

chapter 2

Settings

Questions

 Show Question Details

0 pts

Describe how an understanding of both a normally functioning brain and a split brain enables us to better appreciate the fact that most information processing takes place outside of conscious awareness.

0 pts

Because he has difficulty falling asleep at night, Professor Yoo doesn't go to bed until very late. Before he retires, he tries to wear himself out by running around the block several times. Then he treats himself to a beer and perhaps a pizza while preparing his lecture for the next day's early morning classes. What specific advice would you give the professor to help him fall asleep?

0 pts

Franco studied all evening for a college biology test scheduled for the following morning. That night he dreamt that he accurately copied a female classmate's correct answers to the test questions as they unexpectedly flashed before his eyes. Compare and contrast explanations of Franco's dream that might be provided by Freudian, information-processing, and activation-synthesis theories. In what sense is the dream a reflection of Franco's level of cognitive development?

0 pts

The ancient Greek physician Hippocrates believed that body fluids influenced human behavior, emotions, and personality. Use your understanding of the body's rapid and slower chemical communication systems to support or refute the general logic of Hippocrates' theory.

0 pts

After a mild stroke, Mr. Alejandro showed some signs of impaired language functioning. What pattern of symptoms would lead you to believe the damage occurred primarily in (a) Broca's area, (b) Wernicke's area, or (c) the angular gyrus?

0 pts

After suffering a head injury in an auto accident, Alyssa says that she remembers what her mother looks like. She also can accurately recall many of her mother's distinctive facial features. But, when she is shown pictures of her mother, Alyssa is unable to recognize her, even though she can see clearly. Use your understanding of the functioning brain to account for Alyssa's strange pattern of experience.

0 pts

The chemical messengers released into the junctions between neurons are called

hormones.

neurotransmitters.

Answer

interneurons.

free radicals.

0 pts

Neurotransmitters are released from terminals at the end of the

dendrite.

cell body.

axon.

neural network.

Answer

0 pts

Reuptake refers to the

movement of neurotransmitter molecules across a synaptic gap.

release of hormones into the bloodstream.

flow of neural messages into the dendrites.

absorption of excess neurotransmitter molecules by a sending neuron.

Answer

0 pts

An undersupply of serotonin is most closely linked to

Alzheimer's disease.

schizophrenia.

Parkinson's disease.

depression.

Answer

0 pts

Schizophrenia is most closely linked with an oversupply of the neurotransmitter

dopamine.

epinephrine.

acetylcholine.

serotonin.

Answer

0 pts

Alzheimer's disease is most closely linked to the deterioration of neurons that produce

dopamine.

Answer

acetylcholine.

epinephrine.

endorphins.

0 pts

An undersupply of the major inhibitory neurotransmitter known as _____ is linked to seizures.

glutamate

Answer

GABA

serotonin

ACh

0 pts

Migraines are most closely linked with an

oversupply of GABA.

undersupply of serotonin.

Answer

oversupply of glutamate.

undersupply of acetylcholine.

0 pts

Endorphins are

neurotransmitters.

motor neurons.

endocrine glands.

sensory neurons.

Answer

0 pts

Opiate drugs occupy the same receptor sites as

serotonin.

Answer

endorphins.

dopamine.

epinephrine.

0 pts

The vast majority of neurons in the body's nervous system are

free radicals.

Answer

interneurons.

motor neurons.

sensory neurons.

0 pts

José has just played a long, bruising football game but feels little fatigue or discomfort. His lack of pain is most likely caused by the release of

melatonin.

dopamine.

acetylcholine.

Answer

endorphins.

0 pts

The body's natural production of endorphins is likely to be

increased by heroin use and increased by vigorous exercise.

decreased by heroin use and decreased by vigorous exercise.

increased by heroin use and decreased by vigorous exercise.

Answer

decreased by heroin use and increased by vigorous exercise.

0 pts

Jason suffered painful withdrawal symptoms after he stopped using heroin. This was most likely due to his brain's reduced production of

dopamine.

epinephrine.

acetylcholine.

Answer

endorphins.

0 pts

The two major divisions of the nervous system are the central nervous system and the _____ nervous system.

autonomic

sympathetic

somatic

Answer

peripheral

0 pts

The central nervous system consists of

sensory and motor neurons.

somatic and autonomic divisions.

Answer

the brain and the spinal cord.

sympathetic and parasympathetic divisions.

0 pts

Messages are transmitted from your spinal cord to muscles in your hands by the _____ nervous system.

Answer

peripheral

parasympathetic

sympathetic

autonomic

0 pts

Information travels through axons that are bundled into the "cables" that we call

interneurons.

action potentials.

Answer

nerves.

association areas.

0 pts

You feel the pain of a sprained ankle when _____ relay(s) messages from your ankle to your central nervous system.

the limbic system

interneurons

motor neurons

Answer

sensory neurons

0 pts

Sensory neurons are part of the

thalamus.

reticular formation.

Answer

peripheral nervous system.

sensory cortex.

0 pts

Central nervous system neurons that process information between sensory inputs and motor outputs are called

neurotransmitters.

Answer

interneurons.

synapses.

dendrites.

0 pts

An electrical signal that travels down the axon of a neuron is called the

synapse.

microelectrode.

Answer

action potential.

EEG.

0 pts

A synapse is a(n)

chemical messenger that triggers muscle contractions.

automatic response to sensory input.

Answer

junction between a sending neuron and a receiving neuron.

neural cable containing many axons.

0 pts

The speed at which a neural impulse travels is increased when the axon is covered with

association area.

Answer

myelin sheath.

free radicals.

an endocrine gland.

0 pts

The minimum level of stimulation required to trigger a neural impulse is called the

MRI.

Answer

threshold.

synapse.

action potential.

