Test Bank for Psychology Contemporary Perspectives 1st Edition by Okami

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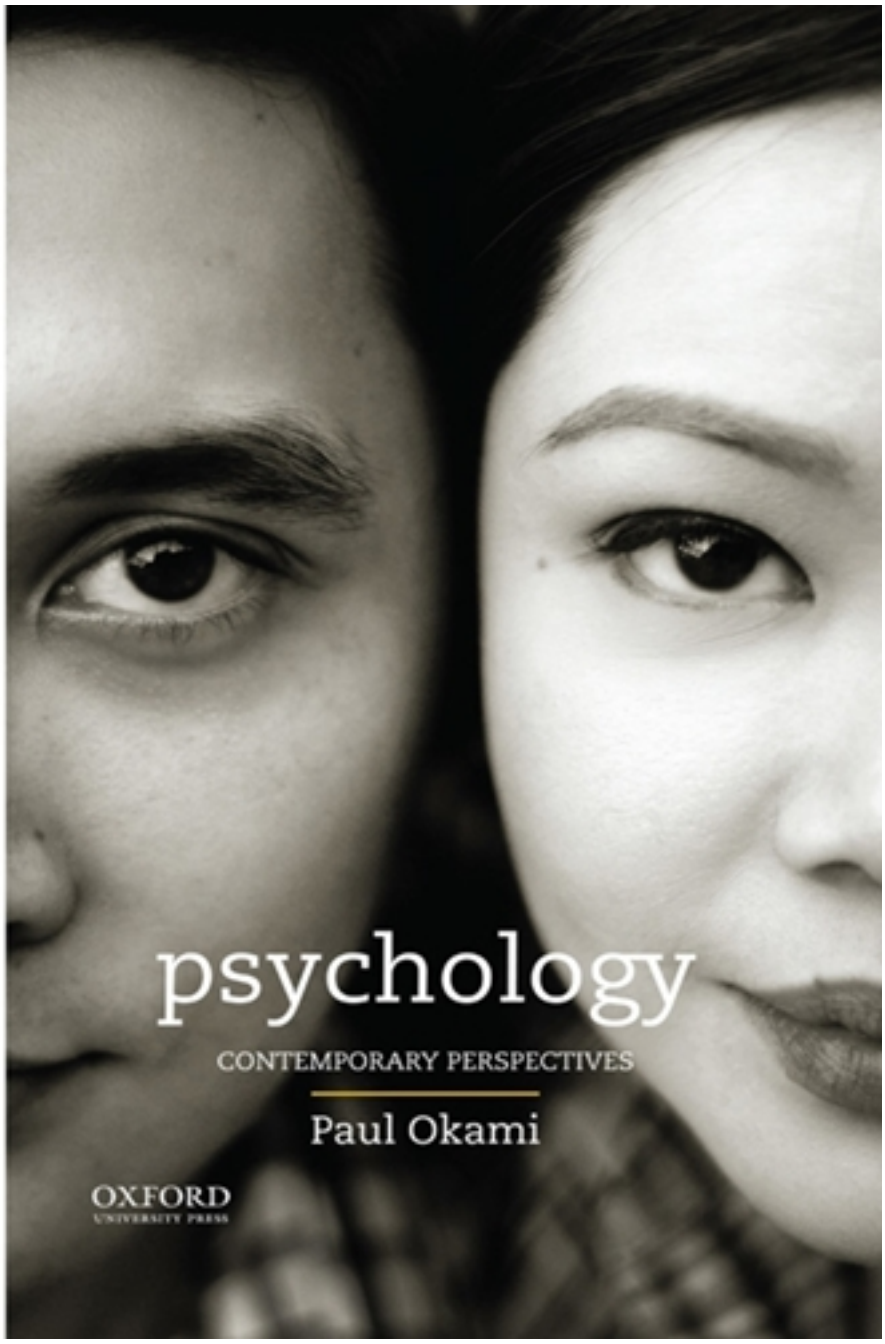

Test Bank

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MULTIPLE-CHOICE QUESTIONS

Neuroscience is best defined as
a. the study of the brain and the nervous system
b. the study of the mind and the body
c. the study of behavior and the mind
d. the study of unconscious neurons
Answer: A p. 3 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

