron.
D : sensory neuron.

Correct Answer : D

189 : A nerve cell carrying information from your brain to muscles and glands is called a(n)
A : motor neuron.
B : effector cell.
C : connector neuron.
D : sensory neuron.

Correct Answer : A

190 : An advantage of having neural reflexes is that they
A : allow our brain to be free to deal with more important decision-making.
B : take place only in the peripheral nervous system.
C : occur regularly, even though their response time is slow.
D : reduce complex stimuli into an all-or-none type of event.

Correct Answer : A

191 : The decision making within a neural network involves a neuron reaching its trigger point when
A : it receives more than 10 exciting messages.
B : the number of inhibiting messages is half or less than the number of exciting messages.
C : exciting messages arrive close in time and are not canceled by inhibiting messages.
D : inhibiting messages arrive close in time and are not canceled by exciting messages.

Correct Answer : C

192 : The capacity of our brains to change in response to experience is referred to as
A : neuroplasticity.
B : resiliency.
C : saltatory conduction.
D : neurogenesis.

Correct Answer : A

193 : In response to experience, new synapses form between neurons, and other connections grow stronger. These changes in the brain due to experience illustrate the brains
A : neuroplasticity.
B : resiliency.
C : saltatory conduction.
D : neurogenesis.

Correct Answer : A

194 : The connection between two neurons is strengthened by the repeated activation of the synapses between these neurons, according to
A : the activation-synthesis hypothesis.
B : the phi phenomenon.
C : Sperrys law.

D : Hebbs rule.

Correct Answer : D

195 : According to Hebbs rule, the connection between two neurons is strengthened by the
A : lateralization of the neurons.
B : flow of sodium ions from the axons of the two neurons.
C : negative after-potential that occurs after the original synapse.
D : repeated activation of the synapses between these neurons.

Correct Answer : D

196 : Rats that are raised in a complex environment have more synapses and longer dendrites in their brains than rats raised in a simpler environment. These differences in the rats brains due to environmental experiences illustrate the brains
A : saltatory conduction.
B : resiliency.
C : neuroplasticity.
D : neurogenesis.

Correct Answer : C

197 : To demonstrate the impact of different environmental experiences on the brain, one group of rats was raised in a complex environment, while another group of rats was raised in a simpler environment. When their brains were compared, the rats raised in the more complex environments had
A : fewer synapses and shorter dendrites.
B : more synapses and longer dendrites.
C : fewer axons but more neurilemma.
D : less myelin and less neurilemma.

Correct Answer : B

198 : Regarding neuroplasticity, which of the following statements is FALSE?
A : Synaptic connections may grow stronger and new ones may form, while inactive synaptic connections may weaken and even die.
B : The repeated activation of synapses between two neurons that strengthens the connection between them is known as Hebbs rule.
C : Scientists who study the brain believe that every mental event involves a brain event, which means that every new experience we have is reflected in changes to our brains.
D : Adult brains are more neuroplastic than the brains of infants and children.

Correct Answer : D

199 : Nico and Brooke are teenagers who had a large portion of their brains removed as infants. Today they are functioning well because over the years their brains have compensated for their losses through a process called
A : lateralization.
B : saltatory connection.
C : deep lesioning.
D : neuroplasticity.

Correct Answer : D

200 : When people suffer from chronic traumatic encephalopathy, their prospects for recovery are not good because the brain damage from these head traumas can be extensive and often triggers
A : multiple sclerosis.
B : increased neuroplasticity.
C : constraint-induced movement disorder.
D : a subsequent disease process that continues to damage the brain.

Correct Answer : D

201 : In one study, people with depression became more able to control their negative moods after undergoing cognitive behavior therapy. After this therapy, the images of their brains revealed
A : reduced endorphin levels throughout the brain.
B : increased endorphin levels within the subcortical areas.
C : reduced brain activity in the brain areas related to combativeness.
D : more normal activity in brain areas related to emotional processing.

Correct Answer : D

202 : In a study that focused on taxi drivers in London, England, who must learn the names and locations of tens of thousands of streets in order to earn their licenses, the experienced cabbies exhibited superior memory for street information with the parts of their brains responsible for processing this learning being
A : enlarged.
B : lateralized.
C : more myelinated.
D : all of these.

Correct Answer : A

203 : Every time you learn something, you are reshaping your living brain, a process known as
A : brain osmosis.
B : synaptic malleability.
C : self-directed neuroplasticity.
D : self-directed neural induction.

Correct Answer : C

204 : As you study your psychology textbook, you are changing your mind and your brain about psychology through a process known as
A : brain osmosis.
B : synaptic malleability.
C : neuroplasticity.
D : neural induction.

Correct Answer : C

205 : Regrowth of a damaged nerve cell is most likely when
A : damage occurs within the brain.
B : the cell body is destroyed.
C : damage occurs in the spinal cord.

D : an accidentally severed toe is sewn back on.

Correct Answer : D

206 : Horror movies and science fiction stories are often based on the premise that one persons brain has been surgically removed and implanted in the body of another person. This would actually be impossible because
A : damage to the brain is almost always fatal.
B : if the corpus callosum is cut, the brain cannot function.
C : damage to neurons in the CNS is usually considered permanent.
D : the blood brain barriers would not protect against infection.

Correct Answer : C

207 : The production of new brain cells is known as
A : neural induction.
B : depolarization.
C : neural resiliency.
D : neurogenesis.

Correct Answer : D

208 : Each day, thousands of new cells originate deep within the brain and then move to the surface to link up with other neurons to become part of the brains circuitry through a process known as
A : neural induction.
B : depolarization.
C : neurogenesis.
D : neural resiliency.

Correct Answer : C

209 : Learning, memory, and the ability to adapt to changing circumstances are most likely due to the fact that new brain cells form each day through
A : neural resiliency.
B : neurogenesis.
C : neural induction.
D : depolarization.

Correct Answer : B

210 : Regarding brain cells regeneration and repair, which of the following statements is FALSE?
A : Constraint-induced movement therapy involves restraining a patients good arm, which forces his or her impaired arm to be more active and increases neurogenesis in the damaged part of the brain.
B : Doctors have identified specific drugs that can enhance neurogenesis in the damaged areas of the brain.
C : Because of aging, a healthy 75-year-old brain has only about 75 percent of the brain cells of a healthy 25-year-old brain.
D : Although the brain loses cells daily, it simultaneously grows new neurons to replace them.

Correct Answer : C

211 : Regarding brain cells regeneration and repair, which of the following statements is FALSE?
A : Saltatory conduction is the approach in which a patients good arm is restrained in order to force his or her impaired arm to be more active with a resulting increase in neurogenesis in the damaged part of the brain.
B : Approaches involving neurogenesis are offering hope for persons suffering from a variety of disabilities, such as depression, addiction, and schizophrenia.
C : A healthy 75-year-old brain has just as many neurons as it did when it was 25 years old.
D : Although the brain loses cells daily, it simultaneously grows new neurons to replace them.

Correct Answer : A

212 : Anatomists learned that the brain is made up of many distinct areas or parts by cutting apart autopsied human and animal brains and then examining them under a microscope. This procedure being used is known as
A : lateralization.
B : neural induction.
C : corticalization.
D : dissection.

Correct Answer : D

213 : Dissection revealed that the brain was made up of many anatomically distinct areas or parts. This technique involves
A : linking specific structures in the brain with specific psychological or behavioral functions.
B : direct electrical stimulation and activation of brain tissue.
C : cutting apart autopsied human and animal brains and examining them under a microscope.
D : studying subtle behavioral signs of nervous system dysfunction, including clumsiness, an awkward gait, poor hand-eye coordination, and other perceptual and motor problems.

Correct Answer : C

214 : Dissection reveals that the brain is made up of many anatomically distinct areas composed of clusters of neuron cell bodies interspersed by bundles of myelinated axons and pathways between those clusters. These clusters of neuron cell bodies are referred to as
A : gray matter.
B : white matter.
C : the limbic system.
D : the subcortex.

Correct Answer : A

215 : Dissection reveals that the brain is made up of many anatomically distinct areas composed of clusters of neuron cell bodies interspersed by bundles of myelinated axons and pathways between those clusters. These bundles of myelinated axons are referred to as
A : gray matter.
B : white matter.
C : the limbic system.
D : the subcortex.

Correct Answer : B

216 : Which of the following brain tools can be used to map location, shape, and size of brain structures in living brains as well as any abnormal structures, such as tumors, that may be present?
A : CT scan and MRI scan
B : PET scan and EEG
C : ESB
D : deep lesioning

Correct Answer : A

217 : CT scans and MRI scans are considered _____ imaging techniques.
A : structural
B : functional
C : subcortical
D : hemispheric

Correct Answer : A

218 : Using which brain tool is X-ray information collected by a computer from a number of different angles and then formed into an image of the brain to reveal the effects of strokes, injuries, tumors, and other brain disorders?
A : CT scan
B : EEG
C : PET scan
D : functional MRI

Correct Answer : A

219 : A specialized type of X-ray was used to show the area where a tumor was located within a patients brain. This type of X-ray is known as
A : a computed tomographic scan.
B : electroencephalography.
C : positron emission tomography.
D : functional magnetic resonance imaging.

Correct Answer : A

220 : During practice, a football player experiences symptoms commonly associated with having a stroke. The coaches rush him to the hospital so that the doctors can view the structure of this players brain using a specialized X-ray technique known as a(n)
A : ESB.
B : CT scan.
C : PET scan.
D : ablation.

Correct Answer : B

221 : Which of the following structural brain techniques may expose patients to unhealthy doses of radioactivity with repeated use?
A : ablations
B : EEGs
C : CT scans
D : MRI scans

Correct Answer : C

222 : The technique that uses a magnetic field to develop an image of the brain is called the
A : ESB.
B : ablation technique.
C : MRI scan.
D : EEG.

Correct Answer : C

223 : The MRI scan obtains an image of the brain by using
A : electrode patches placed on the skull.
B : magnetic fields.
C : x-rays.
D : radioactive glucose.

Correct Answer : B

224 : Clarence was in a car accident, and the doctor suspects that he may have suffered damage to his brain. He is put in a chamber with a strong magnetic field that will yield a three-dimensional picture of Clarences brain. Which technique is being utilized?
A : EEG
B : MRI
C : PET
D : CT

Correct Answer : B

225 : Juans physician has told him that he wants him to take a test that will give a three-dimensional representation of Juans brain. This procedure will require Juan to be placed in a strong magnetic field. The test being discussed is the
A : EEG.
B : CT scan.
C : MRI scan.
D : PET scan.

Correct Answer : C

226 : Which of the following techniques produces the most detailed images of brain structures and allows any two-dimensional plane, or slice, of the body to be selected and displayed as an image on a computer screen?
A : MRI scan
B : ESB
C : CT scan
D : EEG

Correct Answer : A

227 : Which of the following structural imaging techniques allows scientists to peer into the living brain, almost as if it were transparent, with recent developments in this technique making it possible to explore pathways in the brain in ever great detail?
A : MRI scan

B : CT scan
C : PET scan
D : EEG

Correct Answer : A

228 : The study of how biological processes, the brain, and the nervous system are related to behavior is called
A : neuroinduction.
B : biopsychology.
C : physiological behaviorism.
D : ablation.

Correct Answer : B

229 : Jessie is a psychologist who specializes in how a persons biological processes, brain, and nervous system are related to behavior. Jessie would be referred to as a
A : neurogenic psychologist.
B : biopsychologist.
C : physiological behaviorist.
D : cranial behaviorist.

Correct Answer : B

230 : Dr. Amad is a psychologist who is studying how parts of the brain control particular mental or behavioral functions, such as being able to recognize faces, speak, problem-solve, or move ones hands or feet. Dr. Amad would be referred to as a
A : neurogenic psychologist.
B : biopsychologist.
C : physiological behaviorist.
D : cranial behaviorist.

Correct Answer : B

231 : The research strategy of linking specific structures in the brain with specific psychological or behavioral functions is known as
A : ablation.
B : constraint-induced functionality.
C : localization of function.
D : functional analysis.

Correct Answer : C

232 : When a researcher tries to identify which structures in the brain control specific psychological or behavioral functions, such as recognizing faces or moving the hands, the basic research strategy is called
A : localization of function.
B : constraint-induced analysis.
C : extrapolated functional analysis.
D : neuroplasticity.

Correct Answer : A

233 : If damage to a particular part of the brain consistently leads to a particular loss of function, then we say that the function is
A : localized in that structure.
B : generalized for that structure.
C : ablated within that structure.
D : constrained to that structure.

Correct Answer : A

234 : Many techniques have been developed to help identify brain structures and the functions they control. These research techniques are part of the basic research strategy known as
A : constraint-induced analysis.
B : localization of function.
C : neuroplastic analysis.
D : functional lateralization.

Correct Answer : B

235 : Studies that examine changes in personality, behavior, or sensory capacity caused by brain diseases or injuries and help doctors to localize function by linking psychological or behavioral capacities with particular brain structures are known as
A : neural induction.
B : neurogenesis.
C : functional analysis.
D : case studies.

Correct Answer : D

236 : A detailed investigation of a single person, especially one suffering from some injury or disease, is known as a natural clinical test, or a(n)
A : ablation.
B : functional analysis.
C : case study.
D : neural dissection.

Correct Answer : C

237 : A psychiatrist does a lengthy and thorough examination of a patient in a hospital. This patient was the victim of a car accident, in which a pen that was lying on the dashboard actually pierced her skull and her brain. The psychiatrist performs physical examinations, interviews with the patient and family members, and closely observes her behavior. This technique is known as a(n)
A : case study.
B : ablation.
C : ESB.
D : functional analysis.

Correct Answer : A

238 : After Phineas Gages accident in which a metal rod entered his brain, the doctors kept notes on his behavior, used tests to measure various responses, and interviewed Phineas and those who knew him. His brain injury was studied using a(n)
A : ablation.

B : case study.
C : ESB.
D : functional analysis.

Correct Answer : B

239 : Which of the following are not direct tests of the brain, but are subtle outward behavioral signs of nervous system dysfunction that have been used to diagnose problems ranging from childhood learning disorders to psychosis?
A : confabulations
B : neurological soft signs
C : neural inductions
D : brain embolisms

Correct Answer : B

240 : Jacob suspects he may have had a stroke because he is having some difficulty in controlling his right hand and feels numbness on the right side of his face. This behavioral evidence of possible brain damage is called
A : neurological soft signs.
B : spatial neglect.
C : neurogenesis.
D : virilism.

