ASPPB EPPP - Quiz Questions with Answers

Part 1-Knowledge, Domain 1: Biological Bases of Behavior

1.

Which of the following properly describes the relationship of the firing of neurons to the quality of the signal received?

The firing of a neuron is all-or-nothing

The stronger and more intense the input is, the faster and stronger the neuronal firing will be

The weaker and less intense the input is, the faster and stronger the neuronal firing will be

The more rapid the input is, the weaker and less intense the neuronal firing will be

Correct answer: The firing of a neuron is all-or-nothing

Neurons, the building blocks of the nervous system, are responsible for conducting the connections that occur within the brain. The axon terminal of a neuron releases neurotransmitters, which cause postsynaptic excitation or inhibition. The firing of a neuron is an all-or-nothing approach, as the strength of the neuronal firing does not vary in response to the strength or speed of the input.

2.

How many divisions are located on the spinal cord?

Four

Two

Seventeen

Forty

Correct answer: Four

There are four major divisions of the spinal cord: cervical, thoracic, lumbar, and sacral. Each of these regions corresponds to different areas of the body. Within these four divisions, there are 30 total segments that link the organs and muscles of specific body regions.

3.

What does the brain's ventricular system provide?

Both protection and structural support

Protection

Structural support

Increased surface area of the cortex

Correct answer: Both protection and structural support

The ventricular system of the brain provides both protection and structural support. It is made up of chambers and channels filled with fluid, which circulates through the ventricles and maintains the brain's buoyancy in the cranial vault.

The cerebrum, not the ventricular system, increases the surface area of the cortex.

4.

A diabetic patient is admitted to the hospital for a mild foot infection that will not go away. On the second day of hospitalization, the infection becomes much worse. The patient begins acting confused, has trouble concentrating, and seems to have difficulty speaking.

These symptoms can be attributed to which of the following?

Delirium

Pseudodementia

Alexia

Cognitive impairment

Correct answer: Delirium

Delirium refers to a state of confusion with an acute onset. It cannot be better explained by dementia, has a course that is often fluctuating, and is usually reversible. Delirium best describes the patient's symptoms in this scenario.

Pseudodementia refers to dementia-like symptoms that occur alongside another psychiatric illness, most often depression. Pseudodementia can cause problems like slowed processing speed and inattention. Alexia is the acquired inability to read, often the result of a stroke in the posterior region of the left hemisphere. Cognitive impairment is a general term that describes decline in cognitive functions, such as thinking, memory, and information processing, but delirium more specifically describes the patient's symptoms.

5.

Which area of the brain has been the focus of some studies on autism spectrum disorder due to its link with imitation and empathy?

Premotor cortex

Occipital lobes

Temporal lobes

Parietal lobes

Correct answer: Premotor cortex

The premotor cortex is dedicated to initiating and executing limb movements along with input from other areas of the brain. Mirror neurons in this section of the brain are associated with empathy and imitation, skills that people with autism spectrum disorder may lack.

The occipital lobes are primarily dedicated to visual processing. The temporal lobes are primarily concerned with auditory processing. The parietal lobes also process visual information and include the site of somatosensory processing.

6.

What is the outermost layer of the brain's protection?

The skull

The arachnoid mater

The pia mater

The subarachnoid space

Correct answer: The skull

The skull is the hard bone structure forming the cranial vault in which the brain sits. It is the outermost layer of brain protection.

The arachnoid mater is a membrane separated from the immediate inside surface of the skull by a series of veins. The pia mater is the most delicate membrane that closely follows the contours of the brain. The subarachnoid space contains a network of arteries, veins, and connective tissue.

7.

Which of the following refers to something that has no effect unless an agonist is present?

Antagonist

Subagonist

Inferior agonist

Partial agonist

Correct answer: Antagonist

An antagonist blocks the effects of agonists on the system but has no effect of its own unless the agonist is also present. Antagonists are used in pharmacology to change the effects of certain neurotransmitters in the brain.