This position on the connection between mind and brain holds that mind and the body are made of different material
a. materialsm
b. dualism
c. reductivism
d. deductivism
Answer: B p. 4 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

The phrase “ghost in the machine” is most associated with
a. materialism
b. dualism
c. Marxism
d. empiricism
Answer: B p. 4 difficulty: 1 conceptual
Goal 1: Knowledge Base of Psychology

Jenny believes that the mind and the body are both made of physical matter. Thus, Jenny believes in
a. materialism
b. dualism
c. reductivism
d. deductivism
Answer: A p. 5 difficulty: 1 conceptual
Goal 1: Knowledge Base of Psychology

Evidence for materialism has come from patients in this medical state
a. aggravated assault state
b. post-traumatic state
c. persistent vegetative state
d. persistent alert state
Answer: C p. 6 difficulty: 3 conceptual
Goal 4: Application of Psychology

The fact that parts of the brain initiate the process of performing actions before a person is aware of the behavior is consistent with

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a. dualism
b. empiricism
c. behaviorism
d. materialism
Answer: D p.7 difficulty: 3 conceptual
Goal 4: Application of Psychology

The complex biological system designed for electro-chemical communication among specialized cells in the body is called the
a. circulatory system
b. nervous system
c. communicative system
d. endocrine system
Answer: B p. 8 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

The principal cell for communication in the nervous system is the
a. glia
b. T-cell
c. lipid
d. neuron
Answer: D p. 9 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

Which of the following provides the best description of a neuron?
a. a cell that receives information and transmits it to other cells
b. a cell that encodes information in endocrine copies
c. a cell that supports neuronal health and function
d. a cell that lines the inside of the skull
Answer: A p. 9 difficulty: 2 conceptual
Goal 1: Knowledge Base of Psychology

The cells that send information to the muscles and organs of the body are called
a. sensory neurons
b. motor neurons
c. interneruons
d. protoneruons
Answer: B p. 10 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

The cells that convert physical energy into a form that may be transmitted to the brain are called
a. sensory neurons
b. motor neurons
c. interneruons
d. protoneruons

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Answer: A p. 10 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

These cells vastly outnumber other neurons and function to pass messages between neurons.
a. sensory neurons
b. motor neurons
c. interneruons
d. protoneruons
Answer: C p. 10 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

These projections reach out from the cell body of a neuron.
a. dendrites
b. cell bodies
c. axons
d. terminal buttons
Answer: A p. 11 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

Neurons receive information via _____ which are embedded in their membranes.
a. dendrites
b. axons
c. terminal buttons
d. synaptic receptors
Answer: D p. 11 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

Also called the soma, this part of the cell contains the nucleus, where most of the genetic material for the cell is stored.
a. dendrite
b. cell body
c. axon
d. terminal button
Answer: B p. 11 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

This part of a neuron transmits neural impulses from the cell body to other neurons.
a. dendrite
b. cell body
c. axon
d. terminal button
Answer: C p. 12 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

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Bundled axons that form communication channels within the brain and spinal cord are called
a. dendrites
b. tracts
c. sheaths
d. nerves
Answer: B p. 12 difficulty: 2 factual
Goal 1: Knowledge Base of Psychology

Bundled axons that form communication channels outside the central nervous system are called
a. dendrites
b. tracts
c. sheaths
d. nerves
Answer: D p. 12 difficulty: 2 factual
Goal 1: Knowledge Base of Psychology

Some axons are wrapped in this fatty layer that allows for faster neural transmission.
a. fatty acid
b. myelin sheath
c. myelin tract
d. lipid top-layer
Answer: B p. 12 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

The small gaps in myelin on an axon are referred to as
a. nodes of Ranvier
b. nodes of Radinor
c. tracts of myelin
d. tracts of Ranvier
Answer: A p. 12 difficulty: 2 factual
Goal 1: Knowledge Base of Psychology

Neurotransmitters are released from this part of the neuron
a. cell body
b. axon
c. dendrite
d. terminal
Answer: D p. 13 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

The term for the junction between terminals and dendrites is called the
a. terminus
b. cervix
c. synapse

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d. corpus
Answer: B p. 13 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