Correct Answer : A

241 : Ray awoke one morning to find that he could not see anything in the upper right side of his visual field, his right eye and the right side of his mouth looked different in the mirror, his gait when walking was a bit awkward, and he felt generally clumsy. Ray is exhibiting
A : neurological soft signs of a stroke.
B : the initial onset of spatial neglect.
C : hard neurological signs of facial agnosia.
D : the initial onset of Alzheimers disease.

Correct Answer : A

242 : The symptoms of memory loss, trouble spelling words, depression, and moodiness exhibited by Dave Duerson and other NFL football players who had suffered concussions would be considered
A : neurological soft signs.
B : symptoms of spatial neglect.
C : functional lateralizations.
D : confabulations.

Correct Answer : A

243 : Max, a seventy-year-old man, has recently been exhibiting a somewhat awkward gait and poor eye-hand coordination as well as slight changes to his personality. His family encourages him to see a doctor, who determines that Max has had a slight stroke. Maxs family had observed
A : neural inductions.
B : psychotic indicators.
C : confabulations.

D : neurological soft signs.

Correct Answer : D

244 : The use of an electrode to stimulate small areas of the brain beneath the surface is called
A : ESB.
B : deep lesioning.
C : fMRI.
D : electroencephalography.

Correct Answer : A

245 : Any device, such as a wire, needle, or metal plate, used to electrically stimulate or destroy nerve tissue or to record its activity is called a(n)
A : electrode.
B : inductor.
C : neuralizer.
D : telemetry instrument.

Correct Answer : A

246 : A doctor activates the surface of a patients brain by touching it with a small electrified wire and the patient tells the doctor what effect the stimulation had. Regarding this procedure, which of the following statements is TRUE?
A : This procedure is impossible because patients cannot be awake during brain procedures.
B : The doctor is performing an ablation.
C : The doctor is using an electrode to turn on brain structures.
D : The doctor is using an EEG to turn on brain structures.

Correct Answer : C

247 : Regarding the use of brain stimulation research, which of the following statements is FALSE?
A : Brain research is often based on electrical stimulation, but chemical stimulation is also used at times.
B : Electrical stimulation of the brain (ESB) has been used to instantly call forth euphoria, aggression, or tears in a person.
C : Electrical stimulation of the brain (ESB) is done during brain surgery while the patient is awake, so they can describe the effect of the stimulation.
D : Electrical stimulation of the brain (ESB) cannot be used to bring forth behaviors, such as eating, sleeping, or speech in a person.

Correct Answer : D

248 : Scientists implanted an electrode into a specific area of a rats brain. When the electrode was activated, which in turn activated the target area, the rat aggressively attacked a cat within the same cage. The technique being utilized by the scientists is known as
A : ESB.
B : ablation.
C : deep lesioning.
D : PET.

Correct Answer : A

249 : In biopsychology, the surgical removal of tissue from the surface of the brain is called
A : ablation.
B : neuroplasticity.
C : the clinical method.
D : neural induction.

Correct Answer : A

250 : Pierre Flourens surgically removed portions of a rabbits cerebellum with the rabbit subsequently showing extreme problems with motor coordination. This surgical removal of the surface portions of the cerebellum is an example of
A : ablation.
B : deep lesioning.
C : ESB.
D : fMRI.

Correct Answer : A

251 : Dr. Anton removed a tumor from the back surface area of a patients brain. After removal of this brain tissue, the patient experienced extreme visual problems. This type of surgical removal of brain tissue is called
A : deep lesioning.
B : ablation.
C : ESB.
D : fMRI.

Correct Answer : B

252 : The destruction of brain tissue occurs with both deep lesioning and with surgical
A : fMRI.
B : PET.
C : electroencephalography.
D : ablation.

Correct Answer : D

253 : The use of an electrode to destroy small areas of the brain beneath the surface is called
A : PET.
B : neural induction.
C : deep lesioning.
D : electroencephalography.

Correct Answer : C

254 : Scientists destroyed a tiny area of a cats limbic system by inserting a tiny electrode into this target area and then passing an electric current through the electrode. They then observed the cat for any changes in its behavior, which would provide clues about the function of this affected area. The procedure that was used to destroy the tiny area in the cats brain is known as
A : ESB.
B : neural induction.
C : deep lesioning.

D : FMRI.

Correct Answer : C

255 : In order to detect the electrical activity of a single neuron, a scientist would most likely use
A : ESB.
B : a microelectrode.
C : PET.
D : fMRI.

Correct Answer : B

256 : An extremely thin glass tube filled with a salty fluid with its tip being small enough to detect the electrical activity of a single neuron would be referred to as a(n)
A : pixel.
B : microelectrode.
C : PET scan.
D : fMRI.

Correct Answer : B

257 : Which of the following techniques provides a fascinating glimpse into the true origins of behavior by allowing scientists to view the action potentials of a single neuron?
A : ablation
B : deep lesioning
C : PET scans
D : microelectrode recording

Correct Answer : D

258 : PET scans and EEGs are considered _____ imaging techniques.
A : structural
B : functional
C : hemispheric
D : subcortical

Correct Answer : B

259 : Biopsychologists are able to pinpoint areas in the brain responsible for thoughts, feelings, and actions using all of the following EXCEPT for the
A : EEG.
B : fMRI.
C : PET scan.
D : CT scan.

Correct Answer : D

260 : Three of these techniques allow scientists to observe the activity of parts of the brain without doing any damage at all. Which technique would cause some degree of damage to the living brain?
A : EEG
B : fMRI
C : PET scan

D : ablation

Correct Answer : D

261 : An electroencephalograph (EEG) records
A : the number of neurons in the brain.
B : electrical impulses from the brain.
C : chemical activity in the cranial nerves.
D : the amount of glucose being utilized by the brain.

Correct Answer : B

262 : The procedure that detects, amplifies, and records electrical activity in the brain is known as
A : electrical stimulation of the brain (ESB).
B : functional MRI (fMRI).
C : electroencephalography (EEG).
D : positron emission tomography (PET).

Correct Answer : C

263 : Greg is participating in a sleep lab experiment. Electrodes are affixed to his scalp to measure the beta, alpha, theta, and delta waves Greg exhibits as he goes through the various stages of sleep. What technique is being utilized?
A : EEG
B : MRI
C : PET scan
D : CT scan

Correct Answer : A

264 : Martina has what appears to be a seizure. To verify whether Martina has epilepsy, her doctor affixes small disk-shaped mental plates to Martinas scalp in order to obtain a recording of her brain waves. What technique is being utilized?
A : MRI
B : EEG
C : PET scan
D : CT scan

Correct Answer : B

265 : Brain wave activity during sleep, daydreaming, hypnosis, and other mental states is likely to be studied using a(n)
A : CT scan.
B : MRI scan.
C : electroencephalograph.
D : implanted microelectrode.

Correct Answer : C

266 : Which of the following is an imaging technique that results in a computer-generated image of brain activity and is based on glucose consumption in the brain?
A : computed tomographic scan (CT scan)

B : electroencephalography (EEG)
C : magnetic resonance imaging (MRI)
D : positron emission tomography (PET)

Correct Answer : D

267 : By detecting the subatomic particles emitted by weakly radioactive glucose as it is consumed by the brain, researchers are able to obtain detailed images of activity both near the surface and below the surface of the brain. This technique is called a(n)
A : ablation.
B : PET scan.
C : MRI scan.
D : CT scan.

Correct Answer : B

268 : A PET scan records the amount of which radioactive substance used by brain cells?
A : potassium
B : iodine
C : glucose
D : sodium

Correct Answer : C

269 : Anthony was a subject in a study in which the glucose in his brain was marked with a radioactive substance. Then the detectors identified the especially active brain areas. Anthony participated in a study that employed a(n)
A : EEG.
B : MRI scan.
C : PPRC.
D : PET scan.

Correct Answer : D

270 : By placing positron detectors around the head and sending data to a computer, it is possible to create a moving, color picture of changes in brain activity using a(n)
A : MRI.
B : CT scan.
C : PET scan.
D : ESB recording.

Correct Answer : C

271 : Regarding PET scans, which of the following statements is FALSE?
A : PET scans provide detailed images of activity both near the surface and below the surface of the brain.
B : PET scans detect the negative ion particles emitted by weakly radioactive sodium and potassium as they are consumed by the brain.
C : PET scans show which areas of the brain are using more energy, with higher energy use corresponding with higher activity.
D : PET scans have suggested that different patterns of brain activity accompany major psychological disorders, such as depression or schizophrenia.

Correct Answer : B

272 : Regarding the findings obtained through brain scan research, which of the following statements is FALSE?
A : Most people use only 10 percent of their brain capacity.
B : Brain scans show that all parts of the brain are active during the waking hours.
C : Some people make better use of their innate brainpower than others.
D : A normally functioning brain has no great hidden or untapped reserves of mental capacity.

Correct Answer : A

273 : Psychiatrist Daniel Langleben and his colleagues have used a new brain technique to tell if a person is lying, with the front of the brain being more active when a person is lying rather than telling the truth. This technology is the
A : CT scan.
B : MRI scan.
C : EEG.
D : fMRI.

Correct Answer : D

274 : Psychiatrist Daniel Langleben and his colleagues have used fMRI technology to tell if a person is lying. When a person was lying, the
A : front of the brain became more active.
B : back of the brain became more active.
C : brainstem became less active.
D : entire brain became less active.

Correct Answer : A

275 : Humans are superior to all other animals in
A : intelligence.
B : sensory sensitivity.
C : speed and strength.
D : all of these skills.

Correct Answer : A

276 : Compared with other creatures, our human intelligence is specifically related to the fact that our brains have a much larger
A : limbic system.
B : cerebellum.
C : cerebral cortex.
D : reticular formation.

Correct Answer : C

277 : In a comparison of the human brain with other animals, which of the following statements is FALSE?
A : Whales have the largest brains in overall size.
B : Humans have a larger brain weight to body weight ratio than any other mammal.
C : Many parts of our brain are surprisingly similar to corresponding brain areas in other animals, such as lizards.

D : Compared with other creatures, our brains have a much larger cerebral cortex.

Correct Answer : B

278 : Regarding brain size and abilities, which of the following statements is FALSE?
A : A small positive correlation exists between intelligence and brain size.
B : The brain of lower animals is twisted and folded, while the human brain is smooth.
C : Many parts of the human brain are surprisingly similar to corresponding brain areas in lower animals, such as lizards.
D : Other animals surpass humans in almost every category of strength, speed, and sensory sensitivity.

Correct Answer : B

279 : Which is more important in gauging the intelligence of humans versus other animals?
A : the size of the cerebral cortex
B : the overall size of the entire brain
C : the ratio of brain weight to body weight
D : the overall weight of the entire brain

Correct Answer : A

280 : Which area of the brain is responsible for the human intellectual superiority within the animal kingdom?
A : hippocampus
B : corpus callosum
C : cerebellum
D : cerebral cortex

Correct Answer : D

281 : The most obvious difference between the human brain and the brain of a fish would be in the
A : hypothalamus.
B : thalamus.
C : cerebellum.
D : cerebral cortex.

Correct Answer : D

282 : Although Einsteins brain was of normal overall size, there were parts of his cerebral cortex that had a unique anatomy and were larger than in most other brains. The parts of Einsteins cerebral cortex that were larger were the ones necessary for
A : memory.
B : verbal reasoning.
C : spatial reasoning.
D : auditory comprehension.

Correct Answer : C

283 : Which part of the brain consists of two large hemispheres, which are divided into smaller areas known as lobes?
A : cerebellum

B : cerebral cortex
C : limbic system
D : reticular formation

Correct Answer : B

284 : In humans, which of the following looks like a giant, wrinkled walnut that consists of the two large hemispheres and covers the upper part of the brain?
A : cerebellum
B : cerebral cortex
C : limbic system
D : hippocampus

Correct Answer : B

285 : The cerebral cortex is divided into two
A : reticular formations.
B : fissures.
C : lobes.
D : hemispheres.

Correct Answer : D

286 : The cerebral cortex is divided into eight smaller areas known as
A : reticular formations.
B : amygdalas.
C : lobes.
D : hemispheres.

Correct Answer : C

287 : Regarding the cerebral cortex of humans, which of the following statements is FALSE?
A : The cerebral cortex covers most of the brain with a mantle of gray matter.
B : The cerebral cortex is only 10 millimeters thick (one third of an inch).
C : The cerebral cortex contains 70 percent of the neurons in the central nervous system.
D : The cerebral cortex shows corticalization.

Correct Answer : B

288 : Seventy percent of the neurons in the central nervous system of humans are located in the
A : cerebral cortex.
B : frontal lobe.
C : spinal cord.
D : medulla.

Correct Answer : A

289 : The cerebral cortex in humans accounts for what percent of all the neurons in the central nervous system?
A : 10 percent
B : 40 percent
C : 70 percent

D : 99 percent

Correct Answer : C

290 : Which of the following is the brain area in humans that is largely responsible for our ability to use language, make tools, acquire complex skills, and live in complex social groups?
A : cerebral cortex
B : hypothalamus
C : limbic system
D : reticular activation system

Correct Answer : A

291 : Compared to the human brain, the cortex of lower animals
A : is small and smooth.
B : is twisted and folded.
C : is extremely corticalized.
D : contains 90 percent of the neurons in the central nervous system.

Correct Answer : A

292 : The increased size and wrinkling of the cerebral cortex in higher animals is referred to as
A : cerebralization.
B : hemispherization.
C : corticalization.
D : reticulation.

Correct Answer : C

293 : Human intelligence and the ability to acquire complex skills are basically a result of
A : responsive sensory organs.
B : great upper-body strength.
C : brain corticalization.
D : superior native instincts.

Correct Answer : C

294 : Half-globes is the literal translation for the
A : frontal lobes.
B : two parts of the amygdala.
C : hemispheres of the brain.
D : corpus callosum.

Correct Answer : C

295 : The two cerebral hemispheres are connected by a band of fibers called
A : the corpus callosum.
B : the lateral cortex.
C : the cerebellum.
D : association fibers.

Correct Answer : A

296 : The corpus callosum is a thick band of fibers that connect
A : the hindbrain to the midbrain.
B : the motor cortex to the frontal lobe.
C : hindbrain to the spinal cord.
D : the two cerebral hemispheres.