A partial agonist also binds to a receptor site and mimics the activity of a neurotransmitter but only produces a partial effect of the full agonist. "Subagonist" and "inferior agonist" are fabricated terms.

8.

A doctor has ordered a non-urgent test that will capture high-resolution images to detect any lesions or tumors in the brain. What type of test can **best** capture these images?

MRI

CT scan

Neuroangiography

EEG

Correct answer: MRI

MRI (magnetic resonance imaging) can capture detailed images of the brain to detect small lesions, tumors, or other abnormalities that are not seen by a CT scan. MRIs, however, cost more and take longer than CTs.

CT scans are made of many different X-rays that are put together to produce detailed images of bone, air, tissues, and liquid; they are typically used to examine the density of brain tissue. Neuroangiography produces images of blood vessels via radiographs and is primarily used to detect vascular diseases. EEGs measure brain activity but have poor sensitivity for detecting brain lesions.

9.

A genetic counselor would most likely pass on what information to a 35-year-old client recently diagnosed with Huntington's disease?

The client's children have a 50% chance of developing Huntington's disease

The client's children will likely begin to show symptoms by adolescence if they have the condition

Just 5/100,000 children who have a parent with Huntington's disease will develop the condition

Only the client's sons have a chance of developing Huntington's disease

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Correct answer: The client's children have a 50% chance of developing Huntington's disease

Huntington's disease is a degenerative movement disorder that also often results in behavioral disturbances such as personality changes, restlessness, psychosis, and others. Unfortunately, there is no treatment yet for Huntington's disease. Because it is an autosomal dominant gene, if one parent has the Huntington's gene and the other does not, the offspring have a 50% chance of developing the disease.

Typically, symptoms begin in the third or fourth decade of life, not during adolescence. Overall, Huntington's disease affects 5/100,000 people, but offspring have a 50% chance of having the disorder if their parents have it. Because Huntington's disease is inherited through an autosome rather than a sex chromosome, males and females are equally affected.

10.

According to the DSM-5-TR, what percentage of dementias is attributable to Alzheimer's disease?

60-90%

10-20%

1-5%

45-55%

Correct answer: 60-90%

According to the DSM-5-TR, approximately 60% to 90% of dementia cases are attributable to Alzheimer's disease, depending on the setting and diagnostic criteria. Almost 100% of all people with Alzheimer's disease are age 65 or older.

11.

A six-year-old child has been diagnosed with Broca's aphasia. What area of the brain has likely been affected?

The inferior lateral region of the left frontal lobe

The temporal lobe

The basal ganglia

The thalamus

Correct answer: The inferior lateral region of the left frontal lobe

The inferior lateral region of the left frontal lobe governs the production of fluent oral and written speech. Someone with a lesion on this part of the brain is often diagnosed with Broca's aphasia, a language disorder.

The temporal lobes are associated with auditory processing, which refers to the ability to process sound. The basal ganglia are associated with movements of the body, and abnormal basal ganglia activities would result in a movement disorder. Lesions on the thalamus would result in diseases associated with metabolism, the vascular system, and infections.

12.

Which of the following is an anxiolytic drug used for the treatment of anxiety disorders?

Lorazepam

Phenelzine

Paroxetine

Haloperidol

Correct answer: Lorazepam

Lorazepam is a benzodiazepine drug used in the treatment of anxiety. Drugs in the benzodiazepine class can be used to treat generalized anxiety disorder, panic disorder, and phobic disorder, among others.

Phenelzine and paroxetine are both antidepressant drugs, and haloperidol is an antipsychotic.

13.

A patient enters the emergency room with head trauma after falling onto concrete from a high wall. What imaging test is **most likely** to be recommended right away?

CT scan

MRI

Wada test

Neuroangiography

Correct answer: CT scan

There are several types of structural imaging tests that can be administered to view images of the brain, although each test is used for different purposes. Computerized tomography (CT) provides information about the density of brain tissue and is used in emergency rooms to detect skull fractures and acute hemorrhages due to trauma.

MRIs provide good contrast and imaging but take longer than CT scans and are more expensive.

14.