0 pts

Even if excitatory signals are increased above the threshold for an action potential to occur, this will not affect the intensity of the action potential. This indicates that a neuron's reaction

is slowed down by the synapse.

is delayed by the central nervous system.

Answer

is an all-or-none response.

depends on neurotransmitter molecules.

0 pts

A slap on the back is more painful than a pat on the back because a slap triggers

the release of endorphins.

more intense neural impulses.

the release of GABA.

Answer

more frequent neural impulses.

0 pts

At the age of 22, Mrs. LaBlanc was less than 4 feet tall. Her short stature was probably influenced by the lack of a growth hormone produced by the

pancreas.

thyroid.

adrenal gland.

Answer

pituitary gland.

0 pts

The most influential gland of the endocrine system is the

thyroid gland.

adrenal gland.

Answer

pituitary gland.

pancreas.

0 pts

The release of epinephrine and norepinephrine by the adrenal glands is most likely to trigger

a reduction of blood pressure.

Answer

the fight-or-flight response.

hallucinations.

REM rebound.

0 pts

If a professor accused you of cheating on a test, your adrenal glands would probably release _____ into your bloodstream.

endorphins

acetylcholine

Answer

epinephrine

melatonin

0 pts

The ovaries in females and the testes in males are part of the

limbic system.

Answer

endocrine system.

sympathetic nervous system.

central nervous system.

0 pts

Endocrine glands secrete hormones into

synaptic gaps.

Answer

the bloodstream.

the limbic system.

sensory neurons.

0 pts

Hormones are the chemical messengers of the

autonomic nervous system.

Answer

endocrine system.

limbic system.

reticular formation.

0 pts

In a tragic diving accident, Andrew damaged his spinal cord. As a result, he suffered paralysis of his legs. Andrew's injury was located in his

somatic nervous system.

limbic system.

sympathetic nervous system.

Answer

central nervous system.

0 pts

The part of the central nervous system that carries information from your senses to your brain and motor-control information to your body parts is the

pituitary gland.

pancreas.

Answer

spinal cord.

reticular formation.

0 pts

A football quarterback can simultaneously make calculations of receiver distances, player movements, and gravitational forces. This best illustrates the activity of multiple

endocrine glands.

endorphin agonists.

Answer

neural networks.

reticular formation.

0 pts

The strengthening of synaptic connections facilitates the formation of

interneurons.

endorphins.

Answer

neural networks.

free radicals.

0 pts

Neural networks refer to

the branching extensions of a neuron.

clusters of neurons in the central nervous system.

neural cables containing many axons.

junctions between sending and receiving neurons.

Answer

0 pts

An accelerated heartbeat is to a slowed heartbeat as the _____ nervous system is to the _____ nervous system.

somatic; autonomic

autonomic; somatic

Answer

sympathetic; parasympathetic

parasympathetic; sympathetic

0 pts

After discovering that the shadows outside his window were only the trees in the yard, Ralph's blood pressure decreased and his heartbeat slowed. These physical reactions were most directly regulated by his

Answer

parasympathetic nervous system.

sympathetic nervous system.

somatic nervous system.

hippocampus.

0 pts

You come home one night to find a burglar in your house. Your heart starts racing and you begin to perspire. These physical reactions are triggered by the

somatic nervous system.

Answer

sympathetic nervous system.

parasympathetic nervous system.

sensory cortex.

0 pts

The parasympathetic nervous system

Answer

stimulates digestion and slows heartbeat.

inhibits digestion and accelerates heartbeat.

stimulates digestion and accelerates heartbeat.

inhibits digestion and slows heartbeat.

0 pts

Which division of the autonomic nervous system arouses the body and mobilizes its energy in stressful situations?

the limbic system

Answer

the sympathetic nervous system

the somatic nervous system

the central nervous system

0 pts

Messages are transmitted from your spinal cord to your heart muscles by the

limbic system.

somatic nervous system.

central nervous system.

Answer

autonomic nervous system.

0 pts

The part of the peripheral nervous system that controls the glands and the muscles of the internal organs is called the

somatic nervous system.

reticular formation.

limbic system.

Answer

autonomic nervous system.

0 pts

The somatic nervous system is part of the _____ nervous system.

Answer

peripheral

central

sympathetic

parasympathetic

0 pts

The two divisions of the peripheral nervous system are the

brain and spinal cord.

cerebrum and cerebellum.

limbic system and endocrine system.

Answer

somatic nervous system and the autonomic nervous system.

0 pts

Motor neurons transmit signals to

Answer

glands.

interneurons.

sensory neurons.

all of these parts.

0 pts

Information is carried from the central nervous system to the body's tissues by

interneurons.

sensory neurons.

Answer

motor neurons.

the limbic system.

0 pts

Which brain structure receives information from all the senses except smell?

hippocampus

amygdala

angular gyrus

Answer

thalamus

0 pts

If your _____ is destroyed, the left side of your brain could not control the movements of your right hand.

Answer

brainstem

hippocampus

angular gyrus

corpus callosum

0 pts

The part of the brainstem that controls heartbeat and breathing is called the

cerebellum.

Answer

medulla.

amygdala.

thalamus.

0 pts

The sequence of brain regions from the evolutionarily oldest to newest is

limbic system, brainstem, cerebral cortex.

brainstem, cerebral cortex, limbic system.

limbic system, cerebral cortex, brainstem.

Answer

brainstem, limbic system, cerebral cortex.

0 pts

To identify which specific brain areas are most active during a particular mental task, researchers would be most likely to make use of a(n)

Answer

fMRI.

REM.

ACh.

GABA.

0 pts

The best way to detect enlarged fluid-filled brain regions in some patients who have schizophrenia is to use a(n)

EEG.

Answer

MRI.

PET scan.

REM.