Correct Answer : D

297 : Differences between the two sides of the body, especially differences in the abilities of the brain hemispheres, is called
A : ablation.
B : corticalization.
C : lateralization.
D : neuroplasticity.

Correct Answer : C

298 : The left hemisphere mainly controls the right side of the body, while the right hemisphere controls the left side of the body. This specialization in the abilities of the two hemispheres is called
A : dexterity.
B : lateralization.
C : corticalization.
D : neuroplasticity.

Correct Answer : B

299 : In humans, the right side of the brain mainly controls which part of the body?
A : right side
B : left side
C : lower half
D : upper half

Correct Answer : B

300 : In humans, the left side of the brain mainly controls which part of the body?
A : right side
B : left side
C : lower half
D : upper half

Correct Answer : A

301 : John has some paralysis and loss of sensation on his right side after a motorcycle accident. It is likely that there is brain damage in the
A : cerebellum.
B : left hemisphere.
C : corpus callosum.
D : right hemisphere.

Correct Answer : B

302 : When patients with right-hemisphere strokes ignore the left side of their visual space or

refuse to acknowledge their paralyzed left arms, they are exhibiting
A : aphasia.
B : amnesia.
C : spatial neglect.
D : agnosia.

Correct Answer : C

303 : A person exhibiting spatial neglect for their left visual field most likely has had damage to the
A : right hemisphere.
B : left hemisphere.
C : corpus callosum.
D : cerebellum.

Correct Answer : A

304 : Ellie had a right hemisphere stroke. During her rehabilitation period, her family and the hospital staff noticed that she placed all articles on the right side of the dresser and did not notice an article if it was placed on the left side until it was brought to her attention. Even when eating, she tended to eat the food items on the right side of the plate before she even noticed food items on the left side. Ellie was exhibiting
A : aphasia.
B : agnosia.
C : perceptual neglect.
D : spatial neglect.

Correct Answer : D

305 : A person exhibiting spatial neglect will have difficulty
A : making speech sounds.
B : understanding speech.
C : identifying the faces of familiar persons.
D : attending to one side of their visual field.

Correct Answer : D

306 : Through his study of split-brain patients, which of the following scientists won a Nobel Prize in 1981 for his discovery that the right and left brain hemispheres perform differently on tests of language, perception, music, and other capacities?
A : Richard J. Haier
B : Roger Sperry
C : Paul Broca
D : John Dewey

Correct Answer : B

307 : By studying split-brain patients, scientists discovered that the right hemisphere is especially adapted for handling perceptual skills, such as drawing a picture or recognizing melodies, while the left hemisphere is especially adapted for the production and understanding of speech. This difference is referred to as
A : brain corticalization.
B : spatial discrimination.

C : hemispheric lateralization.
D : peripheral localization.

Correct Answer : C

308 : An important outcome of Sperrys split-brain research was
A : an understanding of hemispheric lateralization.
B : a procedure for treating schizophrenia.
C : insight into the relationships between the central and peripheral nervous systems.
D : a technique for training enhanced creativity.

Correct Answer : A

309 : The surgical procedure of cutting the corpus callosum is done in cases of
A : communication problems.
B : severe epilepsy.
C : injury or stroke.
D : split personality.

Correct Answer : B

310 : Velishea has severe epileptic seizures that cannot be controlled by medication. Therefore, her doctor suggests that a surgery might help. The surgery would involve
A : cutting the corpus callosum.
B : removing the hippocampus.
C : stimulating the brains pleasure centers.
D : severing the connection between the prefrontal lobe and the hypothalamus.

Correct Answer : A

311 : In order to perform a split-brain operation, which of the following would be severed?
A : pons
B : cerebellum
C : corpus callosum
D : cerebral cortex

Correct Answer : C

312 : Regarding the split-brain operation, which of the following statements is FALSE?
A : After a split-brain operation, it is possible to send information to one hemisphere or the other.
B : After a split-brain operation, each hemisphere will have its own separate perceptions, concepts, and impulses to act.
C : If a conflict between the two hemispheres arises after the split-brain operation, one hemisphere will usually override the other.
D : Most people show a change in hand dominance after a split-brain operation.

Correct Answer : D

313 : After a split-brain operation, the majority of these patients
A : show severe impairment of language ability.
B : show constant competition between the two hemispheres.
C : function relatively normally, unless submitted to specialized testing.

D : show a change in hand dominance.

Correct Answer : C

314 : After a split-brain operation, conflicts between the actions of the two hemispheres are actually rare because
A : the right hemisphere will always be the dominant hemisphere.
B : the left hemisphere will always be the dominant hemisphere.
C : information still must pass through the hypothalamus before one can respond.
D : both halves of the brain normally have about the same experience at the same time.

Correct Answer : D

315 : The most likely consequence of a split-brain operation is a patient
A : whose actions are in continual conflict.
B : with sharply diminished intellectual capacity.
C : who acts normally in most situations.
D : with a schizophrenic personality.

Correct Answer : C

316 : We flash a picture of a tree to the right brain of a split-brain patient and a picture of a dog to his left brain. If we ask the split-brain patient to draw what he saw using his left hand (out of sight), he will
A : draw a dog.
B : draw a tree.
C : draw both a dog and a tree.
D : be unable to draw either picture.

Correct Answer : B

317 : If a split-brain subject were given a key (hidden from sight) to feel with his left hand, he
A : could easily name what he had touched.
B : would be unable to describe the object.
C : would be able to point to the key with his right hand.
D : would have to wait for the information transfer to take place before describing it.

Correct Answer : B

318 : A circle is flashed to the left brain of a split-brain patient, and he is asked what he saw. The split-brain patient will be
A : able to easily name what he saw.
B : unable to verbally describe the circle.
C : able to point to a picture of a circle with his left hand.
D : unable to draw the circle with his right hand.

Correct Answer : A

319 : If a triangle is flashed to a split brain patients right brain, he will be able to
A : easily name what he saw.
B : draw the triangle with his right hand.
C : point to a picture of a triangle with his left hand.
D : point and draw the triangle with both of his hands.

Correct Answer : C

320 : In most people, the left hemisphere of the brain is in charge of
A : language.
B : art.
C : pattern recognition.
D : music.

Correct Answer : A

321 : Roughly 95 percent of people mainly use which part of the brain for speaking, writing, and reading skills?
A : right cerebral hemisphere
B : cerebellum
C : limbic system
D : left cerebral hemisphere

Correct Answer : D

322 : Which part of the brain is superior at speech, language, math calculation, judging time and rhythm, and coordinating the order of complex movements?
A : left hemisphere
B : right hemisphere
C : limbic system
D : reticular activating system

Correct Answer : A

323 : Seans skills in computational math and analytic thought are mainly a function of the
A : right hemisphere.
B : left hemisphere.
C : midbrain.
D : limbic system.

Correct Answer : B

324 : Judging time and rhythm and coordinating the order of complex movements, such as those needed for speech, are special skills of the
A : right hemisphere.
B : left hemisphere.
C : corpus callosum.
D : limbic system.

Correct Answer : B

325 : For most people, an injury to which of the following brain areas would result in impairment of speaking, reading, writing, and math calculation abilities?
A : right cerebral hemisphere
B : cerebellum
C : limbic system
D : left cerebral hemisphere

Correct Answer : D

326 : A patient who has suffered brain damage to the left hemisphere is likely to experience diminished capacity for
A : naming objects.
B : recognizing faces.
C : composing melodies.
D : expressing emotions.

Correct Answer : A

327 : Carrie has experienced brain damage to her left hemisphere. She will most likely experience difficulty with which ability?
A : putting a puzzle together
B : recognizing faces
C : judging time and rhythm
D : understanding sarcasm and irony

Correct Answer : C

328 : Sue has recovered from extensive injury to her left cerebral hemisphere and has continued her career with little sign of impairment. Her occupation is most likely
A : graphic artist.
B : accountant.
C : English teacher.
D : sports writer for a newspaper.

Correct Answer : A

329 : Which of the following best describes how the left hemisphere deals with information?
A : processes information simultaneously
B : focuses on the small details
C : explores the overall pattern and general connections
D : must use non-verbal responses

Correct Answer : B

330 : The left hemisphere processes information
A : simultaneously.
B : sequentially.
C : holistically.
D : through general connections.

Correct Answer : B

331 : The most accurate conclusion that can be drawn from research on the brain is that
A : normal people can be taught to use one hemisphere at a time.
B : most people use the right hemisphere more often than the left hemisphere.
C : only creative people can use both hemispheres simultaneously.
D : the activities of both hemispheres of the brain combine to produce most behaviors.

Correct Answer : D

332 : Regarding the functioning of the left and right hemispheres of the brain, which of the following statements is FALSE?
A : People normally use both sides of the brain at all times.
B : Some tasks may make more use of one hemisphere or the other.
C : A smart brain is one that sees the details first and then works it into an overall pattern.
D : Each hemisphere does the parts of the activity it does best and then shares the information with the other side.

Correct Answer : C

333 : Perceptual skills involved in putting puzzles together or recognizing musical melodies are special skills of the
A : right hemisphere.
B : left hemisphere.
C : midbrain.
D : corpus callosum.

Correct Answer : A

334 : Harriet has lost the ability to recognize faces, and she has also lost the ability to detect the emotions that other people are feeling. You would expect to find damage to her
A : left hemisphere.
B : right hemisphere.
C : midbrain.
D : cerebellum.

Correct Answer : B

335 : The right hemisphere in humans
A : is the major or dominant one in most right-handed persons.
B : controls psychomotor activity on the right side of the body.
C : governs the ability to use language, do math, and engage in analytical acts.
D : is involved in recognizing faces and in the expression of emotion.

Correct Answer : D

336 : Successfully negotiating a maze, sculpting pottery, or painting a watercolor is a function of the
A : corpus callosum.
B : left hemisphere.
C : right hemisphere.
D : temporal lobe.

Correct Answer : C

337 : Sam has experienced brain damage to his right hemisphere. He will most likely experience difficulty with which ability?
A : math calculation
B : expressing emotions
C : judging time and rhythm
D : ordering of complex movements

Correct Answer : B

338 : Which of the following brain areas was most likely damaged if a person loses his or her ability to understand jokes, irony, sarcasm, and the overall context in which something is said?
A : left hemisphere
B : right hemisphere
C : amygdala
D : corpus callosum

Correct Answer : B

339 : After having a stroke, Rich can speak and understand what has been said to him, but he now has great difficulty understanding the context in which something is said. Rich also misunderstands sarcasm and jokes. Rich has most likely suffered a stroke to
A : the left hemisphere.
B : the right hemisphere.
C : Brocas area.
D : Wernickes area.

Correct Answer : B

340 : Which of the following best describes how the right hemisphere deals with information?
A : processes information sequentially
B : focuses on the small details
C : explores the overall pattern and general connections
D : coordinates the order and sequencing of complex movements

Correct Answer : C

341 : The right hemisphere processes information
A : simultaneously.
B : sequentially.
C : by specific details.
D : analytically.

Correct Answer : A

342 : Which part of the brain sees the world from a wide-angle view and is particularly effective at assembling pieces of the world into a coherent picture by seeing overall patterns and general connections?
A : cerebellum
B : right hemisphere
C : left hemisphere
D : corpus callosum

Correct Answer : B

343 : In studies of mens and womens brains, which of the following statements is FALSE?
A : No physical differences between male and female brains have been found.
B : When presented with a language task, both men and women showed increased activity in Brocas area.
C : During the language task, both the left and right brains were activated in more than half the women tested.
D : Men and women performed equally well on a task that involved sounding out words.

Correct Answer : A

344 : In studies of mens and womens brains, it is currently being hypothesized that
A : the two hemispheres appear to be more interconnected in women than in men.
B : women tend to show a front-to-back connection pattern of the hemispheres, which makes them more willing to quickly go from perception to action.
C : men tend to show a left-to-right connection pattern of the hemispheres, which makes them more willing to combine rational and intuitive judgments.
D : no physical or functional differences exist between male and female brains.

Correct Answer : A

345 : Regarding the studies of mens and womens brains, which of the following statements is FALSE?
A : Many physical differences have been found between male and female brains with these structural differences theorized to be the basis for the observed functional differences between mens and womens brains.
B : It has been hypothesized that women show a left-to-right connection pattern of the hemispheres, which makes them more willing to combine rational and intuitive judgments.
C : It has been hypothesized that men show a front-to-back connection pattern of the hemispheres, which makes them more willing to quickly go from perception to action.
D : The two hemispheres appear to be more interconnected in men than in women.

Correct Answer : D

346 : In studies of mens and womens brains, it was hypothesized that women
A : use a front-to-back connection pattern of their brain hemispheres.
B : show a greater readiness than men to quickly go from perception to action.
C : use both sides of their brain for language and other forms of intelligence.
D : exhibit all of these characteristics.

Correct Answer : C

347 : In studies of mens and womens brains, it was hypothesized that men
A : show a left-to-right connection pattern of the hemispheres.
B : are more willing to combine rational and intuitive judgments than women are.
C : use both sides of their brain for language and other forms of intelligence.
D : show none of these characteristics.

Correct Answer : D

348 : In studies of mens and womens brains, it was hypothesized that women
A : show a left-to-right connection pattern of the hemispheres.
B : are more willing to combine rational and intuitive judgments than men are.
C : use both sides of their brain for language and other forms of intelligence.
D : show all of these characteristics.

Correct Answer : D

349 : After damage to Brocas area, many women tend to regain more of their lost language abilities than men because
A : Brocas area in women is larger than mens, making it harder to damage completely.

B : women tend to use a front-to-back connection of the hemispheres in processing language.
C : women tend to use both hemispheres of the brain for language.
D : women have more neurilemma within their brains, which aids the repair of damaged nerve tissue.

Correct Answer : C

350 : Many women typically recover from strokes that result in aphasia faster than men do because many women
A : rarely have strokes in the left hemisphere.
B : process language in both hemispheres.
C : have a larger hippocampus than men.
D : have a larger hypothalamus than men.

Correct Answer : B

351 : Mary and John are both in their 30s, while Frank is in his 60s. All three are listening to a speech pathologist pronounce words that they then repeat. Research shows that this use of language is more likely to occur in both sides of the brain of
A : Mary.
B : both Mary and John.
C : both John and Frank.
D : all three persons.