Which of the following is true about the prognosis for children who suffer from febrile seizures?

They suffer no further long-lasting effects

They later develop epilepsy in all cases

They develop epilepsy in 30% of cases

They develop epilepsy in 45% of cases

Correct answer: They suffer no further long-lasting effects

Most children with febrile seizures, which occur in the context of a high fever, do not develop epilepsy. These seizures are isolated and have no long-lasting effects.

15.

A psychiatrist has diagnosed a patient with schizophrenia. Which medication may be used to treat this condition?

Risperdal

Wellbutrin

Klonopin

Adderall

Correct answer: Risperdal

Risperdal is an atypical antipsychotic used to treat symptoms of psychosis, such as hallucinations and paranoia. It is also FDA-approved for treating agitation and aggression associated with dementia and bipolar disorders, as well as disruptive behavior disorders in children and adolescents.

Wellbutrin treats depression, Klonopin is an anxiety medication, and Adderall is used for patients with attention-deficit/hyperactivity disorder (ADHD).

16.

Which of the following is the most accurate definition of a seizure?

Abnormal behavior resulting from abnormal electrical firing of neurons

A disturbance in consciousness alongside a change in cognition that isn't explained by dementia

A state in which at least one cognitive domain, such as memory, is impaired more than expected for one's age

A progressive neurodegenerative disorder associated with history of head trauma

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Correct answer: Abnormal behavior resulting from abnormal electrical firing of neurons

Seizures occur when neurons fire abnormally, resulting in abnormal behavior of the individual. This can result in convulsions, loss of consciousness, strange emotions or behavior, and odd sensations.

A disturbance in consciousness alongside a change in cognition that isn't explained by dementia is the definition of delirium. Mild cognitive impairment is a state in which at least one cognitive domain, such as memory, is impaired more than expected for one's age. Chronic traumatic encephalopathy (CTE) is a progressive neurodegenerative disorder associated with a history of head trauma.

17.

What is the time it takes for drug concentration to decrease by half?

Elimination half-life

Half-life effectiveness

Therapeutic window

Psychoactivity

Correct answer: Elimination half-life

Elimination half-life is the time it takes for drug concentration to decrease by half due to excretion and metabolic change. Drugs with longer half-lives, such as SSRIs, last longer in a person's system than those with shorter half-lives, such as stimulant medications.

A therapeutic window is the range of a drug dose that can result in desired efficacy without resulting in unsafe side effects. "Psychoactivity" is a fabricated term, although psychoactive drugs can treat psychiatric disorders. "Half-life effectiveness" is also a fabricated term.

18.

Which of the following is the correct definition of excitotoxicity?

Cell death due to excessive stimulation

Abnormal cell activity due to excess dopamine

Extremely low levels of dopamine in the brain

Cell death due to lack of stimulation over time

Correct answer: Cell death due to excessive stimulation

Excitotoxicity is cell death due to excessive stimulation. Excessive glutamate, an amino acid and a neurotransmitter, can lead to excitotoxicity.

Excitotoxicity does not refer to abnormal cell activity due to excess dopamine. The term also does not refer to extremely low levels of dopamine in the brain or cell death due to lack of stimulation.

19.

According to the DSM-5, all the following are examples of domains used to diagnose the severity of a neurocognitive disorder **except**:

Extracurricular function

Complex attention

Language

Social cognition

Correct answer: Extracurricular function

To diagnose the severity of a neurocognitive disorder, the DSM-5 uses criteria from many cognitive domains. "Extracurricular function" is a fabricated answer and is not included in these domains.

The cognitive domains included in the DSM-5 include complex attention, executive function, learning and memory, language, perceptual-motor, and social cognition. These areas are all used to determine whether an individual meets the criteria for a major or mild neurocognitive disorder (NCD).

20.

What was the **first** mood-stabilizing medication approved by the FDA?

Lithium

Zyprexa

Haldol

Thorazine

Correct answer: Lithium

Lithium, which is widely used today, was the first mood-stabilizing medication approved by the FDA. Side effects can be uncomfortable, and frequent blood levels must be drawn to guard against toxicity.