0 pts

To identify which of Lucy's brain areas was most active when she talked, neuroscientists gave her a temporarily radioactive form of glucose and a(n)

REM.

Answer

PET scan.

EEG.

MRI scan.

0 pts

An amplified recording of the waves of electrical activity that sweep across the surface of the brain is called a(n)

fMRI.

Answer

EEG.

PET scan.

MRI.

0 pts

The hypothalamus influences the _____ to send messages to the _____.

cerebellum; amygdala

Answer

pituitary; endocrine glands

motor neurons; sensory neurons

thalamus; angular gyrus

0 pts

Which structure located at the back of the brain helps process and store memories for things we cannot consciously recall?

thalamus

medulla

Answer

cerebellum

reticular formation

0 pts

Neurosurgeons have severed the corpus callosum in human patients to reduce

narcolepsy.

Answer

epileptic seizures.

neural plasticity.

sleep apnea.

0 pts

Those whose corpus callosum is surgically severed are said to be patients with

brain plasticity.

narcolepsy.

neurogenesis.

Answer

split brains.

0 pts

The corpus callosum is a wide band of neural fibers that

enables the left hemisphere to control the right side of the body.

transmits information between the cerebral hemispheres.

controls the glands and muscles of the internal organs.

directs the muscle movements involved in speech.

Answer

Damage to the left cerebral hemisphere is most likely to reduce a person's ability to

solve arithmetic problems.

copy drawings.

recognize faces.

recognize familiar melodies.

0 pts

Answer

0 pts

The process of forming new neurons within the brain is called

reticular formation.

hemispherectomy.

neurogenesis.

Answer

REM rebound.

0 pts

A person whose lower leg had been amputated actually felt sensations on his nonexistent foot during orgasm. This best illustrates

tomography.

Answer

brain plasticity.

change blindness.

narcolepsy.

0 pts

The benefits of brain plasticity are most clearly demonstrated in

Answer

children who have had a cerebral hemisphere surgically removed.

people paralyzed by a severed spinal cord.

individuals with Alzheimer's disease.

adults with language impairment.

0 pts

The capacity of a brain area to reorganize in response to damage is known as

tomography.

rebound.

resonance.

Answer

plasticity.

0 pts

Localized areas of the brain often control one specific mental or behavioral subfunction. However, complex activities typically involve the coordination of many brain regions. Thus, the principles of _____ describe the way the brain functions.

autonomic and somatic

neurogenesis and plasticity

Answer

specialization and integration

manifest content and latent content

0 pts

The correct sequence of brain areas involved in reading a printed sentence aloud is

visual cortex, Wernicke's area, angular gyrus, Broca's area, and motor cortex.

visual cortex, Wernicke's area, Broca's area, angular gyrus, and motor cortex.

Answer

visual cortex, angular gyrus, Wernicke's area, Broca's area, and motor cortex.

visual cortex, angular gyrus, Broca's area, Wernicke's area, and motor cortex.

0 pts

After suffering a head injury in a biking accident, Louis lost his ability to read, even though he could see well, speak fluently, and understand what others are saying. His cortex was most likely damaged in

the angular gyrus.

Wernicke's area.

the frontal lobe.

Broca's area.

Answer

0 pts

After Kichi's serious snow-skiing accident, an MRI scan showed damage to her cerebral cortex in Wernicke's area. Because of the damage, Kichi is most likely to experience difficulty in

remembering past events.

pronouncing words correctly.

understanding what others are saying.

recognizing familiar faces.

Answer

0 pts

Wernicke's area is typically located in the left _____ lobe.

parietal

occipital

temporal

frontal

Answer

0 pts

After Miguel's automobile accident, an MRI scan showed damage to his cerebral cortex in Broca's area. Miguel will probably have difficulty

remembering past events.

Answer

speaking fluently.

reading.

understanding other people when they speak.

0 pts

The part of the cerebral cortex that directs the muscle movements involved in speech is known as

Wernicke's area.

Answer

Broca's area.

the angular gyrus.

the reticular formation.

0 pts

The inability to recognize familiar faces even though you can clearly see and describe facial features may result from damage to the right _____ lobe.

frontal

parietal

occipital

Answer

temporal

0 pts

People's moral judgments are most likely to seem unrestrained by normal emotions if they have suffered damage to their

cerebellum.

sensory cortex.

corpus callosum.

Answer

frontal cortex.

0 pts

Knowing that you will be punished for breaking Mom's favorite dish is a function of the

sensory cortex.

reticular formation.

Answer

association areas.

sympathetic nervous system.

0 pts

After he suffered a stroke, Mr. Santore's motor skills, vision, and hearing quickly returned to normal. Sadly, he began to have trouble figuring out how to find his way to neighborhood stores. Mr. Santore probably suffered damage to his

cerebellum.

thalamus.

hypothalamus.

Answer

association areas.

0 pts

The largest regions of the brain that are primarily involved in higher mental functions such as learning and thinking, are called the

reticular formation.

medulla.

cerebellum.

Answer

association areas.

0 pts

The association areas are located in the

brainstem.

thalamus.

limbic system.

Answer

cerebral cortex.

0 pts

When people with schizophrenia have auditory hallucinations, MRI scans show active auditory areas in the

motor cortex.

angular gyrus.

temporal lobes.

hypothalamus.

Answer

0 pts

Sensory experiences that occur without a sensory stimulus are called

night terrors.

sleep spindles.

reticular formations.

hallucinations.

Answer

0 pts

Which of the following body parts is associated with the greatest amount of brain tissue in the sensory cortex?

toes

knees

neck

lips

Answer

0 pts

Which part of your brain receives information when you are moving your legs?

limbic system

motor cortex

sensory cortex

Broca's area

Answer

0 pts

The sensory cortex is located just behind the motor cortex and is most important for our sense of

sight.

hearing.