Correct Answer : A

352 : Which of the following are defined by large fissures on the surface of the cortex or are regarded as separate areas because of their function?
A : the limbic systems
B : the lobes
C : the ventromedial chisms
D : the saltatory connections

Correct Answer : B

353 : Which lobes of the brain are associated with motor movements as well as higher mental abilities, such as ones sense of self?
A : frontal
B : parietal
C : temporal
D : occipital

Correct Answer : A

354 : An arch of tissue called the primary motor area directs the bodys muscles and is located at the rear of which lobes of the brain?
A : frontal
B : occipital
C : parietal
D : temporal

Correct Answer : A

355 : A researcher wishes to place electrodes in the brain so that existing motor activity can be used to control an artificial hand designed for amputees. The researcher should place the electrodes in the
A : temporal lobe.
B : limbic system.
C : frontal lobe.
D : midbrain.

Correct Answer : C

356 : Voluntary muscle movement originates in the primary motor cortex, which is located in the _____ lobes.
A : parietal
B : temporal
C : frontal
D : occipital

Correct Answer : C

357 : Which of the following parts of the body would have the largest area represented on the motor area with regards to dexterity?
A : shoulder
B : feet
C : torso
D : hand

Correct Answer : D

358 : Regarding dexterity, there is a greater portion of motor cortex devoted to the
A : hands and fingers.
B : feet and toes.
C : legs.
D : arms.

Correct Answer : A

359 : Drawings that represent the areas taken up by the various body parts on the motor cortex appear distorted because they are based on which of the following aspects regarding these body parts?
A : their relative size
B : their tactile sensitivity
C : their evolutionary origin
D : their dexterity

Correct Answer : D

360 : Due to neuroplasticity, violin, viola, and cello players have a larger proportion of which of the following areas devoted to their hands?
A : association cortex
B : motor cortex
C : reticular formation
D : limbic system

Correct Answer : B

361 : Which of the following are located in the motor cortex and are active when we perform an action or when we merely observe one?
A : pons
B : mirror neurons
C : neurogenetic nodes
D : neurilemmas

Correct Answer : B

362 : The action of which of the following may explain how we can intuitively understand the behavior of others and may also underlie our ability to learn new skills by imitating others?
A : pons
B : neurogenetic nodes
C : mirror neurons
D : neurilemmas

Correct Answer : C

363 : While Italian researchers were recording the activity of a single neuron in the motor cortex of a monkey, they noticed that this neuron responded the same way whether the monkey was actually performing the motor task or just observing a researcher performing the task. This observation led to the discovery of the
A : amygdala.
B : effector cell.
C : mirror neuron.
D : neurilemma.

Correct Answer : C

364 : Neuroscientists speculate that newborn humans (and monkeys) are able to imitate others because networks of specific types of neurons are activated when an infant watches someone perform an action with this same network being used to perform that action. These specific types of neurons are called _____ neurons.
A : effector
B : sensory
C : reflector
D : mirror

Correct Answer : D

365 : The activation of mirror neurons may play a role in a persons ability to identify with another persons experiences and feelings, a skill known as human
A : empathy.
B : evaluation.
C : intuition.
D : reflection.

Correct Answer : A

366 : The human capacity to empathize and identify with other peoples points of view and their feelings may arise directly from the activation of

A : mirror neurons.
B : the pons.
C : neurogenic nodes.
D : neurilemmas.

Correct Answer : A

367 : A malfunction of the mirror neurons has been implicated in an early childhood condition in which the child shows impaired social interaction and communication as well as restricted and repetitive behavior, such as head banging. This condition is known as
A : autism spectrum disorders.
B : Tourettes syndrome.
C : acromegaly.
D : Down syndrome.

Correct Answer : A

368 : Which theory explains that autism may arise in infants due to specific neurons in the frontal lobe being damaged by genetic defects or environmental risk factors?
A : activation-synthesis hypothesis
B : broken mirrors hypothesis
C : cognitive dissonance theory
D : gate control theory

Correct Answer : B

369 : According to the broken mirrors hypothesis, which of the following disorders that involves impaired social interaction and communication may arise in infants whose mirror neuron system has been damaged by genetic defects or environmental risk factors?
A : acromegaly
B : agnosia
C : virilism
D : autism

Correct Answer : D

370 : According to one theory, autism may arise in some infants because genetic abnormalities or environmental risk factors damage the _____ system.
A : limbic
B : reticular activating
C : mirror neuron
D : endocrine

Correct Answer : C

371 : The parts of the cerebral cortex that receive information from the senses (sensory) or directly control the body (motor) are referred to as _____ areas.
A : primary
B : association
C : perceptual
D : temporal

Correct Answer : A

372 : Areas of the brain that are NOT primarily sensory or motor in function are called the
A : somatosensory areas.
B : association cortex.
C : temporal lobes.
D : incidental lobes.

Correct Answer : B

373 : The areas of the cerebral cortex that combine and process information are called _____ areas.
A : primary
B : association
C : perceptual
D : semantic

Correct Answer : B

374 : Which area of the cortex combines and processes information from the senses and contributes to higher mental abilities, such as language?
A : motor cortex
B : somatosensory cortex
C : aphasic cortex
D : association cortex

Correct Answer : D

375 : If you see a rose, which area of the brain will help you connect your primary sensory impressions with memories, so that you can recognize the rose and name it?
A : association area
B : aphasic cortex
C : somatosensory cortex
D : reticular activating system

Correct Answer : A

376 : A person with damage to the association areas in the left hemisphere would most likely suffer
A : paralysis.
B : deafness.
C : aphasia.
D : insensitivity to pain and temperature.

Correct Answer : C

377 : A person who has aphasia would have an impaired
A : ability to walk.
B : sense of smell.
C : ability to see.
D : ability to use language.

Correct Answer : D

378 : Aphasia would be described as a(n)
A : inability to recognize objects in ones left visual field.
B : loss of tactile sensations due to brain damage.
C : language disturbance resulting from brain damage.
D : blind spot due to damage in the occipital lobe.

Correct Answer : C

379 : Aphasia would be the likely result of damage to
A : the primary motor cortex of the frontal lobes.
B : Brocas area or Wernickes area.
C : the primary visual areas of the occipital lobes.
D : the cerebellum.

Correct Answer : B

380 : Following different accidents, Margo is unable to speak but can comprehend language, while Jeff is unable to comprehend the language he hears but can still produce speech sounds. Both are suffering from
A : agnosia.
B : aphasia.
C : spatial neglect.
D : damage to the primary somatosensory area.

Correct Answer : B

381 : The center for the production of speech in 95 percent of all people is located in the _____ association area.
A : left frontal
B : right frontal
C : right temporal
D : left temporal

Correct Answer : A

382 : Paul Brocas patient Tan lost his ability to speak because an area had deteriorated in his brain. This area is now called Brocas area and is located in the left _____lobe.
A : occipital
B : frontal
C : temporal
D : parietal

Correct Answer : B

383 : Damage to which of the following causes motor or expressive aphasia?
A : Wernickes area
B : Brocas area
C : the corpus callosum
D : the somatosensory cortex

Correct Answer : B

384 : Damage to Brocas area causes

A : motor (or expressive) aphasia.
B : receptive aphasia.
C : mindblindness.
D : facial agnosia.

Correct Answer : A

385 : Which area of the brain is most closely associated with grammar and the correct pronunciation of words?
A : the amygdala
B : Brocas area
C : Wernickes area
D : the thalamus

Correct Answer : B

386 : Damage to Brocas area causes great difficulty in
A : speaking or writing.
B : walking.
C : understanding the meaning of words.
D : feeling pain.

Correct Answer : A

387 : Jose has lost his ability to speak following a stroke, although he is still able to understand words spoken to him. Damage was most likely to
A : the occipital lobe.
B : Brocas area.
C : Wernickes area.
D : the limbic system.

Correct Answer : B

388 : When shown a picture of a spoon, Alfred says, foon, hoon, poon. Alfreds mispronunciation would be classified as a(n)
A : expressive aphasia.
B : fluent aphasia.
C : receptive aphasia.
D : primary agnosia.

Correct Answer : A

389 : After suffering a stroke, Emil often knows what he wants to say but cannot seem to utter the words. When he does speak, his pronunciation and grammar are poor, and his speech is slow and labored. However, Emil has no difficulty in understanding the speech of others. Emil has
A : receptive aphasia.
B : motor aphasia.
C : agnosia.
D : virilism.

Correct Answer : B

390 : A person with brain damage who mispronounces the word cross by saying croth and tsar for car would most likely have damage to
A : the amygdala.
B : Brocas area.
C : Wernickes area.
D : the corpus callosum.

Correct Answer : B

391 : Damage to the frontal lobe may affect all of the following EXCEPT
A : movement of body parts.
B : reasoning and planning ability.
C : tactile sensation of body parts.
D : personality.

Correct Answer : C

392 : Which part of the brain is related to complex behaviors with damage dramatically changing ones personality and emotional life?
A : prefrontal area
B : primary somatosensory area
C : corpus callosum
D : primary auditory area

Correct Answer : A

393 : Which part of the brain generates our sense of self, including our awareness of our current emotional state?
A : prefrontal cortex
B : primary somatosensory area
C : thalamus
D : Wernickes area

Correct Answer : A

394 : Phineas Gage underwent dramatic personality changes after he experienced serious damage to which lobe of his brain?
A : temporal
B : occipital
C : parietal
D : frontal

Correct Answer : D

395 : Ones reasoning and planning ability are centered within which lobes of the brain?
A : parietal
B : occipital
C : temporal
D : frontal

Correct Answer : D

396 : Which of the following changes would you expect to occur in someone whose frontal lobes

were damaged in an accident?
A : development of blind spots in the visual field
B : reduced capacity to hear high frequency sounds
C : reduced reasoning and planning abilities and changes in personality
D : inability to sense hot and cold

Correct Answer : C

397 : Because of his abuse of drugs, Miguel gets stuck on mental tasks and repeats the same answers over and over again, even when the answers are wrong. His abuse of drugs most likely caused damage to his _____ lobes.
A : temporal
B : occipital
C : parietal
D : frontal

Correct Answer : D

398 : Reduced function in which lobes of the brain has been shown to lead to greater impulsivity and an increased risk for drug addiction?
A : temporal
B : occipital
C : parietal
D : frontal

Correct Answer : D

399 : Bodily sensations such as touch, temperature, and pressure register in the _____ lobes.
A : occipital
B : parietal
C : temporal
D : frontal

Correct Answer : B

400 : The primary somatosensory area is located in the _____ lobes.
A : temporal
B : parietal
C : occipital
D : frontal

Correct Answer : B

401 : Regarding sensitivity, more of the primary somatosensory cortex is devoted to the
A : lips.
B : shoulder.
C : feet.
D : legs.

Correct Answer : A

402 : Which of the following parts of the body would have the largest area represented on the

primary somatosensory area?
A : foot
B : torso
C : arm
D : hand

Correct Answer : D

403 : Drawings that represent the areas taken up by the various body parts on the somatosensory cortex appear distorted because they are based on which of the following aspects regarding these body parts?
A : size
B : sensitivity
C : coordination
D : dexterity

Correct Answer : B

404 : Which of the following is a major function of the primary somatosensory area of the cerebral cortex?
A : primary area for receiving visual information
B : analysis of body sensations
C : location of motor control for the body
D : primary area for receiving auditory information

Correct Answer : B

405 : You are sitting in a very uncomfortable desk that is overly small and has a slight crack in the plastic that pinches your back when you move. This sensation on your body from the uncomfortable chair is being processed in your _____ lobes.
A : frontal
B : occipital
C : parietal
D : temporal

Correct Answer : C

406 : You are running the water for your bath and place your hand under the faucet to feel and adjust the temperature of the water. The temperature of the water registers in which brain area?
A : occipital lobes
B : temporal lobes
C : frontal lobes
D : parietal lobes

Correct Answer : D

407 : Persons with damage to the primary somatosensory area in the parietal lobes will
A : exhibit changes in language comprehension.
B : exhibit poor reasoning and planning abilities.
C : lose the feeling of touch in specific areas of the body.
D : have deficits in visual perception.

Correct Answer : C

408 : Which of the following changes would you expect to occur in someone whose parietal lobes were damaged in an accident?
A : development of blind spots in the visual field
B : reduced capacity to hear sounds
C : reduced reasoning and planning abilities and changes in personality
D : inability to sense hot and cold

Correct Answer : D

409 : The brain center for hearing is in the _____ lobe.
A : temporal
B : parietal
C : occipital
D : frontal

Correct Answer : A

410 : If a PET scan was done of your brain while you listened to your favorite song, your primary auditory area would be the first to light up, followed by association areas in your _____ lobes.
A : frontal
B : parietal
C : temporal
D : occipital

Correct Answer : C

411 : A researcher electrically stimulates a part of Raphaels brain, and Raphael hears a series of sounds. This researcher most likely stimulated Raphaels _____ lobes.
A : temporal
B : parietal
C : occipital
D : frontal

Correct Answer : A

412 : Which of the following is a major function of the temporal lobe?
A : primary area for receiving visual information
B : analysis of body sensations
C : location of motor control for the body
D : primary area for receiving auditory information

Correct Answer : D

413 : Which of the following combinations is correct?
A : frontal lobe-------primary somatosensory cortex
B : occipital lobe-----primary motor cortex
C : temporal lobe----primary auditory area
D : parietal lobe-----primary visual area

Correct Answer : C

414 : Which of the following changes would you expect to occur in someone whose temporal lobes were damaged in an accident?
A : development of blind spots in the visual field
B : reduced capacity to hear sounds
C : reduced reasoning and planning abilities and changes in personality
D : inability to sense hot and cold

Correct Answer : B

415 : Persons with temporal lobe damage may
A : show changes in personality and emotions.
B : lose the ability to comprehend language.
C : show deficits in visual perception.
D : lose fine motor control.

Correct Answer : B

416 : Which of the following parts of the brain allows one to understand the meaning of words heard?
A : the hypothalamus
B : Brocas area
C : Wernickes area
D : the reticular formation

Correct Answer : C

417 : The association area for the understanding of language for 95 percent of all people is located in the _____ lobe.
A : left frontal
B : right frontal
C : left temporal
D : right temporal

Correct Answer : C

418 : Wernickes area is located in the _____ lobe.
A : right frontal
B : right temporal
C : left frontal
D : left temporal

Correct Answer : D

419 : Receptive or fluent aphasia is caused by damage to
A : the amygdala.
B : Brocas area.
C : the cerebellum.
D : Wernickes area.