Zyprexa is an atypical antipsychotic, and Haldol and Thorazine are typical antipsychotics.

21.

According to the DSM-5-TR, which of the following is the strongest risk factor, among these four options, for major or mild neurocognitive disorder due to Alzheimer's disease?

Genetics

Ethnicity and race

Gender

Traumatic brain injury

Correct answer: Genetics

According to the DSM-5-TR, age is the greatest risk factor for Alzheimer's disease (AD), but because age is not listed here, genetics is the strongest risk factor for the condition among these four choices. In fact, there is a strong genetic component to the disease, with genetics contributing 60 to 80% to the risk of Alzheimer's.

Ethnicity/race and national origin are linked to the genetic risk for Alzheimer's, as certain genetic markers are more likely in specific ethnoracial groups. This contributes less to the risk of Alzheimer's than genetics themselves. Some research suggests that women are more likely than men to develop Alzheimer's disease, but genetics is still a stronger contributor. Traumatic brain injury can increase the risk of Alzheimer's, particularly in men, but the relationship between traumatic brain injury and Alzheimer's is controversial.

22.

All of the following are amino acids **except**:

Dopamine

Tryptophan

Glutamine

Cysteine

Correct answer: Dopamine

Dopamine is a catecholamine that can be both excitatory and inhibitory. It is not an amino acid.

Amino acids are organic compounds that combine to form proteins. Tryptophan, glutamine, and cysteine are amino acids. All four answer choices, including dopamine, are types of neurotransmitters that transmit signals from one neuron to another.

23.

Depression and anxiety are associated with low levels of which neurotransmitter?

Serotonin

Dopamine

Norepinephrine

Acetylcholine

Correct answer: Serotonin

Low levels of serotonin are associated with depression and anxiety, which is why many antidepressant medications target increasing levels of serotonin in the brain. Serotonin levels, in general, are associated with mood regulation, appetite, learning, sleep, sexual functioning, level of consciousness, and pain.

Low levels of dopamine are associated with attention deficit/hyperactivity disorder. Low levels of norepinephrine may cause depression but not necessarily anxiety. Degeneration of acetylcholine is associated with Huntington's disease, a movement disorder.

24.

A woman has a seizure that causes her to appear as if she is staring into space. What type of seizure is she probably experiencing?

Absence

Tonic-clonic

Pseudoseizure

Simple partial seizure

Correct answer: Absence

There are several different types of seizures. An absence seizure is a type of generalized seizure in which a person seems to be staring into space. Absence seizures were previously called petit-mal seizures.

In a tonic-clonic seizure, formally called a grand mal seizure, an individual may lose consciousness, stiffen, and jerk their arms or legs repetitively. A person having a pseudoseizure may appear to be having a seizure, but there is no seizure activity actually taking place in the brain. With a simple partial seizure, a person does not lose consciousness but may demonstrate sudden, unexplained joy or anger and hear, smell, or see things that are not actually present.

25.

The flight-or-fight response is controlled by what area of the brain?

Amygdala

Basal ganglia

Brainstem

Cerebellum

Correct answer: Amygdala

The amygdala, which is located in front of the hippocampus, is responsible for controlling emotions as well as processing olfactory stimuli. The amygdala is an essential component of the flight-or-fight response and is connected to midbrain structures.

The basal ganglia are associated with bodily movements. The brainstem is the source of many autonomic functions such as breathing. The cerebellum is composed of gray and white matter and, like the basal ganglia, is associated with the regulation of movement.

26.

A woman speaks in a slow and halting manner with poor grammar and limited vocabulary. She might be suffering from:

Broca's aphasia

Alexia

Conduction aphasia

Wernicke's aphasia

Correct answer: Broca's aphasia

Broca's aphasia is associated with speech that is slow and halting, with poor grammar. Individuals with this condition typically have brain damage in the left frontal lobe, near Brodmann areas 44 and 45, which are called the "Broca's area".

Alexia is an acquired inability to read, which usually develops after a stroke in the posterior region of the brain's left hemisphere.