Answer

touch.

smell.

0 pts

Which of the following body parts is associated with the greatest amount of brain tissue in the motor cortex?

arms

Answer

face

trunk

knees

0 pts

A laboratory cat could be made to twitch its whiskers by direct stimulation of a region of the _____ lobes of its cerebral cortex.

temporal

occipital

Answer

frontal

parietal

0 pts

The motor cortex is located in the _____ lobes.

occipital

temporal

Answer

frontal

parietal

0 pts

Auditory stimulation is first processed in the _____ lobes.

occipital

Answer

temporal

frontal

parietal

0 pts

The surgical removal of a large tumor resulted in massive loss of brain tissue from Leonardo's occipital lobe. Leonardo is most likely to suffer some loss of muscular coordination.

Answer

visual perception.

speaking ability.

pain sensations.

0 pts

Which lobes of the brain receive the input that enables you to feel someone scratching your back?

Answer

parietal

temporal

occipital

frontal

0 pts

Which portion of the cerebral cortex is located nearest the top of the head just behind the frontal lobes?

occipital lobes

cerebellum

Answer

parietal lobes

limbic system

0 pts

Your conscious awareness of your own name and self-identity depends primarily on the normal functioning of your

cerebellum.

amygdala.

hypothalamus.

Answer

cerebral cortex.

0 pts

The cerebral cortex is the covering layer of the

brainstem.

corpus callosum.

amygdala.

cerebrum.

Answer

0 pts

Olds and Milner located reward centers in the brain structure known as the

hypothalamus.

cerebellum.

medulla.

amygdala.

Answer

0 pts

The brain structure that provides a major link between the nervous system and the endocrine system is the

cerebellum.

amygdala.

reticular formation.

hypothalamus.

Answer

0 pts

A brain tumor damages Mr. Chou's hypothalamus. He will most likely suffer a loss of

visual perception.

muscular coordination.

sexual motivation.

language comprehension.

Answer

0 pts

To demonstrate that brain stimulation can make a rat violently aggressive, a neuroscientist should electrically stimulate the rat's

reticular formation.

cerebellum.

medulla.

Answer

amygdala.

0 pts

The amygdala consists of emotion-linked neural clusters in the

frontal lobes.

reticular formation.

Answer

limbic system.

association areas.

0 pts

Which part of the limbic system plays an essential role in the formation of conscious memories?

hypothalamus

thalamus

Answer

hippocampus

medulla

0 pts

A doughnut-shaped neural system between the brain's older parts and the cerebral hemispheres is known as the

angular gyrus.

Answer

limbic system.

reticular formation.

peripheral nervous system.

0 pts

After Kato's serious motorcycle accident, doctors detected damage to his cerebellum. Kato is most likely to have difficulty

reading printed words.

understanding what others are saying.

tasting the flavors of foods.

Answer

playing his guitar.

0 pts

The "little brain" attached to the rear of the brainstem is called the

limbic system.

corpus callosum.

Answer

cerebellum.

reticular formation.

0 pts

Which region of your brainstem plays a role in arousing you to a state of alertness when, for example, someone mentions your name?

Answer

reticular formation

cerebellum

amygdala

medulla

0 pts

Severing a cat's reticular formation from higher brain regions causes the cat to

become violently aggressive.

cower in fear.

experience convulsive seizures.

Answer

lapse into a coma.

0 pts

The reticular formation is located in the

Answer

brainstem.

limbic system.

sensory cortex.

cerebellum.

0 pts

Information from higher brain regions is transmitted to the medulla through the

corpus callosum.

hippocampus.

angular gyrus.

thalamus.

Answer

0 pts

Which brain structure relays information from the eyes to the visual cortex?

thalamus

amygdala

medulla

cerebellum

Answer

0 pts

Deaf people who use sign language typically

demonstrate greater ability in solving mathematical problems than hearing persons.

process language in their left cerebral hemisphere.

recognize facial expressions of emotion with their left rather than their right cerebral hemisphere.

have a smaller corpus callosum than hearing persons.

Answer

0 pts

When a person speaks, brain waves and bloodflow are especially likely to reveal increased activity in the

hypothalamus.

left hemisphere.

amygdala.

right hemisphere.

Answer

0 pts

The ability to simultaneously draw one shape with the right hand and a different shape with the left hand is most characteristic of those whose _____ has been cut.

angular gyrus

reticular formation

Answer

corpus callosum

motor cortex

0 pts

A picture of a dog is briefly flashed in the left visual field of a split-brain patient. At the same time a picture of a boy is flashed in the right visual field. In identifying what she saw, the individual would be most likely to

use her left hand to point to a picture of a dog.

verbally report that she saw a dog.

use her left hand to point to a picture of a boy.

Answer

verbally report that she saw a boy.

0 pts

An increase in accident rates following the change to "daylight savings" time best illustrates the dangers of

narcolepsy.

sleep apnea.

REM rebound.

Answer

sleep deprivation.

0 pts

Sleep deprivation increases levels of the hunger-arousing hormone _____ and decreases levels of the hunger-suppressing hormone _____.

melatonin; cortisol

serotonin; dopamine

Answer

ghrelin; leptin

epinephrine; norepinephrine

0 pts

Sleep deprivation has been shown to

increase attentiveness to highly motivating tasks.

reduce high blood pressure.

Answer

diminish immunity to disease.

increase sleep apnea.

0 pts

Chronic sleep debt is most likely to contribute to

sleep apnea.

Answer

obesity.

insomnia.

night terrors.

0 pts

Compared with when they were only 20 years old, 60-year-olds

Answer

spend less time in deep sleep.

spend less time in Stage 1 sleep.

spend more time in paradoxical sleep.

complete the sleep cycle more slowly.