Neurons are not fused to each other so neurotransmitters must pass across the
a. synaptic gap
b. neuronal cliff
c. fiscal gap
d. synaptic cliff
Answer: A p. 13 difficulty: 2 factual
Goal 1: Knowledge Base of Psychology

This type of cell not only assists neural functioning but outnumbers the neuron in the nervous system.
a. flora
b. fauna
c. glia
d. lipa
Answer: C p. 13 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

This is the term for the default “setting” of the energy of a neuron.
a. action potential
b. resting potential
c. activating potential
d. relaxing potential
Answer: B p. 14 difficulty: 2 factual
Goal 1: Knowledge Base of Psychology

Action potentials can only occur once a neuron receives input beyond this.
a. the threshold of stimulation
b. the resting potential
c. the active potential
d. the node of Ranvier
Answer: A p. 14 difficulty: 3 conceptual
Goal 1: Knowledge Base of Psychology

When a neuron “fires” it is technically generating a(n)
a. refractory potential
b. resting potential
c. action potential
d. accuracy potential
Answer: C p. 14 difficulty: 1 conceptual
Goal 1: Knowledge Base of Psychology

Which of the following is true about the input a neuron constantly receives?

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a. Action potentials are sent via the dendrites to the cell body.
b. Neurons may receive only excitatory or inhibitory input separately.
c. Neurons may receive both excitatory and inhibitory input at any time.
d. Action potentials will only occur when a neuron is at resting potential.
Answer: C p. 14 difficulty: 3 conceptual
Goal 1: Knowledge Base of Psychology

Signals that signal a cell to fire are _____ while those that signal a cell to hold or not fire are _____.
a. excitatory; transitory
b. transitory; inhibitory
c. inhibitory; excitatory
d. excitatory; inhibitory
Answer: D p. 14 difficulty: 2 factual
Goal 1: Knowledge Base of Psychology

Resting potential is created by a greater proportion of negatively charged ions in a neuron known as
a. depolarization
b. polarization
c. ionization
d. sodium
Answer: B p. 15 difficulty: 2 factual
Goal 1: Knowledge Base of Psychology

The most important ions contributing to resting potential are
a. sodium and potassium
b. calcium and sodium
c. calcium and chlorine
d. potassium and calcium
Answer: A p. 15 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

Which of the following best describes the function of ion channels during resting potential?
a. regulating the potassium and calcium ions outside the cell
b. maintaining the distance between ions outside the cell
c. regulating the amount of sodium and potassium ions in the cell
d. regulating the action of calcium ions inside the cell
Answer: C p. 15 difficulty: 3 conceptual
Goal 1: Knowledge Base of Psychology

The flood of sodium neurons leading to an increase of positively charged ions in the cell is called
a. polarization
b. depolarization

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c. neutralization
d. action formation
Answer: B p. 16 difficulty: 2 factual
Goal 1: Knowledge Base of Psychology

Which of the following is NOT true of action potentials?
a. Repolarization of the axon is immediate.
b. Sodium ions rush into the cell leading to depolarization.
c. Action potentials travel in both directions along the axon.
d. Action potentials begin at the axon hillock.
Answer: C p. 16 difficulty: 3 conceptual
Goal 1: Knowledge Base of Psychology

The process of reuptake is best described as
a. the breakdown of excess neurotransmitter molecules in the synapse
b. the re-absorption of excess neurotransmitter molecules by the presynaptic cell
c. the rejection of neurotransmitter molecules from receptor sites
d. the binding of neurotransmitter molecules to receptor sites.
Answer: B p. 18 difficulty: 3 factual
Goal 1: Knowledge Base of Psychology

When a drug increases the effect of a neurotransmitter is called a(n)
a. agonist
b. antagonist
c. interneuron
d. protagonist
Answer: A p. 18 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

When a drug decreases the effect of a neurotransmitter is called a(n)
a. agonist
b. antagonist
c. interneuron
d. protagonist
Answer: B p. 18 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

Opiate agonists mimic the activity of these pain-killing neurotransmitters
a. endopiums
b. endoplasms
c. endorphins
d. morphemes
Answer: C p. 19 difficulty: 2 factual
Goal 1: Knowledge Base of Psychology

This neurotransmitter affects mood, sleep, and sexual behavior.