Conduction aphasia is believed to develop with damage to the arcuate fasciculus, a large area of white matter that connects the Broca's area to the Wernicke's area. A person with this condition can speak normally, name objects, and understand speech, but they struggle to repeat what others have said.

Finally, Wernicke's aphasia is a form of fluent aphasia in which a person is unable to understand language. Speech is fluent but is often incoherent, with word salads and neologisms being prominent. This condition usually develops as a result of lesions in the left temporal lobe.

27.

Since the 1990s, benzodiazepines have been replaced by what type of psychotropic medication?

Selective serotonin reuptake inhibitors

Antipsychotics

Tricyclic antidepressants

Psychostimulants

Correct answer: Selective serotonin reuptake inhibitors

Since the 1990s, benzodiazepines have been replaced with selective serotonin reuptake inhibitors (SSRIs). Overall, SSRIs are safer than benzodiazepines, have fewer side effects, and have a lower risk of dependence.

Benzodiazepines have not been replaced with antipsychotics, tricyclic antidepressants (TCAs), or psychostimulants because all these medications target symptoms that are different from those targeted by benzodiazepines. In the case of TCAs, certain symptoms (e.g., orthostatic hypertension) make them less attractive than more recently developed medications.

28.

A psychologist reads on an intake form filled out by a new patient that they are taking 36 mg of Concerta. Based on this information, the psychologist can assume which of the following?

The patient has attentional difficulties

The patient has a history of depression

The patient requires frequent lab work to draw blood levels

The patient has a form of bipolar disorder

Correct answer: The patient has attentional difficulties

Psychostimulants are used to treat attention deficit hyperactivity disorder and include Concerta (methylphenidate), Adderall (amphetamine), and many others. Stimulant medications are typically effective, and side effects can include digestive upset, headaches, insomnia, and irritability, among others.

29.

What is the difference between alexia and dyslexia?

Alexia is acquired, and dyslexia is a developmental disorder

Alexia is the inability to read, and dyslexia is the inability to write

Alexia occurs in children, and dyslexia occurs in adults

Alexia is more severe than dyslexia

Correct answer: Alexia is acquired, and dyslexia is a developmental disorder

Alexia is an acquired inability to read, whereas dyslexia is a developmental disorder starting in childhood. Alexia usually results from a stroke in the posterior region of the left hemisphere of the brain.

Both alexia and dyslexia are associated with an impaired ability to read, and both can occur in childhood and/or adulthood. Depending on the individual, dyslexia can be more severe than alexia and vice versa.

30.

In a severe car accident, the lower cervical regions of an individual's spine are damaged. Which of the following is **most likely**?

The individual can move their arms but not their legs

The individual cannot move their arms or legs

The individual is unable to speak

The individual cannot understand or express emotion

Correct answer: The individual can move their arms but not their legs

The ways in which a person is injured depends on what part of the spine is affected. Damage to the lower cervical regions often results in an inability to move the legs.

Damage to the upper part of the spine often results in an inability to move both arms and legs. Brain damage, not spinal damage, is more likely to result in an inability to speak or otherwise express oneself.

31.

Which of the following characterizes the medication memantine?

Slows the progression of Alzheimer's disease

Restores organized thought for those with psychotic disorders

Is a first-line agent for severe depression

Can only be prescribed to children

Correct answer: Slows the progression of Alzheimer's disease

Memantine (Namenda) is a medication that is sometimes used to slow the progression of Alzheimer's disease. It works by regulating glutamate, an important transmitter for brain function that can cause cell death at high levels. Side effects of memantine include dizziness, constipation, and headaches.

32.

Which of the following brain regions is associated with the regulation of movement?

Cerebellum

Temporal lobe

Cerebrum

Occipital lobe

Correct answer: Cerebellum

The cerebellum, which is attached to the posterior brain stem, is responsible for the regulation of movement. This includes coordination, postural control, and both automatic and rhythmic movements.

The temporal lobes are associated with primary auditory processing. The cerebrum is responsible for increasing the surface area of the brain and forming boundaries of major brain divisions. The occipital lobes are primarily dedicated to visual processing.