0 pts

The pituitary gland releases a growth hormone during

Stage 2 sleep.

Stage 1 sleep.

Answer

deep sleep.

paradoxical sleep.

0 pts

Creative thinking and a capacity to spot connections among novel pieces of information is most likely to be facilitated by

the production of free radicals.

inattentional blindness.

Answer

a complete night's sleep.

sleep apnea.

0 pts

Bats need a lot of sleep because their high waking metabolism produces _____ that are toxic to neurons.

endorphins

hormones

free radicals

alpha waves

Answer

0 pts

Which of the following animals tend to sleep the least?

elephants

gorillas

cats

bats

Answer

0 pts

The activation of light-sensitive proteins in our eyes signals our brains to decrease production of

melatonin.

serotonin.

acetylcholine.

dopamine.

Answer

0 pts

An integrated understanding of sleep patterns in terms of cultural expectations, unique individual motives, and genetic predispositions is most clearly provided by

activation-synthesis theory.

a biopsychosocial approach.

cognitive-development theory.

a memory consolidation perspective.

Answer

0 pts

Research on sleep patterns indicates that

as we grow older, more of our sleep time consists of deep sleep.

narcolepsy is characterized by repeated periods of interrupted breathing.

everyone needs a minimum of 8 hours of sleep per night to function well.

Answer

sleep patterns may be genetically influenced.

0 pts

The human sleep cycle repeats itself about every

30 minutes.

Answer

90 minutes.

2 1/2 hours.

4 hours.

0 pts

Forty-year-old Lance insists that he never dreams. Research suggests that he probably

Answer

would report a vivid dream if he were awakened during REM sleep.

dreams during Stage 4 rather than during REM sleep.

experiences more Stage 4 sleep than most people.

passes through the sleep cycle much more rapidly than most people.

0 pts

Three hours after going to sleep, Shoshanna's heart rate increases, her breathing becomes more rapid, and her eyes move rapidly under her closed lids. Research suggests that Shoshanna is

Answer

dreaming.

ready to sleepwalk.

exhibiting a sleep spindle.

experiencing a night terror.

0 pts

At 3 o'clock in the morning, John has already slept for 4 hours. As long as his sleep continues, we can expect an increase in

sleep apnea.

muscle tension.

Answer

REM sleep.

Stage 4 sleep.

0 pts

During the course of a full night's sleep, people are most likely to spend more time in

Stage 4 sleep than in Stage 2 sleep.

Answer

REM sleep than in Stage 4 sleep.

Stage 3 sleep than in REM sleep.

REM sleep than in Stage 2 sleep.

0 pts

After sleeping for about an hour and a half, José enters a phase of paradoxical sleep. He is likely to

be easily awakened.

have slower, more regular breathing.

have slower brain waves.

Answer

have very relaxed muscles.

0 pts

REM sleep is called paradoxical sleep because

our heart rate is slow and steady, while our breathing is highly irregular.

we are deeply asleep but can be awakened easily.

Answer

our nervous system is highly active, while our voluntary muscles hardly move.

it leads to very creative dreams that are perceived as colorless images.

0 pts

Fast and jerky movements of the eyes are especially likely to be associated with

sleep spindles.

dissociation.

Answer

REM sleep.

sleep apnea.

0 pts

Genital arousal is most likely to be associated with

sleep apnea.

paradoxical sleep.

Stage 4 sleep.

sleep spindles.

Answer

0 pts

Bed-wetting is most likely to occur at the end of _____ sleep.

Stage 1

Stage 2

Stage 4

paradoxical

Answer

0 pts

Which of the following sleep stages is said to be a transitional stage immediately prior to deep sleep?

REM sleep

Stage 1 sleep

Stage 3 sleep

Stage 4 sleep

Answer

0 pts

The rhythmic bursts of brain activity that occur during Stage 2 sleep are called

alpha waves.

circadian rhythms.

sleep spindles.

delta waves.

Answer

0 pts

Sensations of floating weightlessly are most closely associated with _____ sleep.

Stage 1

Answer

Stage 2

Stage 3

Stage 4

0 pts

A periodic, natural, reversible loss of consciousness that involves five distinct stages is known as

the circadian rhythm.

narcolepsy.

dissociation.

sleep.

Answer

0 pts

Jordanna has decided to go to bed early. Although her eyes are closed and she's very relaxed, she has not yet fallen asleep. An EEG is most likely to show the presence of

delta waves.

alpha waves.

sleep spindles.

rapid eye movements.

Answer

0 pts

Most college students are "owls," with performance _____ across the day. Most older adults are "larks," with performance _____ as the day progresses.

improving; declining

declining; improving

declining; staying the same

staying the same; declining

Answer

0 pts

With the approach of night, our body temperature begins to drop. This best illustrates the dynamics of the

all-or-none response.

circadian rhythm.

Answer

latent content.

REM rebound.

0 pts

Circadian rhythm refers to

the pattern of emotional ups and downs we routinely experience.

Answer

a pattern of biological functioning that occurs on a roughly 24-hour cycle.

the experience of sleep apnea following paradoxical sleep.

the cycle of five distinct stages that we experience during a normal night's sleep.

0 pts

When working an occasional night shift, people often feel groggiest in the middle of the night but experience new energy around the time they normally would wake up. This best illustrates the impact of

neurogenesis.

selective attention.

Answer

the circadian rhythm.

REM rebound.

0 pts

While a man provides directions to a construction worker, two experimenters rudely pass between them carrying a door. The man does not notice that the construction worker was replaced by a different person during the interruption. This illustrates

narcolepsy.

circadian rhythm.

plasticity.

Answer

change blindness.

0 pts

A bank teller was so distracted by the sight of a bank robber's weapon that she failed to notice his facial features. This failure illustrates

REM rebound.

inattentional blindness.