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a. dopamine
b. serotonin
c. glutamate
d. GABA
Answer: B p. 17 difficulty: 2 factual
Goal 1: Knowledge Base of Psychology

Dopamine is an important part of the reward system of the brain but is also very important for
a. regulating bodily movement
b. blocking pain signals
c. bonding between mother and infant
d. regulating th experience of pain
Answer: A p. 20 difficulty: 2 factual
Goal 1: Knowledge Base of Psychology

Many “recreational” psychoactive drugs are rewarding because they increase the release of
a. glutamate
b. serotonin
c. dopamine
d. norepinephrine
Answer: C p. 20 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

GABA tends to produce relaxation and sedition because its action is
a. excitatory
b. inhibitory
c. transitory
d. reuptake
Answer: B p. 20 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

This neurotransmitter operates by inhibiting brain neurons from firing.
a. dopamine
b. serotonin
c. glutamate
d. GABA
Answer: D p. 20 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

Which of the following best describes the relationship between endorphins and runners high.
a. There is a direct causal link between experienced euphoria and levels of endorphins in runners.

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b. There is a positive correlation between experienced euphoria and levels of endorphins in runners.
c. There is a negative correlation between experienced euphoria and levels of endorphins in runners.
d. There is no relationship between experienced euphoria and levels of endorphins in runners.
Answer: B p. 23 difficulty: 3 conceptual
Goal 4: Application of Psychology

The central nervous system is composed of
a. the central nerve
b. the brain
c. the brain and spinal cord
d. the cerebellum and brain
Answer: C p. 25 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

This tubular bundle of nerve tracts is the communication pathway between the brain and the rest of the body.
a. the peripheral nervous system
b. the spinal cord
c. the brain stem
d. the cerebellum
Answer: B p. 26 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

In the spinal cord and brain _____ matter is made of cell bodies, unmyelinated axons, glia, and dendrites, while _____ matter is made of myelinated axons.
a. gray; white
b. white; gray
c. green; white
d. gray; yellow
Answer: A p. 26 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

Gray matter is responsible for collecting and integrating information because it is partly made of
a. mylenated axons
b. dendrites and cell bodies
c. endorphins
d. spinal reflexes
Answer: B p. 26 difficulty: 2 factual
Goal 1: Knowledge Base of Psychology

These motor actions are automatic and not controlled by the brain.
a. brain reflexes

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b. peripheral reflexes
c. spinal reflexes
d. vestibular reflexes
Answer: C p. 26 difficulty: 2 factual
Goal 1: Knowledge Base of Psychology

These circuits of neurons in the spinal cord are the reason why infants will execute walking movements if placed on a treadmill.
a. peripheral pattern generators
b. cerebellar motors
c. spinal generators
d. central pattern generators
Answer: D p. 27 difficulty: 2 factual
Goal 4: Application of Psychology

The nerves that exist outside of the brain and spinal cord are known as
a. the central nervous system
b. the peripheral nervous system
c. the vestibular system
d. the motor system
Answer: B p. 27 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

The peripheral nervous system has two divisions called
a. the somatic and autonomic systems
b. the central and somatic systems
c. the autonomic and automatic systems
d. the sensory and motor systems
Answer: A p. 27 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

The somatic nervous system is mainly responsible for regulating
a. involuntary reflexes
b. heart and lung function
c. cellular activity
d. voluntary motor actions
Answer: D p. 27 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

The autonomic nervous system is mainly responsible for regulating
a. primary visual sensitivity
b. involuntary actions of muscles, glands, and organs
c. cellular activity in the spinal cord
d. voluntary motor actions
Answer: B p. 28 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

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This subdivision of the autonomic nervous system triggers an increase in heart rate, lung expansion, and other physiological responses designed to increase the amount of oxygen to the brain and muscles.
a. parasympathetic
b. sympathetic
c. metasympathetic
d. megasympathetic
Answer: B p. 28 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

Arousal of the sympathetic nervous system leads to a cascade of physiological responses also know as the
a. rest and digest response
b. fight or flight response
c. tend and befriend response
d. fear and loathing response
Answer: B p. 28 difficulty: 2 conceptual
Goal 1: Knowledge Base of Psychology

This subdivision of the autonomic nervous system triggers a decrease of heart rate, and other physiological responses designed to restore your body's resources.
a. parasympathetic
b. sympathetic
c. metasympathetic
d. megasympathetic
Answer: A p. 29 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