Correct Answer : D

420 : Damage to Wernickes area causes great difficulty in
A : speaking and writing.

B : walking.
C : understanding the meaning of words.
D : feeling pain.

Correct Answer : C

421 : Damage to Wernickes area would lead to
A : motor aphasia.
B : fluent aphasia.
C : expressive aphasia.
D : facial agnosia.

Correct Answer : B

422 : Marjorie is still able to speak, although she has great difficulty comprehending language. Damage was most likely to
A : the somatosensory area.
B : Brocas area.
C : Wernickes area.
D : the limbic system.

Correct Answer : C

423 : When asked to point to the picture of what we drive, the stroke patient points to the picture of the apple rather than the car, illustrating that the stroke damaged
A : the somatosensory cortex.
B : Brocas area.
C : Wernickes area.
D : the corpus callosum.

Correct Answer : C

424 : When shown a picture of a bed, Tim calls the picture a table. The brain damage he experienced has resulted in _____ aphasia.
A : receptive or fluent
B : motor or expressive
C : Brocas
D : Gages

Correct Answer : A

425 : The primary visual area of the brain is located in the _____ lobe.
A : frontal
B : parietal
C : occipital
D : temporal

Correct Answer : C

426 : Using an electrode, an experimenter produces flashes of colored light and simple visual experiences in a patient undergoing brain surgery. Most likely, the experimenter has activated the _____ lobes.
A : parietal

B : frontal
C : occipital
D : temporal

Correct Answer : C

427 : Zelda is experiencing more and more blind spots in her vision as her inoperable brain tumor grows. The brain tumor would most likely be in her _____ lobe.
A : frontal
B : occipital
C : parietal
D : temporal

Correct Answer : B

428 : You are sitting on a stool when suddenly you lean back and fall off the stool, hitting the back of your head on the floor. You see stars as you try to sit back up. This sensation of seeing stars occurs because
A : neurons in your occipital lobe are stimulated.
B : your eyes are jarred to the extent stars are seen.
C : neurons in your retina are stimulated.
D : neurons in your hypothalamus are stimulated.

Correct Answer : A

429 : Regarding visual images, which of the following statements is TRUE?
A : Visual images are accurately represented in miniature in the occipital lobes like a little TV screen in your brain.
B : Visual images create patterns of activity in nerve cells in the occipital lobes which we interpret as images.
C : Visual images are the exact opposite in color and form as real world images.
D : Visual images are processed primarily by the parietal lobes.

Correct Answer : B

430 : Regarding agnosia, which of the following statements is TRUE?
A : Agnosia is the inability to identify visually-presented objects.
B : Agnosia involves damage to the speech centers.
C : Agnosia is a thought disturbance related to a mental disorder.
D : Agnosia results from damage to the thalamus and midbrain.

Correct Answer : A

431 : The inability to identify visually presented objects is referred to as visual
A : agnosia.
B : aphasia.
C : lateralization.
D : sclerosis.

Correct Answer : A

432 : Visual agnosia is caused by damage to the
A : prefrontal cortex.

B : somatosensory areas of the parietal lobes.
C : primary sensory areas of the temporal lobes.
D : association areas of the occipital lobes.

Correct Answer : D

433 : Visual agnosia may sometimes be helped by
A : cues of touch.
B : additional visual cues, such as color, size, and shape.
C : waiting long enough to think through an answer.
D : hypnosis.

Correct Answer : A

434 : Another term for mindblindness is
A : aphasia.
B : spatial neglect.
C : dyslexia.
D : visual agnosia.

Correct Answer : D

435 : Alice is shown a candle. She can see it, describe it, and even draw it; but she cannot name it. Alice is suffering from
A : expressive aphasia.
B : spatial neglect.
C : dyslexia.
D : visual agnosia.

Correct Answer : D

436 : People with facial agnosia cannot
A : speak in a coherent manner.
B : recognize familiar faces.
C : move their facial muscles.
D : feel sensations in their faces.

Correct Answer : B

437 : Margarita had a stroke and is in the hospital. When her family members visit her there, Margarita is unable to recognize any of their faces until she hears their voices. Margarita has facial
A : aphasia.
B : agnosia.
C : dyslexia.
D : neglect.

Correct Answer : B

438 : The evolutionary specialization of the association areas of the occipital and frontal lobes for facial recognition may be due to this skill being important in
A : self-preservation from potential dangers.
B : leadership among tribe members.

C : sound localization through lip movement.
D : socialization.

Correct Answer : D

439 : The importance of socialization may have played a large role in the evolutionary specialization of the association areas in the occipital and frontal lobes for
A : facial recognition.
B : tactile sensitivity.
C : motor functions.
D : auditory reception.

Correct Answer : A

440 : The brainstem, midbrain, and parts of the forebrain are referred to as the
A : reticular formation.
B : subcortex.
C : gray matter.
D : cerebral cortex.

Correct Answer : B

441 : The three main areas of the subcortex are the
A : brainstem, cerebellum, and corpus callosum.
B : forebrain, brainstem, and the upper parts of the hindbrain.
C : brainstem, midbrain, and cerebral cortex.
D : brainstem, midbrain, and the lower parts of the forebrain.

Correct Answer : D

442 : The subcortex areas include all of the following brain areas EXCEPT the
A : hypothalamus.
B : hippocampus.
C : cerebral cortex.
D : medulla.

Correct Answer : C

443 : Hunger, thirst, sleep, attention, sex, breathing, and many other vital functions are controlled by parts of the
A : subcortex.
B : corpus callosum.
C : cerebral cortex.
D : prefrontal cortex.

Correct Answer : A

444 : Which of the following parts of the brain can be viewed as a link between the forebrain and the brainstem?
A : corpus callosum
B : midbrain
C : hypothalamus
D : limbic system

Correct Answer : B

445 : One of the main roles of the midbrain is to
A : help in storing skill memories.
B : control motives, such as hunger and thirst.
C : serve as a link between the forebrain and the brainstem.
D : keep the brain aroused and alert.

Correct Answer : C

446 : Which of the following structures is part of the hindbrain?
A : hypothalamus
B : hippocampus
C : cerebellum
D : amygdala

Correct Answer : C

447 : Which of the following structures is part of the forebrain?
A : hypothalamus
B : medulla
C : cerebellum
D : reticular formation

Correct Answer : A

448 : The thalamus and hypothalamus are considered parts of the
A : forebrain.
B : hindbrain.
C : midbrain.
D : brainstem.

Correct Answer : A

449 : As the spinal cord joins the brain, it widens into the
A : brainstem.
B : cerebrum.
C : limbic system.
D : corpus callosum.

Correct Answer : A

450 : The brainstem consists mainly of the
A : hippocampus and amygdala.
B : thalamus and hypothalamus.
C : medulla and the pons.
D : cerebral cortex and the corpus callosum.

Correct Answer : C

451 : The reflex control centers for vital life functions like heart rate and breathing are found in the

A : forebrain.
B : medulla.
C : hippocampus.
D : thalamus.

Correct Answer : B

452 : Severe damage to which of the following parts of the brain would most likely result in death?
A : amygdala
B : medulla
C : hippocampus
D : cerebellum

Correct Answer : B

453 : A karate chop to an area at the top of the neck could stop a persons heart and breathing by damaging the
A : hippocampus.
B : thalamus.
C : medulla.
D : amygdala.

Correct Answer : C

454 : At age 33, Kate Adamson had a stroke that resulted in a locked-in syndrome, in which one moment she was fine and the next totally paralyzed and barely able to breathe. The stroke had damaged which part of Kate Adamsons brain?
A : amygdala
B : brainstem
C : hippocampus
D : thalamus

Correct Answer : B

455 : At age 33, Kate Adamson had a stroke that caused catastrophic damage to her brainstem. She was totally paralyzed and barely able to breathe but was still fully awake and aware. Kate Adamson was experiencing what is known as
A : Brocas aphasia.
B : spatial neglect.
C : locked-in syndrome.
D : neurogenic agnosia.

Correct Answer : C

456 : Coma researchers used fMRI to reexamine 54 patients previously diagnosed as being in a persistent vegetative state, or brain-dead. Patients were repeatedly asked to imagine swinging a tennis racquet or walking down a familiar street. Five of the patients showed clearly different brain activity to the two tasks despite being unable to communicate with doctors in any other way. These results suggest that not all patients who are non-responsive are brain dead, but instead some may have
A : Brocas aphasia.
B : spatial neglect.

C : locked-in syndrome.
D : neurogenic agnosia.

Correct Answer : C

457 : The pons acts as a bridge between the medulla and other brain areas and influences
A : memory.
B : sleep and arousal.
C : motor behavior.
D : higher reasoning.

Correct Answer : B

458 : Which of the following parts of the brain looks like a small bump on the brainstem and acts as a bridge between the medulla and other brain areas?
A : pons
B : hippocampus
C : hypothalamus
D : limbic system

Correct Answer : A

459 : Although there is growing evidence of its role in cognition and emotion, which part of the brain primarily regulates posture, muscle tone, and muscular coordination?
A : hypothalamus
B : cerebellum
C : hippocampus
D : limbic system

Correct Answer : B

460 : Christina enviously watches her tennis rival practice. She admires Sarinas control of the racket and finely coordinated movement. Having just covered the section on the brain in her psychology class, Christina states that Sarina must have a highly developed
A : cerebellum.
B : medulla.
C : hippocampus.
D : pons.

Correct Answer : A

461 : Damage to the cerebellum would most likely result in
A : heart stoppage or respiratory failure.
B : a loss of hearing ability.
C : a loss of muscular coordination.
D : having blind spots in ones vision.

Correct Answer : C

462 : Weeks after an automobile accident, a friend continues to have difficulty maintaining balance and coordinating movements. You should suspect that damage may have occurred to the
A : corpus callosum.

B : cerebellum.
C : medulla.
D : thalamus.

Correct Answer : B

463 : The cerebellum stores which type of memory?
A : the names of persons and other personal information
B : skill memories, such as riding a bicycle
C : knowledge of information heard or spoken
D : knowledge of information seen or read

Correct Answer : B

464 : Which part of the brain stores memories related to skills and habits?
A : amygdala
B : thalamus
C : cerebellum
D : reticular formation

Correct Answer : C

465 : Musicians, who practice special motor skills throughout their lives, have a larger than average
A : pons.
B : limbic system.
C : cerebellum.
D : thalamus.

Correct Answer : C

466 : The first symptom(s) of a crippling disease called spinocerebellar degeneration
A : are hyperactivity and a lack of attention.
B : are tremor, dizziness, and muscular weakness.
C : is an inability to recognize faces and familiar surroundings by sight alone.
D : is an inability to store new long-term verbal memories.

Correct Answer : B

467 : Jordan has developed a noticeable tremor and is experiencing dizziness and muscular weakness. Her doctor tells her that she has a crippling disease that will eventual progress to the point that she will have difficulty standing, walking, or feeding herself. Jordan most likely has
A : spinocerebellar degeneration.
B : degenerative agnosia.
C : motor aphasia.
D : progressive virilism.

Correct Answer : A

468 : The reticular formation (RF) is associated with
A : hunger and thirst.
B : attention and wakefulness.
C : sex, rage, and emotion.

D : pleasure and punishment.

Correct Answer : B

469 : Which of the following is a network of fibers and cell bodies that lie inside the medulla and pons and is associated with attention, alertness, and some reflexes, such as sneezing and coughing?
A : reticular formation
B : amygdala
C : hippocampus
D : thalamus

Correct Answer : A

470 : Which of the following does not fully mature until adolescence, which may be the reason that children have such short attention spans?
A : thalamus
B : hypothalamus
C : reticular formation
D : amygdala

Correct Answer : C

471 : Regarding the reticular formation, which of the following statements is FALSE?
A : Destruction of the reticular formation causes constant wakefulness.
B : The reticular formation lies inside the pons and medulla.
C : The reticular formation is important in the control of attention and arousal.
D : The reticular formation acts as a clearinghouse for incoming information, giving some messages priority while turning others aside.

Correct Answer : A

472 : You begin to doze off in class but suddenly come to awareness when your name is called. The part of the brain responsible for your sudden arousal is the
A : somatic nervous system (SNS).
B : reticular activating system (RAS).
C : thalamus.
D : pineal gland.

Correct Answer : B

473 : A sleepy driver rounds a bend and sees a deer standing in the road. The driver snaps to attention and applies the brakes, averting the accident, because his brain was aroused by the
A : parasympathetic nervous system.
B : reticular activating system (RAS).
C : thalamus.
D : pineal gland.

Correct Answer : B

474 : Which of the following is a small, football-shaped structure in the forebrain that acts as a final switching station for most incoming sensory information on their way to the cortex?
A : cerebellum

B : reticular formation
C : hippocampus
D : thalamus

Correct Answer : D

475 : The thalamus is a football-shaped structure in the forebrain that
A : controls posture, muscle tone, and coordination.
B : acts as a final switching station for most incoming sensory information on their way to the cortex.
C : is associated with attention, alertness, and some reflexes, such as coughing, sneezing, and vomiting.
D : regulates emotions and motives, such as hunger and thirst.

Correct Answer : B

476 : Damage to the thalamus may affect any of the senses listed below EXCEPT
A : vision.
B : hearing.
C : touch.
D : smell.

Correct Answer : D

477 : Injury to even small areas of which brain part can cause deafness, blindness, or loss of any other sense, except smell?
A : thalamus
B : hypothalamus
C : hippocampus
D : amygdala

Correct Answer : A

478 : Which part of the forebrain is the size of a grape but is considered the master control center for emotion and many basic motives?
A : thalamus
B : hypothalamus
C : corpus callosum
D : cerebellum

Correct Answer : B

479 : The hypothalamus is a grape-sized structure in the forebrain that
A : controls posture, muscle tone, and coordination and stores skill memories.
B : acts as a final switching station for most incoming sensory information on their way to the cortex.
C : is associated with attention, alertness, and some reflexes, such as coughing, sneezing, and vomiting.
D : is involved in temperature control, hormone release, emotions, and motives, such as hunger and thirst.