Answer

narcolepsy.

plasticity.

0 pts

Failing to see visible objects when our attention is directed elsewhere is called

narcolepsy.

neurogenesis.

paradoxical sleep.

Answer

inattention blindness.

0 pts

If asked to watch a video and press a key each time a black-shirted player passed a basketball, most research participants remained unaware of an umbrella-toting woman strolling across the video screen. This illustrated

REM rebound.

Answer

inattention blindness.

plasticity.

latent content.

0 pts

In driving-simulation experiments, students have been slower to detect traffic signals if they were talking on cell phones. This best illustrates the impact of

the circadian rhythms.

Answer

selective attention.

REM rebound.

neurogenesis.

0 pts

While reading a novel, Raoul isn't easily distracted by the sounds of the television or even by his brothers' loud arguments. This best illustrates

latent content.

narcolepsy.

plasticity.

Answer

selective attention.

0 pts

Our inability to consciously process all the sensory information available to us at any single moment best illustrates the need for

circadian rhythms.

selective attention.

REM rebound.

sleep apnea.

Answer

0 pts

Focusing conscious awareness on a particular stimulus is called

neurogenesis.

self-consciousness.

change blindness.

selective attention.

Answer

0 pts

Consciousness is

the ability to solve problems, reason, and remember.

the process of organizing and interpreting sensory information.

effortless encoding of incidental information into memory.

our awareness of ourselves and our environment.

Answer

0 pts

Which specialty area would be most interested in identifying the brain-activation patterns associated with different states of consciousness?

evolutionary psychology

cognitive neuroscience

behavior genetics

behaviorism

Answer

0 pts

A specialty area that focuses on the connections between brain activity and mental processes is known as

evolutionary psychology.

behavior genetics.

personality psychology.

Answer

cognitive neuroscience.

0 pts

In a recent car accident, Tamiko sustained damage to his right cerebral hemisphere. This injury is most likely to reduce Tamiko's ability to

Answer

facially express emotions.

solve arithmetic problems.

understand simple verbal requests.

correctly pronounce familiar words.

0 pts

Greg dreamed that his girlfriend suddenly grabbed the wheel of his speeding car. Greg's therapist suggests that the dream might represent the girlfriend's efforts to avoid sexual intimacy. According to Freud, the therapist was attempting to reveal the _____ of Greg's dream.

plasticity

circadian rhythm

Answer

latent content

manifest content

0 pts

According to Freud, the dreams of adults can be traced back to

Answer

erotic wishes.

stressful life events.

physiological needs for brain stimulation.

random bursts of neural activity.

0 pts

Evidence suggests that we sift, sort, and fix recent life events in our memory through

sleep apnea.

hallucinations.

sleepwalking.

Answer

REM sleep.

0 pts

A recurring difficulty in falling or staying asleep is called

narcolepsy.

Answer

insomnia.

sleep apnea.

paradoxical sleep.

0 pts

REM sleep is

Answer

reduced by alcohol and reduced by sleeping pills.

enhanced by alcohol and reduced by sleeping pills.

reduced by alcohol and enhanced by sleeping pills.

enhanced by alcohol and enhanced by sleeping pills.

0 pts

Sleep deprivation _____ the production of body fat by _____ levels of the stress hormone cortisol.

Answer

stimulates; increasing

inhibits; increasing

stimulates; decreasing

inhibits; decreasing

0 pts

A need to take larger and larger doses of sleeping pills to avoid insomnia indicates

narcolepsy.

Answer

tolerance.

sleep apnea.

REM rebound.

0 pts

Which of the following is the best advice for a person concerned about occasional insomnia?

Answer

Relax and drink a glass of milk before bedtime.

Eat a big dinner late in the evening so you'll feel drowsy at bedtime.

Relax with a glass of wine just before bedtime.

Exercise shortly before bedtime.

0 pts

Which of the following is bad advice for a person trying to overcome insomnia?

Drink a glass of milk 15 minutes before bedtime.

Avoid taking short naps during the day.

Answer

Drink a glass of wine 15 minutes before bedtime.

Don't engage in strenuous physical exercise just before bedtime.

0 pts

Narcolepsy is a disorder in which a person

temporarily stops breathing during sleep.

has sudden uncontrollable seizures.

Answer

experiences uncontrollable attacks of overwhelming sleepiness.

has difficulty falling and staying asleep.

0 pts

During a heated argument with his teenage daughter, Mr. Reid suddenly lapsed into a state of REM sleep. Mr. Reid apparently suffers from

Answer

narcolepsy.

insomnia.

sleep apnea.

REM rebound.

0 pts

In which of the following disorders does the person repeatedly stop breathing while asleep?

narcolepsy

Answer

sleep apnea

night terrors

insomnia

0 pts

Mr. Oates always sleeps restlessly, snorting and gasping throughout the night. It is most likely that Mr. Oates suffers from

Answer

sleep apnea.

narcolepsy.

night terrors.

insomnia.

0 pts

Particularly among men, sleep apnea is linked with

night terrors.

Parkinson's disease.

narcolepsy.

Answer

obesity.

0 pts

An air pump that keeps a person's airway open and his or her breathing regular is often prescribed for serious cases of

narcolepsy.

insomnia.

Answer

sleep apnea.

night terrors.

0 pts

Night terrors typically occur

among older adults.

during REM sleep.

following sleep apnea.

Answer

within the first few hours of Stage 4 sleep.

0 pts

Compared with adults, children are

more likely to experience night terrors and less likely to experience sleepwalking.

less likely to experience night terrors and more likely to experience sleepwalking.

less likely to experience night terrors and less likely to experience sleepwalking.

Answer

more likely to experience night terrors and more likely to experience sleepwalking.