Which of the following statements best describes the relationship between the sympathetic and parasympathetic nervous systems?
a. The two systems are often in competition for the body's resources
b. The two systems allow for the execution of fine and gross motor movements.
c. The two systems complement each other as a part of the body's homeostasis.
d. The two systems are not active unless the body is under threat.
Answer: C p. 29 difficulty: 3 conceptual
Goal 3: Critical Thinking Skills in Psychology

Which of the following is not a part of the hindbrain?
a. cerebellum
b. medulla
c. pons
d. thalamus
Answer: D p. 33 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

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The inferior and superior colliculi are both parts of the
a. midbrain
b. hindbrain
c. forebrain
d. cerebellum
Answer: A p. 33 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

Ken experienced a blow to the back of the head, which resulted in problems coordinating his balance and his sensory input. Which part of Ken's brain has most likely been damaged?
a. pons
b. cerebellum
c. medulla
d. reticular formation
Answer: B p. 33 difficulty: 2 conceptual
Goal 4: Application of Psychology

Between 50 and 70 percent of the brain's neurons make up this hindbrain structure.
a. cerebellum
b. pons,
c. medulla
d. cortex
Answer: A p. 33 difficulty: 3 factual
Goal 1: Knowledge Base of Psychology

This part of the hindbrain is important for functioning of your vital organs.
a. pons
b. cerebellum
c. medulla
d. reticular formation
Answer: C p. 34 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

This hindbrain structure is involved in body regulation during sleep and relaying information between hindbrain and forebrain structures.
a. pons
b. cerebellum
c. medulla
d. reticular formation
Answer: A p. 35 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

This hindbrain structure plays a role in varying our consciousness awareness.
a. pons

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b. cerebellum
c. medulla
d. reticular formation
Answer: D p. 35 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

The midbrain structures known as the inferior and superior colliculi are essential for
a. forming long-term memories of motor information
b. conveying auditory and visual information to various forebrain structures
c. conveying sensory information from the cortex to the limbs
d. converting tactile sensations into emotions
Answer: B p. 35 difficulty: 2 factual
Goal 1: Knowledge Base of Psychology

Unlike many of the hindbrain and midbrain structures, the structures of the forebrain
a. generally receive information and send commands to the same side of the body
b. are composed of relatively simple neural material
c. are divided into two cerebral hemispheres
d. are only important for regulating vital bodily functions
Answer: C p. 36 difficulty: 3 conceptual
Goal 3: Critical Thinking Skills in Psychology

This structure, severed in so-called “split-brain” patients, allows neurons from separate cerebral hemispheres to communicate directly.
a. thalamus
b. corpus callosum
c. fornix
d. hypothalamus
Answer: B p. 36 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

Which of the following has not been included in the classic descriptions of the so-called “limbic system?”
a. hypothalamus
b. thalamus
c. hippocampus
d. amygdala
Answer: B p. 37 difficulty: 2 factual
Goal 1: Knowledge Base of Psychology

This limbic-system structure links the nervous system to the endocrine system and also regulates sexual and aggressive impulses.
a. hypothalamus
b. thalamus
c. hippocampus
d. amygdala

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Answer: A p. 37 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

This limbic-system structure is most associated with the ability to form new episodic memories.
a. hypothalamus
b. thalamus
c. hippocampus
d. amygdala
Answer: C p. 38 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

Patients like H. M. who incur damage to their hippocampus often experience these symptoms, also known as aneterograde amnesia.
a. loss of the ability to remember anything prior to the damage
b. enhancement of the ability to remember new experiences
c. loss of the ability to form episodic memories after the damage
d. enhancement of the ability form retrieve old memories.
Answer: C p. 39 difficulty: 2 conceptual
Goal 1: Knowledge Base of Psychology

This limbic-system structure is built of neurons that help us understand our emotions and the emotions of other people.
a. hypothalamus
b. thalamus
c. hippocampus
d. amygdala
Answer: D p. 40 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

This nucleus in the limbic system is important for producing voluntary movements, and is compromised in patients suffering from Parkinson’s disease.
a. nucleus accumbens
b. basal ganglia
c. hippocampus
d. amygdala
Answer: A p. 42 difficulty: 2 factual
Goal 1: Knowledge Base of Psychology