33.

A man suffers a stroke in the posterior region of the left hemisphere of his brain. After he has recovered from the immediate effects of the stroke, he discovers that he can write easily but can no longer read well.

This individual **most likely** has which condition?

Alexia

Anomic aphasia

Agraphia

Wernicke's aphasia

Correct answer: Alexia

Alexia refers to the inability to read that occurs after a stroke damages the posterior region of the left hemisphere of the brain. The visual centers are disconnected from the language centers of the brain, leaving the ability to write mostly intact but causing severe impairments in reading abilities.

34.

Which area of the brain is responsible for long-term memory?

Hippocampus

Amygdala

Thalamus

Cerebellum

Correct answer: Hippocampus

The hippocampus is part of the limbic system and is responsible for a person's long-term memory. A person who has had their hippocampus removed experiences severe memory problems.

The amygdala is responsible for processing emotions and olfactory stimuli. The thalamus is responsible for relaying communication between the cortex and brainstem, as well as some attention and perceptual functions. The cerebellum is responsible for regulating movement and may play a role in learning and attention, per research.

35.

What is one difference between a traditional X-ray and a CT scan?

An X-ray takes one picture at a time, whereas a CT scan can combine many different images into one

An X-ray takes much longer to perform than a CT scan

An X-ray shows differences in bone density quickly and easily, whereas a CT scan captures only the image and not the density

There are no differences, as a CT scan is a type of X-ray

Correct answer: An X-ray takes one picture at a time, whereas a CT scan can combine many different images into one

An X-ray takes one picture at a time, but a CT scan can combine many different images into one. CT scans can also show differences in the density of bone and tissue.

X-rays do not take more time to perform than a CT scan.

36.

Dopamine pathways extend to which parts of the brain?

Frontal lobes, basal ganglia, and hypothalamus

Brain stem and amygdala

Cerebellum, amygdala, and hypothalamus

Temporal lobes and parietal lobes

Correct answer: Frontal lobes, basal ganglia, and hypothalamus

Dopamine pathways extend to the frontal lobes, basal ganglia, and hypothalamus in the brain. Overactivity has been associated with schizophrenia, and under-activity has been linked to ADHD.

Dopamine pathways do not extend to the brain stem, amygdala, cerebellum, temporal lobes, or parietal lobes, as none of these regions of the brain are associated with executive functioning or primary symptoms of schizophrenia.

37.

A patient is taking a prescribed drug that acts as an *agonist* of the GABA receptors. What does the term "agonist" mean in this scenario?

The drug mimics the activity of the GABA neurotransmitter

The drug reduces the effectiveness of the GABA neurotransmitter system

The drug blocks the effects of the GABA neurotransmitter

The drug inhibits the enzymes that break down the GABA neurotransmitter

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Correct answer: The drug mimics the activity of the GABA neurotransmitter

An agonist drug is one that binds to a receptor site and mimics the activity of neurotransmitters, thereby causing the same effect as the neurotransmitter itself. A drug that acts as an agonist of the GABA receptors would bind to those receptors and mimic the activity of GABA.

An inverse agonist binds to the same receptors as agonist drugs; however, the inverse agonist acts opposite to an agonist and actually decreases the effectiveness of the neurotransmitter system. An antagonist drug blocks the effects of a neurotransmitter system. Agonists do not inhibit the enzymes that break down the neurotransmitter; instead, agonists act by occupying the receptor and mimicking the effects of the neurotransmitter.

38.

The site of primary auditory processing is located in what part of the brain?

The superior temporal gyrus

The parietal lobe

The cerebellum

The hippocampus

Correct answer: The superior temporal gyrus

Auditory processing takes place in the superior temporal gyrus, which is a division of the temporal lobe. This region inputs frequencies detected by the inner ear and interprets these sounds to the brain.

The parietal lobes are the site of primary somatosensory processing, such as the detection of touch, pressure, and pain in the post-central gyrus. The cerebellum is primarily concerned with the regulation of movement and some cognitive functions. The hippocampus is critical for memory formation.