0 pts

At 1:00 A.M., Luis gets out of bed and begins to sleepwalk. An EEG of his brain activity is most likely to show that he is in _____ sleep.

Stage 1

Stage 2

REM

Answer

Stage 4

0 pts

Research studies of the content of dreams indicate that

men are less likely than women to report dreams with sexual overtones.

the genital arousal that occurs during sleep is typically related to sexual dreams.

Answer

people are more likely to dream of failure than of success.

most dreams are pleasant, exotic, and unrelated to ordinary daily life.

0 pts

As Inge recalled her dream, she was dancing with a tall, dark gentleman. Suddenly, the music shifted to loud rock and the man disappeared. According to Freud, Inge's account represents the _____ content of her dream.

paradoxical

Answer

manifest

latent

circadian

0 pts

When dreamers' faces were lightly sprayed with cold water, they were more likely than other dreamers to experience

sleep apnea.

narcolepsy.

Answer

dreams about water.

paradoxical sleep.

0 pts

According to Freud, the latent content of a dream refers to

its accompanying brain-wave pattern.

the previous day's events that prompted the dream.

the sensory stimuli in the sleeping environment that are incorporated into the dream.

Answer

its underlying but censored meaning.

0 pts

Research indicates that total time spent in REM sleep is especially high in

males.

Answer

infants.

females.

the elderly.

0 pts

Which theory suggests that dreams are mental responses to random bursts of neural stimulation?

cognitive-development theory

information-processing theory

Answer

activation-synthesis theory

Freud's wish-fulfillment theory

0 pts

Dreams often involve sudden emotional reactions and surprising changes in scene. This best serves to support the theory that dreams

strengthen our memories of the preceding day's events.

reflect our level of cognitive development.

prepare us for the stress and challenges of the following day.

Answer

are triggered by random bursts of neural activity.

0 pts

Prior to age 9, children's dreams seem more like a slide show and less like an active story in which the dreamer is an actor. This best illustrates that the content of dreams reflects children's

latent content.

change blindness.

night terrors.

Answer

cognitive development.

0 pts

REM rebound involves the

tendency for REM sleep periods to become increasingly longer and more frequent as a normal night of sleep progresses.

increase in REM sleep that characteristically follows intense learning episodes or stressful daytime experiences.

unusual symptoms of tiredness and irritability that follow periods of REM sleep deprivation.

Answer

tendency for REM sleep to increase following REM sleep deprivation.

0 pts

Brain regions that are active as people learn to perform a visual-discrimination task are especially likely to be active again later as they experience

night terrors.

narcolepsy.

sleep apnea.

Answer

REM sleep.

0 pts

The sleep cycle is approximately _____ minutes.

30

50

75

Answer

90.

0 pts

Which of the following is characteristic of REM sleep?

Answer

genital arousal

increased muscular tension

night terrors

alpha waves

0 pts

According to Freud, dreams are

Answer

a symbolic fulfillment of erotic wishes.

the result of random neural activity in the brainstem.

the brain's mechanism for self-stimulation.

the disguised expressions of wishes we can't fulfill in public.

0 pts

Which of the following is typically controlled by the right hemisphere?

language

learned voluntary movements

arithmetic reasoning

Answer

perceptual tasks

0 pts

Sleep spindles predominate during which stage of sleep?

Answer

Stage 2

Stage 3

Stage 4

REM sleep

0 pts

Which of the following is typically controlled by the left hemisphere?

Answer

spatial reasoning

word recognition

the left side of the body

perceptual skills

0 pts

The brain research technique that involves monitoring the brain's use of glucose is called the

Answer

PET scan.

fMRI.

EEG.

MRI.

0 pts

Cortical areas that are NOT primarily concerned with sensory, motor, or language functions are

Answer

called projection areas.

called association areas.

located mostly in the parietal lobe.

located mostly in the temporal lobe.

0 pts

Damage to _____ will usually cause a person to lose the ability to understand language.

the angular gyrus

Broca's area

Answer

Wernicke's area

frontal lobe association areas

0 pts

One effect of sleeping pills is to

Answer

decrease REM sleep.

increase REM sleep.

decrease Stage 2 sleep.

increase Stage 2 sleep.

0 pts

Jessica experienced difficulty keeping her balance after receiving a blow to the back of her head. It is likely that she injured her

medulla.

thalamus.

hypothalamus.

Answer

cerebellum.

0 pts

Heartbeat, digestion, and other self-regulating bodily functions are governed by the

voluntary nervous system.

Answer

autonomic nervous system.

sympathetic division of the autonomic nervous system.

somatic nervous system.

0 pts

A strong stimulus can increase the

speed of the impulse the neuron fires.

intensity of the impulse the neuron fires.

Answer

number of times the neuron fires.

threshold that must be reached before the neuron fires.

0 pts

The gland that regulates body growth is the

adrenal.

thyroid.

hypothalamus.

pituitary.

Answer

0 pts

Following a nail gun wound to his head, Jack became more uninhibited, irritable, dishonest, and profane. It is likely that his personality change was the result of injury to his

parietal lobe.

temporal lobe.

occipital lobe.

frontal lobe.

Answer

0 pts

During which stage of sleep does the body experience increased heart rate, rapid breathing, and genital arousal?

Stage 2

Stage 3

Stage 4

REM sleep

Answer

0 pts

Although there is no single "control center" for emotions, their regulation is primarily attributed to the brain region known as the

limbic system.

reticular formation.

brainstem.

cerebellum.