Also known as the “reward center” of the brain, these dopamine-rich nuclei provide the motivation to engage in rewarding behavior.
a. nucleus accumbens
b. basal ganglia
c. hippocampus
d. amygdala
Answer: A p. 43 difficulty: 1 factual

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Goal 1: Knowledge Base of Psychology

Seated at the base of the forebrain, this relaying structure is thought of as the “gateway” to the higher functions of the brain.
a. amygdala
b. basal ganglia
c. hippocampus
d. thalamus
Answer: D p. 43 difficulty: 2 factual
Goal 1: Knowledge Base of Psychology

This outer layer of the cerebrum enables humans to interpret sensory information, solve problems, learn, remember, and use language.
a. cerebellum
b. cerebral cortex
c. allocortex
d. hippocortex
Answer: B p. 44 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

You meet a patient in the hospital who has experienced head trauma that disrupted the function of her primary visual cortex. Which lobe of the cortex has been affected?
a. occipital
b. temporal
c. parietal
d. frontal
Answer: A p. 45 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

Which of the following best describes the flow if information in visual cortical areas?
a. The parietal lobe integrates the visual sensations from the eye before sending information to primary visual cortex.
b. Visual sensations from the eye are relayed to primary visual cortex and then conveyed to visual association areas of the brain.
c. Visual associations from primary visual cortex are sent to the thalamus before being relayed to the parietal lobe.
d. The temporal lobe integrates the visual sensations from the thalamus before allowing the superior colliculi to process the information.
Answer: B p. 46 difficulty: 2 conceptual
Goal 3: Critical Thinking Skills in Psychology

This strip of cortical tissue located in the parietal lobe integrates sensations from the body into a topographic map known as the sensory homunculus.
a. primary motor cortex
b. primary visual cortex
c. somatosensory cortex

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d. tonotopic cortex
Answer: C p. 47 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

This lobe houses the auditory cortex, auditory association areas, and Wernicke's area.
a. occipital
b. temporal
c. parietal
d. frontal
Answer: B p. 48 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

This lobe contains the primary motor cortex, and is also important for many of the higher cognitive functions of the cortex.
a. occipital
b. temporal
c. parietal
d. frontal
Answer: D p. 49 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

Which of the following best describes the functions of the prefrontal cortex?
a. The prefrontal cortex processes all of the sensory information that comes from our skin.
b. The prefrontal cortex combines the information from the visual and auditory areas to provide support for the parietal cortex.
c. The prefrontal cortex integrates information from the rest of the brain and compares it against our goals for any given situation.
d. The prefrontal cortex integrates all the information from the temporal lobe to make decisions about our emotions.
Answer: C p. 50 difficulty: 3 conceptual
Goal 3: Critical Thinking Skills in Psychology

Which of the following provides the best description of hemispheric specialization in the cortex?
a. The two hemispheres of the cortex are specialized to have identical functions.
b. The two hemispheres of the cortex are specialized for different functions, especially in the case of language.
c. The two hemispheres of the cortex are specialized to maintain most of the body's vital functions like respiration and heart rate.
d. The two hemispheres of the cortex are specialized to compete for the brain's resources, especially the limbic system.
Answer: B p. 52 difficulty: 2 conceptual
Goal 3: Critical Thinking Skills in Psychology

In Michael Gazzaniga's experiments with split-brain patients, he found that

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a. The patients were not able to speak the names of the objects that they saw.
b. The patients were only able to draw the objects that they saw.
c. The patients could not speak the name of objects shown to the right brain, but could draw the objects with their left hands.
d. The patients could not draw or speak the names of the objects shown to the left brain.
Answer: C p. 55 difficulty: 3 factual
Goal 1: Knowledge Base of Psychology

The human brain is able to reorganize and adapt to environmental input, a concept known as
a. viscosity
b. density
c. plasticity
d. fluidity
Answer: C p. 59 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

The endocrine system is composed of
a. glands and hormones
b. veins and arteries
c. neurons and glia
d. skin and muscle cells
Answer: A p. 65 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