39.

Where in the brain is cerebrospinal fluid located?

The ventricles

The basal ganglia

The brain stem

The subarachnoid space

Correct answer: The ventricles

Cerebrospinal fluid (CSF) is located in the ventricular system of the brain. It is a colorless fluid that circulates throughout the ventricles and prevents infection in the brain.

The basal ganglia includes a network of complex loops that are responsible for motor output, emotions, cognition, and eye movement. The brain stem is the core of the brain, and it is responsible for autonomic functions such as breathing and blood pressure. The subarachnoid space includes a network of arteries, veins, and connective tissue, called the trabeculae. These three areas here do not include the cerebrospinal fluid.

40.

The victim of a car accident suffered damage to the lower cervical regions of the spine. What is the **most likely** result of this injury?

Paraplegia (inability to move the legs)

Quadriplegia (inability to move the arms and legs)

Paresis (muscle weakness)

Posttraumatic stress disorder

Correct answer: Paraplegia (inability to move the legs)

Each region of the spine corresponds to a different area of the body. Damage to the lower cervical areas of the spine results in paraplegia, or the inability to move the legs.

Quadriplegia would result if the upper cervical areas were seriously damaged. Paresis, rather than total immobility, might occur with incomplete damage to the spinal cord. Posttraumatic stress disorder might result from being in a car accident, but it is a psychological consequence of the accident.

41.

Which of the following statements is **true** regarding communication between neurons?

Communication between neurons takes place between the axon of one neuron and the dendrites of another neuron

Communication between neurons takes place between the cell bodies of both neurons

Communication between neurons takes place between the dendrites of both neurons

Communication between neurons takes place between the nucleus of one neuron and the dendrites of another neuron

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Correct answer: Communication between neurons takes place between the axon of one neuron and the dendrites of another neuron

The neuron is the building block of the nervous system and varies in size and shape. The axon from one neuron communicates with the dendrites of another neuron; this is how information is passed from one neuron to the next. Communication between neurons takes place in the synapse, which is the space between two neurons.

42.

After meeting with a client for six sessions, a psychologist tells the client that research shows that a combination of cognitive-behavioral therapy and medication has the best chance of successfully treating the client's condition.

The psychologist has **most** likely given the client which of the following diagnoses?

Severe depression

ADHD

Psychotic disorder

Sleep disorder

Correct answer: Severe depression

In order to recommend the most effective treatments, psychologists should be aware of the results of recent research. Numerous studies have shown that a combination of cognitive-behavioral therapy and antidepressant medication is better than either therapy or medication alone for the treatment of severe depression.

43.

What is the outermost and most visible layer of the brain?

Cortex

Temporal lobes

Ventricles

Amygdala

Correct answer: Cortex

The cortex is the outermost and most visible layer of the brain. It is composed of six layers of cell bodies and interconnections.

The temporal lobes are located on the sides of the brain and act as the site of primary auditory processing. The ventricles are located in the interior of the brain and provide a means for cerebral spinal fluid to circulate throughout the brain. The amygdala is also hidden in the interior of the brain and is associated with processing emotions.

44.

When postsynaptic excitation reaches a minimum threshold, what does that neuron fire?

Action potential

Neurotransmitters

Signal potential

Axon potential

Correct answer: Action potential

Neurotransmitters are released by the axon of one neuron and bind to the receptors of another. This causes postsynaptic excitation, and when it reaches a minimum threshold, the neuron fires what is called an action potential. This causes the neuron to send the neural signal down its axon.

A neuron does not fire neurotransmitters. Axons are the long processes that carry output away from the cell body and are not fired by neurons. "Axon potential" is a fabricated term, as is "signal potential."

45.

What is the purpose of an agonist in the function of psychotropic medications?

To act as a neurotransmitter

To prevent neurotransmitters from binding to neurons

To change the chemical makeup of the medication

To transport the medication through the bloodstream

Correct answer: To act as a neurotransmitter

An agonist acts as a neurotransmitter and binds to the receptor site where the neurotransmitter typically would. The agonist then has the same effect on the brain as the neurotransmitter would and boosts the overall system.