Correct Answer : D

480 : Which of the following is NOT controlled by the hypothalamus?
A : sex
B : eating and drinking
C : temperature control
D : posture

Correct Answer : D

481 : Which part of the brain is responsible for hunger, thirst, sex, body temperature, and hormone secretion?
A : reticular formation
B : pons
C : hypothalamus
D : hippocampus

Correct Answer : C

482 : The limbic system includes the
A : medulla, hypothalamus, and thalamus.
B : medulla, cerebellum, pons, and reticular formation.
C : reticular formation, hypothalamus, thalamus, and parts of the cerebellum.
D : hypothalamus, amygdala, hippocampus, and parts of the thalamus.

Correct Answer : D

483 : The hypothalamus, the hippocampus, the amygdala, and parts of the thalamus make up the _____ system.
A : somatosensory
B : endocrine
C : limbic
D : reticular activating

Correct Answer : C

484 : Two structures that are part of the limbic system are the
A : medulla and pons.
B : reticular formation and cerebellum.
C : amygdala and hippocampus.
D : corpus callosum and brainstem.

Correct Answer : C

485 : Which brain area was the earliest layer of the forebrain to develop during evolution and helps organize basic survival responses in lower animals, such as feeding, fleeing, fighting, and reproduction?
A : somatosensory cortex
B : endocrine
C : limbic system
D : reticular activating system

Correct Answer : C

486 : A researcher places an electrode in a cats limbic system, which he activates. The cat

suddenly jumps up and runs to the corner, showing clear indications of fear. What part of the limbic system was most likely stimulated?
A : hippocampus
B : thalamus
C : hypothalamus
D : amygdala

Correct Answer : D

487 : Which part of the limbic system provides a primitive quick pathway to the cortex when we are startled, so that we are able to react to dangerous stimuli before we fully know what is going on?
A : hippocampus
B : amygdala
C : hypothalamus
D : thalamus

Correct Answer : B

488 : In situations in which true danger exists, such as in military combat, the rapid response of which part of the limbic system may aid survival?
A : hippocampus
B : hypothalamus
C : thalamus
D : amygdala

Correct Answer : D

489 : You are walking down a dark alley with several packages. Behind you, you hear a door open and close suddenly, and you immediately dive behind the nearest trash container. The part of the forebrain mainly responsible for your reaction is the
A : hippocampus.
B : medulla.
C : cerebrum.
D : amygdala.

Correct Answer : D

490 : Which part of the limbic system explains why people who suffer from phobias and disabling anxiety often feel afraid without knowing why?
A : amygdala
B : hippocampus
C : thalamus
D : hypothalamus

Correct Answer : A

491 : Unconscious fear produced by which part of the brain seems to explain why people who survive horrible experiences, such as a plane crash or combat during war, can have debilitating fears years later?
A : amygdala
B : hypothalamus
C : reticular activating system

D : somatosensory cortex

Correct Answer : A

492 : Which part of the brain stores lasting verbal memories and helps us navigate through space?
A : amygdala
B : hypothalamus
C : pons
D : hippocampus

Correct Answer : D

493 : Which area of the limbic system will become more active, if you mentally plan a drive across town?
A : the bottom part of the amygdala
B : the left side of the hypothalamus
C : the top part of the thalamus
D : the right side of the hippocampus

Correct Answer : D

494 : Which part of the brain lies within the temporal lobes and produces memory-like or dream-like experiences when the temporal lobes are stimulated?
A : amygdala
B : hippocampus
C : thalamus
D : pons

Correct Answer : B

495 : Damage to which part of the limbic system would most likely impair memory?
A : thalamus
B : hypothalamus
C : amygdala
D : hippocampus

Correct Answer : D

496 : A detective is shot and suffers brain damage. He is unable to store new memories, so he must relearn information each day from photographs and notes as he tries to find the criminal who shot him. The part of his brain that was most likely damaged was the
A : hypothalamus.
B : hippocampus.
C : somatosensory cortex.
D : amygdala.

Correct Answer : B

497 : Although Marcie remembers all aspects of her life before she experienced brain damage in a terrible fall, each morning she must reread details of her present life that are written in a diary because she is unable to adequately store new memories. The brain damage Marcie experienced was most likely to her

A : amygdala.
B : pons.
C : hypothalamus.
D : hippocampus.

Correct Answer : D

498 : By using electrical stimulation, reward (or pleasure centers) and punishment (or aversive areas) can be shown to exist in the
A : cerebellum.
B : limbic system.
C : occipital lobe.
D : medulla.

Correct Answer : B

499 : Several areas of the limbic system act as reward, or pleasure, pathways with many overlapping with the areas that control thirst, sex, and hunger in the
A : cerebellum.
B : reticular formation.
C : hippocampus.
D : hypothalamus.

Correct Answer : D

500 : Many of the addictive drugs activate the same pleasure centers as are activated by food and sex. Many of these pleasure centers are located in the
A : hypothalamus.
B : medulla.
C : cerebellum.
D : corpus callosum.

Correct Answer : A

501 : Commonly abused drugs, such as cocaine, amphetamine, heroin, nicotine, marijuana, and alcohol, activate pleasure pathways within the _____ system.
A : endocrine
B : reticular activating
C : limbic
D : somatosensory

Correct Answer : C

502 : Listening to certain pieces of music can send shivers down your spine because it activates which area of the brain?
A : reticular activating system
B : limbic system
C : midbrain
D : corpus callosum

Correct Answer : B

503 : Regarding the limbic system, which of the following statements is TRUE?

A : Many of the pleasure pathways in the limbic system are found within the pons.
B : When punishment areas in the limbic system are activated, animals actually show pleasure rather than discomfort and work actively to keep the stimulation turned on.
C : Commonly abused drugs, such as nicotine and alcohol, activate the same pleasure pathways as sex and food.
D : The limbic system is made up of the medulla, cerebellum, pons, and reticular formation.

Correct Answer : C

504 : Regarding the limbic system, which of the following statements is FALSE?
A : Many of the pleasure pathways in the limbic system are found within the reticular formation.
B : When punishment areas in the limbic system are activated, animals show discomfort and will work hard to turn off the stimulation.
C : Commonly abused drugs, such as nicotine and alcohol, activate the same pleasure pathways as sex and food.
D : Music that would be described as thrilling can activate pleasure systems in your brain.

Correct Answer : A

505 : Basic functions of the brain include which of the following?
A : maintaining vital bodily functions and controlling muscles
B : creating consciousness and regulating itself
C : keeping track of the external world and responding to current needs
D : all of these

Correct Answer : D

506 : Regarding the brain, which of the following statements is FALSE?
A : Scientists typically use introspection to clarify how your eyes send information to your primary visual area and how other brain structures cooperate to interpret that information as written language.
B : Scientists have found that incoming information scatters all over the brain and converges again as it goes out through the spinal cord, to muscles and glands.
C : The brain is a vast information-processing system, keeping track of the external world and responding to current needs.
D : Understanding just how the brain lets you read, love someone, or even play catch may hold the key to improving ourselves and helping those who are experiencing difficulties.

Correct Answer : A

507 : Hormones are poured into the bloodstream and lymph system by the glands of the _____ system.
A : limbic
B : reticular activating
C : endocrine
D : somatic

Correct Answer : C

508 : Which system is considered a parallel communication system to the nervous system in the body with its secretions passing directly into the bloodstream or lymph system?
A : endocrine
B : reticular activating

C : limbic
D : somatosensory

Correct Answer : A

509 : A glandular secretion that affects body functions and behavior is known as
A : a neurotransmitter.
B : neurilemma.
C : enkephalin.
D : a hormone.

Correct Answer : D

510 : Regarding the endocrine system, which of the following statements is FALSE?
A : Like neurotransmitters, hormones activate cells in the body, and the cells must have receptor sites for the hormones.
B : Different hormones prevail when you are angry than when you are fearful.
C : Androgens (male hormones) are related to the sex drive in both males and females.
D : Hormones secreted during times of high emotion tend to decrease memory formation.

Correct Answer : D

511 : Regarding the action of hormones, which of the following statements is FALSE?
A : Unlike neurotransmitters, hormones do not require receptor sites.
B : Hormones secreted during times of high emotion intensify memory formation.
C : Androgens (male hormones) are related to the sex drive in both males and females.
D : Pregnancy and motherhood cause the release of hormones that lead to the dramatic changes involved in maternal behavior.

Correct Answer : A

512 : Which of the following is the pea-sized structure hanging from the base of the brain that regulates growth as well as influencing all of the other endocrine glands?
A : pituitary gland
B : pineal gland
C : thyroid gland
D : adrenal gland

Correct Answer : A

513 : Which gland is considered the master gland and regulates the functioning of the other glands?
A : pituitary
B : pineal
C : thyroid
D : adrenal

Correct Answer : A

514 : Which part of the brain is located directly above the pituitary gland and is able to affect all of the other glands in the body by influencing the pituitary gland?
A : pons
B : reticular formation

C : hypothalamus
D : midbrain

Correct Answer : C

515 : A critical link between the chemical and neural information systems in humans is the link between the
A : thalamus and thyroid gland.
B : reticular formation and adrenal gland.
C : cerebellum and sex glands.
D : hypothalamus and pituitary gland.

Correct Answer : D

516 : People with hypopituitary dwarfism have
A : normal-size bodies but smaller than average arms, hands, feet, and facial bones.
B : perfectly proportioned body and limbs, but are smaller than average.
C : smaller than average bodies but enlarged arms, hands, feet, and facial bones.
D : unusually large heads in proportion to their limbs.

Correct Answer : B

517 : If too little growth hormone is released from the pituitary gland, a person may develop
A : giantism.
B : dwarfism.
C : virilism.
D : acromegaly.

Correct Answer : B

518 : If too much growth hormone is secreted at the beginning of the growth period, it can cause
A : giantism.
B : achondroplasia.
C : virilism.
D : acromegaly.

Correct Answer : A

519 : The condition in which too much growth hormone is secreted toward the end of the growth period is called
A : achondroplasia.
B : virilism.
C : hypopituitary dwarfism.
D : acromegaly.

Correct Answer : D

520 : Arnold received too much growth hormone during puberty (late in the growth cycle). His hands, feet, and face show an overgrowth. He has the condition known as
A : acromegaly.
B : giantism.
C : achondroplasia.
D : virilism.

Correct Answer : A

521 : Enlarged hands, feet, and facial bones that create prominent facial features may be the result of
A : acromegaly.
B : giantism.
C : dwarfism.
D : hypopituitary dwarfism.

Correct Answer : A

522 : Oxytocin plays a broad role in regulating many behaviors generally involved in happiness, including pregnancy, parenthood, sexual activity, social bonding, trust, and the reduction of stress reactions, and is released by the _____ gland.
A : pituitary
B : pineal
C : thyroid
D : adrenal

Correct Answer : A

523 : Which of the following hormones is released from the pituitary gland and plays a broad role in regulating many behaviors generally involved in happiness, including pregnancy, parenthood, sexual activity, social bonding, trust, and the reduction of stress reactions?
A : melatonin
B : oxytocin
C : corticoids
D : androgens

Correct Answer : B

524 : Which of the following is known as the cuddle hormone, is released by the pituitary gland, and plays an important role in deepening the mother/child bond during the all-important early years?
A : androgens
B : melatonin
C : oxytocin
D : corticoids

Correct Answer : C

525 : Which gland is associated with a well-developed light-sensitive organ, or third eye found in certain fishes, frogs, and lizards and was once considered a useless remnant of evolution in humans?
A : pineal
B : thyroid
C : adrenal
D : pituitary

Correct Answer : A

526 : Melatonin is released by the _____ gland.

A : pituitary
B : pineal
C : thyroid
D : adrenal

Correct Answer : B

527 : Which gland is associated with body rhythms and sleep cycles and secretes the hormone melatonin?
A : pituitary
B : pineal
C : thyroid
D : adrenal

Correct Answer : B

528 : The hormone melatonin regulates
A : growth.
B : male and female sex drives.
C : salt balance in the body.
D : sleep cycles.

Correct Answer : D

529 : Which hormone is released in response to daily variations in light and tends to rise as night falls, peaks at midnight, and falls again as the sun rises?
A : adrenaline
B : thyroxin
C : melatonin
D : androgen

Correct Answer : C

530 : Which of the following is the correct endocrine gland and hormone pairing?
A : pineal gland-----melatonin
B : pituitary---------epinephrine
C : adrenal gland---human growth hormone
D : thyroid----------norepinephrine

Correct Answer : A

531 : Which gland located in the neck regulates the rate at which energy is produced and expended in the body?
A : pineal
B : thyroid
C : adrenal
D : pituitary

Correct Answer : B

532 : By altering metabolism, which gland can have a sizable effect on personality with overactivity of this gland causing excitability and nervousness and underactivity of this gland causing lethargy and sleepiness?

A : pineal
B : pituitary
C : adrenal
D : thyroid

Correct Answer : D

533 : The function of the thyroid gland is to regulate
A : sleep cycles.
B : metabolism.
C : blood sugar and hunger by releasing insulin.
D : salt balance in the body.

Correct Answer : B

534 : Overactivity of which endocrine gland or brain structure leads to tenseness, nervousness, and excitability?
A : pineal gland
B : thyroid gland
C : hippocampus
D : cerebellum

Correct Answer : B

535 : A person suffering from hyperthyroidism will tend to
A : be thin, tense, excitable, and nervous.
B : exhibit inactivity, sleepiness, slowness, obesity, and depression.
C : have a powerful craving for the taste of salt.
D : have enlarged arms, hands, feet, and facial bones.

Correct Answer : A

536 : Underactivity of which endocrine gland or brain structure causes inactivity, sleepiness, slowness, obesity, and depression?
A : thyroid gland
B : thymus
C : pineal gland
D : hippocampus

Correct Answer : A

537 : A person suffering from hypothyroidism will tend to
A : be thin, tense, excitable, and nervous.
B : exhibit inactivity, sleepiness, slowness, obesity, and depression.
C : have a powerful craving for the taste of salt.
D : have enlarged arms, hands, feet, and facial bones.

Correct Answer : B

538 : Darlene experienced an increase in blood pressure, was extremely irritable, and her eyeballs appeared to be bulging out on several occasions. Her doctor found that one of her endocrine glands was producing too much of its hormone. Darlene most likely has a(n)
A : overactive thyroid gland.

B : underactive thyroid gland.
C : adrenal gland virilism.
D : complication of anabolic steroids.