Which of the following is true regarding the relationship between the endocrine system and nervous system?
a. The endocrine system functions independent of the nervous system.
b. The pituitary gland, which controls functioning of other glands, is a part of the brain.
c. The pineal gland is the seat of all intelligent behavior in the nervous system.
d. The nervous system is under the control of the endocrine system.
Answer: B p. 66 difficulty: 3 conceptual
Goal 3: Critical Thinking Skills in Psychology

These neuroscientists conduct experimental studies, frequently using non-human animals, to shed light on the neural bases of behavior.
a. cognitive neuroscientists
b. biological scientists
c. molecular neuroscientists
d. behavioral neuroscientists.
Answer: D p. 69 difficulty: 2 factual
Goal 1: Knowledge Base of Psychology

This early pseudoscientific theory of brain function held that the physical anatomy of the skull could be analyzed to reveal the workings of the human mind.
a. plasticity

CLICK HERE TO ACCESS THE COMPLETE Test Bank

b. philology
c. phrenology
d. plutocracy
Answer: C. p. 70 diffuclty: 1 factual
Goal 1: Knowledge Base of Psychology

This early theory of brain function held that all parts of the cortex were equally likely to perform any given mental task.
a. equilibrium
b. equatorial theory
c. eventide theory
d. equipotentiality
Answer: D p. 71 difficulty: 2 factual
Goal 1: Knowledge Base of Psychology

Among the early advances in behavioral neuroscience was the observation by Paul Broca that
a. a patient who had damage to the left hemisphere could only speak a single word
b. humans and animals have radically different neural organization
c. a patient who had damage to the right temporal lobe could not speak a single word
d. humans have no single area of the brain dedicated to language behavior
Answer: A p. 73 difficulty: 3 factual
Goal 1: Knowledge Base of Psychology

These neuroscientists usually use human subjects in their research and include methodologies such as psychological testing and brain imaging.
a. behavioral
b. cognitive
c. biological
d. molecular
Answer: B p. 74 difficulty: 1 factual
Goal 1: Knowledge Base of Psychology

This brain imaging technique is the result of a series of radio-frequency images that reveal ongoing changes in the specific portions of the brain.
a. functional positron emission tomography
b. functional electroencephalography
c. functional magnetic resonance imaging
d. functional electrical stimulation imaging
Answer: C p. 75 difficulty: 2 factual
Goal 1: Knowledge Base of Psychology

CLICK HERE TO ACCESS THE COMPLETE Test Bank

TRUE / FALSE QUESTIONS

1. Modern neuroscience has largely rejected dualism as a description of the mind and brain.
TRUE p.6 difficulty: 1 Goal 1: Knowledge Base of Psychology

2. Neurons pass along messages to one another to “fire” or “not fire” in a fashion similar to the use of 1s and 0s by computers to represent complex information.
TRUE p. 10 difficulty: 2 Goal 4: Application of Psychology

3. The majority of neurons in the central nervous system are sensory neurons.
FALSE p. 11 difficulty: 3 Goal 3: Critical Thinking Skills in Psychology

4. Dendrites are the sending parts of neurons, while axons receive information from other neurons.
FALSE p. 12 difficulty: 1 Goal 1: Knowledge Base of Psychology

5. One a neuron’s membrane potential reaches the threshold of stimulation, an action potential occurs in an all-or-nothing fashion.
TRUE p. 14 difficulty: 2 Goal 1: Knowledge Base of Psychology

6. Depolarization is an event that signals the inhibition of an action potential in the axon.
FALSE p. 16 difficulty: 2 Goal 1: Knowledge Base of Psychology

7. In general, neurotransmitters can bind to any receptor on any dendrite regardless of the size and shape.
FALSE p. 17 difficulty: 2 Goal 3: Critical Thinking Skills in Psychology

8. Most substances in the blood stream are allowed to freely enter the brain through the blood-brain barrier.
FALSE p. 21 difficulty: 1 Goal 1: Knowledge Base of Psychology

9. The experience of a “runner’s high” is likely related to the function of endorphins in the brain.
TRUE p. 23 difficulty: 1 Goal 4: Application of Psychology

10. Axons that make up the white matter of the brain and spinal cord are surrounded by myelin, cells that accelerate the speed of neural communication.
TRUE p. 26 difficulty: 2 Goal 1: Knowledge Base of Psychology