Answer

0 pts

Which is the correct sequence in the transmission of a neural impulse?

axon, dendrite, cell body, synapse

dendrite, axon, cell body, synapse

synapse, axon, dendrite, cell body

dendrite, cell body, axon, synapse

Answer

0 pts

I am a relatively fast-acting chemical messenger that affects mood, hunger, sleep, and arousal. What am I?

acetylcholine

dopamine

norepinephrine

serotonin

Answer

0 pts

The pain of heroin withdrawal occurs because

under the influence of heroin the brain ceases production of endorphins.

under the influence of heroin the brain ceases production of all neurotransmitters.

during heroin withdrawal the brain's production of all neurotransmitters is greatly increased.

heroin destroys endorphin receptors in the brain.

Answer

0 pts

Dr. Hernandez is studying neurotransmitter abnormalities in depressed patients. She would most likely describe herself as a

personality psychologist.

behaviorist.

psychoanalyst.

biological psychologist.

Answer

0 pts

Research has found that the amount of representation in the motor cortex reflects the

size of the body parts.

Answer

degree of precise control required by each of the parts.

sensitivity of the body region.

area of the occipital lobe being stimulated by the environment.

0 pts

Voluntary movements, such as writing with a pencil, are directed by the

sympathetic nervous system.

Answer

somatic nervous system.

parasympathetic nervous system.

autonomic nervous system.

0 pts

A neuron will generate action potentials when

it remains below its threshold.

it receives an excitatory input.

Answer

excitatory minus inhibitory inputs exceed a minimum intensity.

it is stimulated by a neurotransmitter.

0 pts

Chemical messengers produced by endocrine glands are called

lobes.

neurotransmitters.

Answer

hormones.

enzymes.

0 pts

An experimenter flashes the word FLYTRAP onto a screen facing a split-brain patient so that FLY projects to her right hemisphere and TRAP to her left hemisphere. When asked what she saw, the patient will

say she saw FLY.

Answer

say she saw TRAP.

point to FLY using her right hand.

point to TRAP using her left hand.

0 pts

Following a head injury, a person has ongoing difficulties staying awake. Most likely, the damage occurred to the

thalamus.

corpus callosum.

reticular formation.

cerebellum.

Answer

0 pts

The visual cortex is located in the

occipital lobe.

temporal lobe.

frontal lobe.

parietal lobe.

Answer

0 pts

Which of the following is NOT a theory of dreaming mentioned in the text?

Dreams facilitate information processing.

Dreaming stimulates the developing brain.

Dreams result from random neural activity originating in the brainstem.

Dreaming is an attempt to escape from social stimulation.

Answer

0 pts

Which of the following statements regarding REM sleep is true?

Adults spend more time than infants in REM sleep.

REM sleep deprivation results in a REM rebound.

People deprived of REM sleep adapt easily.

Sleeping medications tend to increase REM sleep.

Answer

0 pts

A person whose EEG shows a high proportion of alpha waves is most likely

dreaming.

in Stage 2 sleep.

in Stage 3 or 4 sleep.

Answer

awake and relaxed.

0 pts

When Sandy scalded her toe in a tub of hot water, the pain message was carried to her spinal cord by the _____ nervous system.

somatic

sympathetic

parasympathetic

central

Answer

0 pts

Melissa has just completed running a marathon. She is so elated that she feels little fatigue or discomfort. Her lack of pain is probably the result of the release of

ACh.

endorphins.

dopamine.

norepinephrine.

Answer

0 pts

Researchers caused a cat to lapse into a coma by severing neural connections between the cortex and the

reticular formation.

hypothalamus.

thalamus.

cerebellum.

Answer

0 pts

The nerve fibers that enable communication between the right and left cerebral hemispheres and that have been severed in split-brain patients form a structure called the

reticular formation.

association areas.

Answer

corpus callosum.

parietal lobes.

0 pts

Epinephrine and norepinephrine are _____ that are released by the _____ gland.

neurotransmitters; pituitary

hormones; pituitary

neurotransmitters; thyroid

Answer

hormones; adrenal

0 pts

Beginning at the front of the brain and moving toward the back of the head, then down the skull and back around to the front, which of the following is the correct order of the cortical regions?

occipital lobe; temporal lobe; parietal lobe; frontal lobe

temporal lobe; frontal lobe; parietal lobe; occipital lobe

frontal lobe; occipital lobe; temporal lobe; parietal lobe

Answer

frontal lobe; parietal lobe; occipital lobe; temporal lobe

0 pts

Three-year-old Marco suffered damage to the speech area of the brain's left hemisphere when he fell from a swing. Research suggests that

he may never speak again.

his motor abilities may improve so that he can easily use sign language.

Answer

his right hemisphere may take over much of the language function.

his earlier experience with speech may enable him to continue speaking.

0 pts

The perceptual error in which we fail to see an object when our attention is directed elsewhere is

neurogenesis.

Answer

inattention blindness.

narcolepsy.

an all-or-none response.

0 pts

The effects of chronic sleep deprivation include

difficulty studying.

diminished productivity.

a tendency to gain weight.

Answer

all of these answers.

0 pts

Circadian rhythms are the

brain waves that occur during Stage 4 sleep.

muscular tremors that occur during opiate withdrawal.

Answer

regular body cycles that occur on a 24-hour schedule.

brain waves that are indicative of Stage 2 sleep.

0 pts

Which of the following is NOT an example of a biological rhythm?

the circadian rhythm

the 90-minute sleep cycle

the five sleep stages

Answer

sudden sleep attacks during the day

0 pts

Consciousness is defined in the text as

mental life.

selective attention to ongoing perceptions, thoughts, and feelings.

information processing.

Answer

our awareness of ourselves and our environment.

0 pts

According to the activation-synthesis theory, dreaming represents

Answer

the brain's efforts to integrate unrelated bursts of activity in visual brain areas with the emotional tone provided by limbic system activity.

a mechanism for coping with the stresses of daily life.

a symbolic depiction of a person's unfulfilled wishes.

an information-processing mechanism for converting the day's experiences into long-term memory.

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