Correct Answer : A

539 : Terri shows inactivity, sleepiness, slowness, and has gained weight. A problem was found in her endocrine system. She most likely has a(n)
A : overactive thyroid gland.
B : underactive thyroid gland.
C : adrenal gland virilism.
D : complication of anabolic steroids.

Correct Answer : B

540 : Which branch of the autonomic nervous system causes epinephrine and norepinephrine to be released by the adrenal glands?
A : somatic
B : sympathetic
C : central
D : parasympathetic

Correct Answer : B

541 : When you are angry or afraid, the sympathetic branch of the autonomic nervous system causes epinephrine and norepinephrine to be released from the
A : adrenal glands.
B : thyroid gland.
C : pineal gland.
D : gonads.

Correct Answer : A

542 : When you are frightened or angry, your heart rate and blood pressure rise; stored sugar is released into the bloodstream for quick energy; your muscles tense and receive more blood; and your blood is prepared to clot more quickly in case of injury. These changes are controlled by the autonomic nervous system (ANS), specifically, the sympathetic branch, which causes the adrenal glands to release the hormones
A : androgen and estrogen.
B : melatonin and oxytocin.
C : insulin and serotonin.
D : epinephrine and norepinephrine.

Correct Answer : D

543 : Which hormone tends to arouse the body and is associated with fear?
A : melatonin
B : epinephrine
C : norepinephrine
D : estrogen

Correct Answer : B

544 : Which hormone also functions as a neurotransmitter in the brain, tends to arouse the body, and is linked with anger?
A : melatonin
B : epinephrine
C : norepinephrine
D : thyroxin

Correct Answer : C

545 : Which endocrine glands arouse the body, regulate salt balance, adjust the body to stress, and affect sexual functioning?
A : pineal glands
B : thyroid glands
C : adrenal glands
D : parathyroids

Correct Answer : C

546 : Epinephrine and norepinephrine are produced by the
A : adrenal medulla.
B : adrenal cortex.
C : thyroid gland.
D : pineal gland.

Correct Answer : A

547 : The inner core of the adrenal glands that secretes epinephrine and norepinephrine is called the adrenal
A : medulla.
B : cortex.
C : nucleus.
D : ventricle.

Correct Answer : A

548 : The adrenal medulla secretes
A : corticoids.
B : epinephrine and norepinephrine.
C : melatonin.
D : oxytocin.

Correct Answer : B

549 : The outer portion of the adrenal glands that secretes corticoids is called the adrenal
A : medulla.
B : dorsal.
C : cortex.
D : ventricle.

Correct Answer : C

550 : Which of the following is NOT a correct match between endocrine gland and hormone?
A : pineal gland--------melatonin

B : pituitary gland-----growth hormone
C : adrenal gland------epinephrine
D : pancreas----------corticoids

Correct Answer : D

551 : An oversecretion of the corticoids can cause a condition in which a woman may grow a beard or a mans voice may become so low it is difficult to understand. This condition is known as
A : acromegaly.
B : virilism.
C : cretinism.
D : agnosia.

Correct Answer : B

552 : Margaret has problems with virilism. Which gland or part of a gland is malfunctioning?
A : pineal gland
B : thyroid gland
C : adrenal cortex
D : adrenal medulla

Correct Answer : C

553 : An oversecretion of the corticoids early in ones life can cause
A : acromegaly.
B : agnosia.
C : cretinism.
D : premature puberty.

Correct Answer : D

554 : One of the principal androgens, or male hormones, is testosterone, which is supplied in small amounts by which gland?
A : pineal
B : pituitary
C : adrenal
D : thyroid

Correct Answer : C

555 : The main source of testosterone in males is supplied by which gland?
A : pineal
B : pituitary
C : adrenal
D : testes

Correct Answer : D

556 : Anabolic steroids are a synthetic version of which hormone?
A : epinephrine
B : norepinephrine
C : testosterone

D : melatonin

Correct Answer : C

557 : Which of the following drugs are synthetic versions of testosterone and have been used by athletes who want to bulk up or promote muscle growth?
A : anabolic steroids
B : GHB
C : serotonin
D : melatonin

Correct Answer : A

558 : Which of the following statements best describes how anabolic steroids affect young adolescents?
A : Anabolic steroids elevate mood.
B : Anabolic steroids increase the risk of heart attack and stroke.
C : Anabolic steroids are often used to promote weight loss.
D : Anabolic steroids have no adverse health effects.

Correct Answer : B

559 : The side effects of anabolic steroids include
A : a womans voice having a higher pitch.
B : a womans hair becoming thicker, longer, and curlier.
C : increased testicle size in men.
D : breast enlargement in men.

Correct Answer : D

560 : Which of the following is NOT a side effect of anabolic steroids?
A : voice deepening and baldness in women
B : liver damage and stunted growth in young adolescents
C : increased testicle size in men
D : dangerous increases in hostility and aggression

Correct Answer : C

561 : Regarding anabolic steroid use, which of the following statements is FALSE?
A : Anabolic steroids can result in sexual impotence and breast enlargement in men.
B : Almost all of the major sports organizations have banned the use of anabolic steroids by athletes.
C : Young adolescents who use anabolic steroids have an increased risk of heart attack, stroke, liver damage, and stunted growth.
D : Anabolic steroids are a synthetic version of epinephrine.

Correct Answer : D

562 : A preference for using the right or left hand for most activities is referred to as
A : brain lateralization.
B : hand lateralization.
C : handedness.
D : preferential dominance.

Correct Answer : C

563 : Ones dominant hemisphere is considered the side of a persons brain that
A : controls hand movement.
B : controls eye movement.
C : organizes and plans activities.
D : produces language.

Correct Answer : D

564 : The left hemisphere is dominant for language function in
A : no one.
B : about 95 percent of right-handers and 70 percent of left-handers.
C : about 19 percent of left-handers and three percent of right-handers.
D : all left-handed persons.

Correct Answer : B

565 : The right hemisphere is dominant for language function in
A : no one.
B : about 95 percent of right-handers and 70 percent of left-handers.
C : about 19 percent of left-handers and three percent of right-handers.
D : all left-handed persons.

Correct Answer : C

566 : Regarding speech and language processing by left-handers, which of the following statements is TRUE?
A : All left-handers produce speech from the right hemisphere.
B : All left-handers produce speech from the left hemisphere.
C : About 70 percent of left-handers use the right hemisphere for language processing.
D : About 12 percent of left-handers use both sides of the brain for language processing.

Correct Answer : D

567 : In all, what percent of the population uses the left hemisphere for language?
A : 50 percent
B : 70 percent
C : 80 percent
D : 90 percent

Correct Answer : D

568 : Nic tends to gesture more with his right hand when he talks. Nic probably processes language
A : in his right hemisphere.
B : in his left hemisphere.
C : more inefficiently than if he gestured with his left hand.
D : in both hemispheres, since a majority of people do not have a dominant hemisphere for language processing.

Correct Answer : B

569 : Rick does some activities better using his right hand, while he performs better on other tasks using his left hand. Rick would be described as
A : being moderately right-handed.
B : being moderately left-handed.
C : being ambidextrous.
D : having mixed handedness.

Correct Answer : D

570 : From an early age, Daniels parents noticed that Daniel could perform all tasks, including writing and sports activities, equally well with either of his hands. In fact, Daniel really does not prefer the use of one hand over the other in doing any task. Daniel would be described as
A : being moderately right-handed.
B : being moderately left-handed.
C : being ambidextrous.
D : having mixed handedness.

Correct Answer : C

FILL IN THE BLANK

571 : The brain and spinal cord make up the _____ nervous system.

Correct Answer : central

572 : When you give directions and point down the street, the part of the peripheral nervous system that controls this voluntary movement of your finger is the _____ nervous system.

Correct Answer : somatic

573 : The branch of the autonomic nervous system that is called the fight-or-flight system because of its importance in responding to emotional events is the _____ branch.

Correct Answer : sympathetic

574 : The cell body of a neuron is also called the _____.

Correct Answer : soma

575 : The process by which nerve impulses conducted down the axons of neurons coated with myelin jump from gap to gap in the myelin layer is called a(n) _____ conduction.

Correct Answer : saltatory

576 : An excess of dopamine has been linked to the development of the psychotic mental disorder called _____.

Correct Answer : schizophrenia

577 : Brain chemicals, such as enkephalins and endorphins, which regulate the activity of

neurons are called _____.

Correct Answer : neuropeptides

578 : A nerve cell carrying information from your eyes, ears, fingers, etc. toward the central nervous system is called a(n) _____neuron.

Correct Answer : sensory

579 : The capacity of our brains to change in response to experience is referred to as _____.

Correct Answer : neuroplasticity

580 : Dr. Montel is a psychologist who studies how the biological processes, brain, and nervous system are related to a persons behavior. Dr. Montel would be referred to as a(n) _____.

Correct Answer : biopsychologist

581 : Subtle behavioral signs of nervous system dysfunction, including clumsiness, an awkward gait, poor hand-eye coordination, and other perceptual and motor problems, are referred to as _____.

Correct Answer : neurological soft signs

582 : Megan has experienced what appears to be a seizure. So, the doctor affixes electrodes to Megans scalp in order to obtain a recording of her brain waves and determine whether her brain waves are showing a seizure pattern. The doctor is using a technique known as a(n) _____.

Correct Answer : electroencephalography

583 : The amount of radioactive glucose used by the brain cells is recorded by the brain scan technique known as a(n) _____.

Correct Answer : (PET scan)

584 : Research by Daniel Langleben has shown that more activity will occur in the front of the brain when a person is lying than when telling the truth with the brain scan technique utilized in this research being the _____.

Correct Answer : functional MRI (fMRI)

585 : The increased size and wrinkling of the cerebral cortex in higher animals is referred to as _____.

Correct Answer : corticalization

586 : The differences between the two sides of the body, especially differences in the abilities of the brain hemispheres are referred to as _____.

Correct Answer : lateralization

587 : Patients with right hemisphere damage may not eat food on the left side of a plate or may even refuse to acknowledge a paralyzed left arm as their own, which illustrates the condition known as _____.

Correct Answer : spatial neglect

588 : Perry is undergoing a surgical procedure in which the bridge of nerve tissue between his right and left hemispheres will be severed. This bridge of nerve tissue is called the _____.

Correct Answer : corpus callosum

589 : The hemisphere that is superior at math, judging time and rhythm, and coordinating the order of complex movements, such as those needed for speech, is the _____ hemisphere.

Correct Answer : left

590 : Perceptual skills involved in putting puzzles together or recognizing musical melodies are special skills of the _____ hemisphere.

Correct Answer : right

591 : A person with brain damage who mispronounces the word cross by saying srot would most likely have damage to an association area in the left frontal lobe known as _____ area.

Correct Answer : Broca’s

592 : As you reach into your bag, you can tell the shape and texture of the different articles and are able to select the item you need just by touch, which illustrates the sensitivity of the primary somatosensory area located in your _____ lobes.

Correct Answer : parietal

593 : If a PET scan were done of your brain while you listened to your favorite song, your primary auditory area would be the first to light up, followed by association areas in your _____ lobes.

Correct Answer : temporal

594 : The control of vital bodily functions, such as heart rate and breathing, is carried out primarily by the part of the hindbrain known as the _____.

Correct Answer : medulla

595 : The part of the hindbrain that is associated with attention, alertness, and some reflexes, such as sneezing and coughing, is the _____.

Correct Answer : reticular formation

596 : The part of the forebrain that serves as a crossroads that connects many areas of the brain as well as being the master control center for emotions and many basic motives is the _____.

Correct Answer : hypothalamus

597 : The hypothalamus, the hippocampus, the amygdala, and parts of the thalamus make up the _____system.

Correct Answer : limbic

598 : After a car accident, which causes brain damage, Santos is experiencing a great deal of difficulty storing new memories about events in his life and verbal information. Santos most likely had damage to a subcortical part of the forebrain known as the _____.

Correct Answer : hippocampus

599 : The glandular secretions that affect bodily functions or behavior are collectively known as _____.

Correct Answer : hormones

600 : Sam has enlarged hands and feet with his larger facial bones creating very prominent facial features. Sam most likely has a condition known as _____.

Correct Answer : acromegaly

601 : The gland that releases melatonin in response to daily variations in light is the _____ gland.

Correct Answer : pineal

602 : Karen has experienced an increase in her blood pressure, has lost weight, and is extremely irritable. Her doctor found that one of her endocrine glands was producing too much of its hormone. Karens condition is most likely caused by an overactive gland that regulates metabolism called the _____ gland.

Correct Answer : thyroid

603 : Anabolic steroids that are used by athletes to increase muscle growth are synthetic versions of the hormone _____.

Correct Answer : testosterone

ESSAY

604 : List the divisions and subdivisions of the nervous system, and describe the general functions of each division and subdivision.

Correct Answer : Answer will include that the nervous system is divided into two main divisions: the central nervous system and the peripheral system. The central nervous system is made up of the brain and spinal cord with the brain being the control center and communicating with the rest of the body through a large cable called the spinal cord. All the neurons outside the central nervous system are part of the peripheral system. The peripheral system is made up of the

somatic system and the autonomic system. The somatic system carries messages to and from the sense organs and skeletal muscles. It controls voluntary behavior. The autonomic system serves the internal organs and glands of the body and controls all of the “automatic” functions within the body, such as heart rate, digestion, or perspiration. The autonomic system is divided into the sympathetic and parasympathetic branches. Both are related to emotional responses, such as crying, sweating, heart rate, and other involuntary behavior. The sympathetic branch is an “emergency” system, preparing the body for “flight or fight.” The parasympathetic branch quiets the body and returns it to a lower level of arousal as well as keeping vital processes, such as heart rate, breathing, and digestion at moderate levels.

605 : Describe how an action potential occurs, including the role of ions and ion channels; why an action potential is considered an all-or-nothing event; why the negative after-potential occurs; and the importance of myelin during a saltatory conduction.