11. The parasympathetic branch of the autonomic nervous system is responsible for the physiological and psychological reactions known as the fight-or-flight response.
FALSE p. 28 difficulty: 1 Goal 1: Knowledge Base of Psychology

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12. Structures in the hindbrain such as the medulla function to produce most of our conscious thoughts.
FALSE p. 34 difficulty: 1 Goal 1: Knowledge Base of Psychology

13. The cerebellum contains between 50 and 70 percent of the total number of neurons in the brain.
TRUE p. 33 difficulty: 2 Goal 1: Knowledge Base of Psychology

14. When the corpus callosum is damaged by trauma or severed during surgery, the result is the complete loss of language functioning.
FALSE p. 35 difficulty: 2 Goal 3: Critical Thinking Skills in Psychology

15. In addition to memory loss, patient H. M. also experienced reduced sensitivity to emotion, meaning he likely lost functioning in his amygdala and his hippocampus.
TRUE p. 40 difficulty: 3 Goal 3: Critical Thinking Skills in Psychology

16. An increase in dopamine in the nucleus accumbens means that a person is not likely to exert much effort to obtain a reward.
FALSE p. 43 difficulty: 2 Goal 3: Critical Thinking Skills in Psychology

17. Without a thalamus, your cortex would still be able to process sensory and motor information properly.
FALSE p. 44 difficulty: 1 Goal 1: Knowledge Base of Psychology

18. The somatosensory cortex and primary motor cortex are both located in the parietal lobe to help spatial cognition.
FALSE p. 49 difficulty: 1 Goal 1: Knowledge Base of Psychology

19. Evidence for brain plasticity came from brain-imaging studies of professional musicians that revealed enlargements of auditory cortical areas based on the number of years of musical training.
TRUE p. 60 difficulty: 3 Goal 4: Application of Psychology

20. Research involving split-brain patients revealed support for the notion of equipotentiality of brain tissue.
FALSE p. 71 difficulty: 2 Goal 1: Knowledge Base of Psychology

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FILL-IN-THE-BLANK

1. _____ is a philosophical view that the mind and brain are made of the same material.
Answer: materialism p. 5

2. _____ neurons transmit information toward the spinal cord and brain, while _____ neurons transmit information from the spinal cord and brain to the body.
Answer: sensory; motor p. 10

3. Inhibitor and excitatory stimulations received by neurons are collected by the _____, and information is sent to other cells through the _____.
Answer: dendrites; axons p. 12

4. During an action potential, the cell becomes _____ meaning that a flood of sodium (Na^+) ions enter the cell, raising its electric charge.
Answer: depolarized p. 16

5. Neurons communicate through the release of _____ like dopamine, serotonin, and GABA.
Answer: neurotransmitters p. 17

6. The nerves that enable movement of the limbs and sensation from the skin and muscles are part of the _____ nervous system, while the nerves that regulate organ function are part of the _____ nervous system.
Answer: somatic; autonomic p. 28

7. Without a _____ your brain would have a reduced ability to relay signals from lower brain areas to specific parts of the cerebral cortex.
Answer: thalamus p. 43

8. The _____ lobe houses the somatosensory cortex and the _____ lobe is dedicated totally to visual processing.
Answer: parietal; occipital p. 46

9. The endocrine system is composed of bodily organs known as _____ and the chemicals they synthesize and release into your bloodstream and tissues, called _____.
Answer: glands; hormones p. 65

10. A _____ neuroscientist is most likely to employ brain-imaging techniques like fMRI to examine the mind.
Answer: cognitive p. 75

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ESSAY QUESTIONS

1. The anatomy of the neuron includes four very important regions: dendrites, cell body, axon, and terminal. Define each region and explain how each region contributes to an action potential.
Answer reference: p. 11-14

2. Describe the electrochemical processes that enable the following: polarization, depolarization, and repolarization. In your answer, make sure to mention resting potentials and action potentials.
Answer reference: p. 14-16

3. Describe the major divisions in the central and peripheral nervous systems. Be sure to explain spinal gray matter and white matter and the different divisions of the peripheral nervous system.
Answer reference: p. 25-29

4. Explain what it means to say that the human cerebral cortex is plastic. In your answer give two examples of how plasticity might be observed in two separate lobes. Also discuss how plasticity is related to hemispheric specialization.
Answer reference: p. 44-66