Correct Answer : Answer will include that electrically charged molecules called ions are found inside and outside each neuron. When a neuron is inactive (in a resting potential), more of these “plus” charges exist outside the neuron and more “minus” charges exist inside the neuron. If the electrical charge rises to about -50 millivolts, the neuron will reach its threshold, or trigger point for firing. When a neuron reaches threshold, an action potential, or nerve impulse, sweeps down the axon at up to 200 miles per hour. The axon membrane is pierced by tiny tunnels or “holes,” called ion channels, which pop open during the action potential. This allows sodium ions to rush into the axon first near the soma. then, gate after gate opens down the length of the axon. Each action potential is an all-or-nothing event, meaning a nerve impulse occurs completely or not at all. After each nerve impulse, the cell briefly dips below its resting level, and becomes less willing or ready to fire. This negative after-potential occurs because potassium ions flow out of the neuron while the membrane gates are open. The axons of some neurons are coated with a fatty layer called myelin. Small gaps in the myelin help nerve impulses move faster. Instead of passing down the entire length of the axon, the action potential leaps from gap to gap, a process called saltatory conduction. Without the added speed of saltatory action potentials, it would probably be impossible to brake in time to avoid many automobile accidents or hit a tennis serve.

606 : Select three of the six neurotransmitters listed below, and describe the functions of these neurotransmitters, whether the neurotransmitter is an excitatory or inhibitory neurotransmitter, and what effect(s) would occur from having a deficiency and/or excess of each chemical.acetylcholine, serotonin, dopamine, norepinephrine, GABA, glutamate

Correct Answer : Answer will include a description of three of the following six neurotransmitters. Acetylcholine is an excitatory neurotransmitter that participates in movement, autonomic function, learning, and memory with a deficiency of acetylcholine being linked with the development of Alzheimer’s disease. Serotonin is an inhibitory neurotransmitter that participates in mood, appetite, and sleep with a deficiency leading to anxiety and/or depression. Dopamine is an excitatory neurotransmitter that participates in motivation, reward, and planning of behavior. A deficiency of dopamine may lead to Parkinson’s disease or to reduced feelings of pleasure, while an excess of dopamine may lead to schizophrenia. Norepinephrine is considered to be both an excitatory neurotransmitter and a hormone. It is involved in arousal, vigilance, and mood with an excess leading to anxiety. GABA has a major inhibitory effect in the central nervous system and participates in moods with a deficiency in GABA leading to anxiety. Glutamate has a major excitatory effect in the central nervous system and is involved in learning and memory. An excess of glutamate may lead to neuron death and autism, while a deficiency may lead to tiredness.

607 : You have just touched a hot stove. Describe the sequence of events that occurred within

your nervous system from the point you touched the hot stove with your hand to the point you jerked your hand away from the stove. Your answer should include the name of this simple network, the types of neurons involved at each step in the sequence, and why this action would be considered a no-brainer.

Correct Answer : Answer will include that the simplest network is the reflex arc, which occurs when a stimulus, such as touching a hot stove, provokes an automatic response. Such reflexes occur within the spinal cord, without any help from the brain. Pain is detected in your finger by a sensory neuron (a nerve cell that carries messages from the senses toward the central nervous system). Instantly, the sensory neuron fires off a message to your spinal cord. Inside the spinal cord, the sensory neuron synapses with an interneuron, or connector, neuron (a nerve cell that links two others). The connector neuron activates a motor neuron (a cell that carries commands from the central nervous system to muscle and glands). The muscle fibers are made of effector cells, which are cells capable of producing a response. The muscle cells contract and cause your finger to withdraw. No brain activity is required for a reflex arc to occur, although information regarding this painful event will go to the brain to be stored after your body has already reacted to protect itself.

608 : How has the discovery of neurogenesis changed our view of the aging of the brain, the feasibility of repairing the brain, and our understanding of schizophrenia?

Correct Answer : Answer will include that until only a few years ago, it was widely believed that we were born with all the brain cells we would ever have. This led to the depressing idea that we would all slowly go downhill, as the brain lost thousands of neurons a day. However, we now know that a healthy 75-year-old brain has just as many neurons as it did when it was a 25-year-old brain. Although it is true that the brain does lose cells daily, it simultaneously grows new neurons to replace them. This process is called neurogenesis. Each day, thousands of new cells originate deep within the brain, move to the surface, and link up with other neurons to become part of the brain's circuitry. Most likely these new cells are involved in learning, memory, and our ability to adapt to changing circumstances. The discovery of neurogenesis in adult brains has raised new hope that some types of brain damage can be repaired. One approach is the constraint-induced movement therapy, in which the arm not affected by the stroke is immobilized, forcing the impaired arm to become more active to increase the rate of neurogenesis in the damaged part of the brain and speed recovery. Drugs have also been identified that can enhance neurogenesis in the affected areas. Such techniques are beginning to offer new hope for people suffering from a variety of other disabilities, such as depression and addiction. It is also quite possible that other brain disorders are caused by impaired neurogenesis. Neuroscientists Carla Toro and Bill Deakin have proposed such a theory to explain the serious mental disorder schizophrenia. The brains of schizophrenic persons are usually smaller than normal, indicating that they have fewer neurons. Toro and Deakin's idea is that the schizophrenic brain may be unable to continually create new neurons to replace old ones that have died. If they are right, new therapies to promote neurogenesis may hold the key to treating schizophrenia.

609 : Explain what is meant by localization of function; and describe four ways that scientists have been able to localize function.

Correct Answer : Answer will include localization of function is the research strategy of linking specific structures in the brain to specific psychological or behavioral functions. Students will describe four of the following methods for localizing function. (1) Natural clinical tests, or clinical case studies, examine changes in personality, behavior, or sensory capacity caused by brain diseases or injuries. If damage to a particular part of the brain consistently leads to a particular loss of function, then we say that the function is localized in that structure. Presumably, that part

of the brain controls the same function in all of us. (2) Neurological soft signs are more subtle signs that the brain is not working properly, such as clumsiness, an awkward gait, poor eye-hand coordination, and other problems with perception or fine muscle control. (3) Electrical stimulation of the brain (ESB) involves the surface of the brain being “turned on” by stimulating it with a mild electrical current delivered through a thin insulated wire called an electrode. When this is done during brain surgery, the patient can describe the effect of the stimulation. (4) Ablation is surgical removal of parts of the surface of the brain. When ablation causes changes in behavior or sensory capacity, we also gain insight into the purpose of the missing “part.” (5) Using the technique of deep lesioning, structures below the surface of the brain also can be removed. In this case, an electrode is lowered into a target area inside the brain and a strong electric current is used to destroy a small amount of brain tissue. Again, changes in behavior give clues about the function of the affected area. (6) Microelectrode recording is used to find out what individual neurons are doing. A microelectrode is an extremely thin glass tube filled with a salty fluid. The tip of a microelectrode is small enough to detect the electrical activity of a single neuron. Watching the action potentials of just one neuron provides a fascinating glimpse into the true origins of behavior. (7) Electroencephalography measures the waves of electrical activity produced near the surface of the brain. Small electrodes (disk-shaped metal plates) are placed on a person’s scalp. Electrical impulses from the brain are detected and sent to an electroencephalograph (EEG). The EEG amplifies these weak signals (brain waves) and records them on a moving sheet of paper or a computer screen. Various brain-wave patterns can identify the presence of tumors, epilepsy, and other diseases. The EEG also reveals changes in brain activity during sleep, daydreaming, hypnosis, and other mental states. (8) Positron emission tomography (PET) provides much more detailed images of activity both near the surface and below the surface of the brain. A PET scan detects positrons (subatomic particles) emitted by weakly radioactive glucose (sugar) as it is consumed by the brain. Because the brain runs on glucose, a PET scan shows which areas are using more energy. Higher energy use corresponds with higher activity. Thus, by placing positron detectors around the head and sending data to a computer, it is possible to create a moving, color video of changes in brain activity. (9) A functional MRI (fMRI) uses MRI technology to make brain activity visible. If scientists scanned your brain while you are reading this textbook, areas of your brain involved in understanding what you read would be highlighted in an fMRI image.

610 : Describe split-brain surgery, why it is conducted, the effects of this surgery, and why split-brain patients rarely have major problems in everyday functioning after surgery.

Correct Answer : Answer will include that in the split-brain surgery, the corpus callosum is cut to control severe epilepsy. The result is essentially a person with two brains in one body. After the surgery, it is possible to send information to one hemisphere or the other. However, after the right and left brain are separated, each hemisphere will have its own separate perceptions, concepts, and impulses to act. Split-brain effects are easiest to see in specialized testing in which a visual image is presented to only one hemisphere. Without the corpus callosum, the brain is unable to transfer information. So, a visual image presented to the left hemisphere through the right eye could be described, while one presented to the right hemisphere through the left eye could not, since the left hemisphere is verbal and the right is not. However, the right hemisphere could direct the left hand to point or draw the object that was presented to it. In everyday life, conflicts between the two hemispheres are rare after the “split-brain” operation because both hemispheres have similar experiences so that if there is a conflict, one hemisphere will usually override the other. Unlike the specialized testing, the “split-brain” patient can avert any conflict by choosing to look at the object with both eyes and use whichever hand they want to in order to complete the real-life activity.

611 : Describe the structural and functional differences in the brains of men and women; and explain how these differences affect intellectual and language capabilities and the ability to

compensate for brain damage.

Correct Answer : Answer will include that many physical differences between male and female brains have been found, although their implications remain to be better understood. One generalization that may stand the test of time is that the two hemispheres appear to be more interconnected in women than in men. This structural difference may underlie many observed functional differences between men's and women's brains. For example, in one classic series of studies, researchers observed brain activity as people did language tasks. Both men and women showed increased activity in Broca's area, on the left side of the brain, exactly as expected. Surprisingly, however, the left and the right brain were activated in more than half the women tested. Despite this difference, the two sexes performed equally well on a task that involved sounding out words. Another study, this time focused on intelligence, also found that women are more likely than men to use both sides of their brains. It is tempting to conclude that the front-to-back connection pattern of the male hemispheres explains men's readiness to quickly go from perception to action. Similarly, the left-to-right connection pattern in females seems to explain women's greater willingness to combine rational and intuitive judgments. For now, these are just hypotheses that await further research. Regardless, using both sides of the brain for language and other forms of intelligence may be advantageous. For example, when Broca's area is damaged, some women can use the right side of their brains to compensate for the loss, which allows them to resume speaking. A man with similar damage might be permanently impaired.

612 : Discuss mirror neurons, including where they are located, how they were discovered, what their functions are in humans and primates, and how a particular childhood disorder may be caused by damages to these neurons.

Correct Answer : Answer will include that mirror neurons become active when we perform an action and when we merely observe someone else carrying out the same action. The motor cortex is one brain area that contains mirror neurons. Regarding the discovery of mirror neurons, Italian researchers had just recorded an increase in the activity of a single neuron in the motor cortex of a monkey as it reached for food. A few seconds later, one of the researchers happened to reach for a snack of his own. The same neuron again responded as if the monkey had reached for the food itself. Thus, the observation that a neuron involved in controlling a particular motor movement was also activated when the monkey merely observed that same motor movement in someone else led to the discovery of mirror neurons. Because they mirror actions performed by others, such neurons may explain how we can intuitively understand other people's behavior. They may also underlie our ability to learn new skills by imitation. Neuroscientists speculate that newborn humans (and monkeys) are able to imitate others because networks of mirror neurons are activated when an infant watches someone perform an action. Then, the same mirror network can be used to perform that action. Similarly, human empathy (the ability to identify with another person's experiences and feelings) may arise from activation of mirror neurons. Mirror neurons may even partially explain autism spectrum disorders. In early childhood, children with autism begin to suffer from an impaired ability to interact and communicate with other people. Restricted and repetitive behavior, such as head banging, is also common. According to the broken mirrors hypothesis, autism may arise in infants whose mirror neuron system has been damaged by genetic defects or environmental risk factors. This explanation is attractive because autism's primary features of impaired communication and social interaction appear to be related to the role that mirror neurons play in reflecting the actions and words of others. To date, these are just hypotheses that await empirical confirmation. More importantly, such possibilities are only just now leading to proposals for new therapies for autism.

613 : Using your knowledge of the limbic system, explain why people who suffer from phobias

and disabling anxiety often feel afraid without knowing why.

Correct Answer : Answer will include that a part of the limbic system known as the amygdala provides a primitive, “quick pathway” to the cortex. Like lower animals, we can be startled and, as such, are able to react to dangerous stimuli before we fully know what is going on. In situations where true danger exists, such as in military combat, the amygdala’s rapid response may aid survival. However, disorders of the brain’s fear system can be very disruptive. An example is the war veteran who involuntarily dives into the bushes when he hears a car backfire. The role of the amygdala in emotion may also explain why people who suffer from phobias and disabling anxiety often feel afraid without knowing why. Unconscious fear produced by the amygdala seems to explain why people who survive horrible experiences, such as plane crashes can have debilitating fear years later.

614 : Explain five ways that various hormones can affect behavior, moods, and personality.

Correct Answer : Answers will include descriptions of any five of the following examples: (1) Hormone output from the adrenal glands rises during stressful situations. (2) Androgens (“male” hormones) are related to the sex drive in both males and females. (3) Hormones secreted during times of high emotion intensify memory formation. (4) At least some of the emotional turmoil of adolescence is due to elevated hormone levels. (5) Different hormones prevail when you are angry rather than fearful, for example norepinephrine is linked with anger, while epinephrine is associated with fear. (6) Pregnancy and motherhood cause the release of hormones that lead to the changes involved in maternal behavior. (7) Oxytocin, an important hormone released by the pituitary, plays a broad role in regulating many behaviors generally involved in happiness. These include pregnancy, parenthood, sexual activity, social bonding, trust, and even reducing stress reactions. (8) A person suffering from hyperthyroidism (an overactive thyroid) tends to be tense, excitable, and nervous, while an underactive thyroid (hypothyroidism) in an adult can cause inactivity, sleepiness, slowness, and depression. (9) Even disturbing personality patterns may be linked to hormonal irregularities.

615 : One of your college friends who is an athlete tells you that he is thinking about using anabolic steroids in order to bulk up his muscle growth and improve his athletic performance. After reading the section on the endocrine system, what would you tell him regarding the effectiveness and side effects of using steroids?

Correct Answer : Answer will include that almost all major sports organizations ban the use of anabolic steroids. In addition, there is disagreement about whether steroids actually can improve athletic performance. However, it is widely accepted that anabolic steroids may cause serious side effects. Problems include voice deepening or baldness in women and shrinkage of the testicles, sexual impotence, and breast enlargement in men. Dangerous increases in hostility and aggression (“roid rage”) have also been linked to steroid use. Young adolescents are also at increased risk for heart attack, stroke, liver damage, and stunted growth.