An agonist does not prevent neurotransmitters from binding to neurons but mimics the activity of that neurotransmitter. It does not change the chemical makeup of the medication or transport the medication through the bloodstream.

46.

Low levels of gamma-aminobutyric acid (GABA) are associated with which of the following?

High levels of anxiety

Higher rates of movement disorders

High rates of suicide

High excitotoxicity

Correct answer: High levels of anxiety

Low levels of gamma-aminobutyric acid (GABA) are associated with high levels of anxiety, and higher levels are associated with a reduction in anxiety. GABA is also associated with emotion, balance, and sleep patterns.

A lack of acetylcholine is associated with movement disorders. Although high levels of anxiety are associated with low GABA levels, this does not necessarily lead to high rates of suicide. Low GABA levels are not associated with high excitotoxicity.

47.

Which of the following is the most important reason a psychologist should have knowledge of the uses of psychotropic medications?

To know when to refer a patient to a prescribing professional

To know when treating a patient is beyond the psychologists' competence

To be able to answer patients' questions about medications

To monitor patients for side effects

Correct answer: To know when to refer a patient to a prescribing professional

All psychologists should have an understanding of psychotropic medications to be able to know when a referral should be made to a psychiatrist or another prescribing mental health professional. The psychologist is often the intermediary between the patient and the prescribing clinician and should be able to identify when an evaluation for medication is warranted.

While psychologists must be able to identify when a particular task or patient issue is beyond their level of competence, medication issues don't usually indicate that the psychologist is incompetent to treat a patient. Rather, the need for medication can be resolved by referring the patient to a prescribing professional. It is helpful to have some knowledge of psychotropic medications in order to answer patients' questions, but this is not as important as knowing when a referral should be made to a prescribing professional. A psychologist may have knowledge of medication side effects, but the best course of action for a patient who is experiencing side effects is to talk with the prescribing doctor.

48.

All the following are classifications of seizures **except**:

Juvenile

Focal

Generalized

Nonepileptic

Correct answer: Juvenile

There are several classifications of seizures, but juvenile is not one of them. "Juvenile" is a fabricated term.

Focal seizures affect only one part of the brain. Generalized seizures affect both parts of the brain. Nonepileptic seizures occur when a person appears to be having a seizure, but there is no seizure activity in the brain. These terms distinguish the types and causes of seizures and help inform the best course of treatment.

49.

Which of the following medications has the **most** concerning side effect profile?

Clozapine

Methylphenidate

Sertraline

Risperidone

Correct answer: Clozapine

While psychotropic medications can greatly improve the quality of life for many people with mental illness, the side effects of many of them can be harmful and even fatal. Clozapine, an effective atypical antipsychotic medication, can be quite dangerous if individuals taking it are not closely monitored. Fatal agranulocytosis, a dangerously low level of white blood cells, can occur, so psychiatrists prescribing clozapine require their patients to have frequent white blood cell counts.

50.

Which type of aphasia tends to result in neologisms and poor insight into deficits?

Wernicke's aphasia

Conduction aphasia

Broca's aphasia

Transcortical motor aphasia

Correct answer: Wernicke's aphasia

Wernicke's aphasia primarily occurs when there are lesions in the left temporal lobe, which is the site of primary auditory processing. It is a type of fluent aphasia that causes an individual to be unable to understand language. People with Wernicke's aphasia may not fully understand they have a disorder and often expect others to understand what they are saying. They may speak in neologisms (nonwords) or use the incorrect combination of words, called "word salad."

Individuals with conduction aphasia can speak normally and understand speech, but their deficit is in repeating what others say. Broca's aphasia involves slow, halting speech with poor grammar and an inability to repeat what others say. Transcortical motor aphasia is similar to Broca's aphasia, but the ability to repeat what others say remains intact.

51.

What is the purpose of the myelin sheath in the human brain?

To speed transmission in and between neurons

To protect neurons from necrosis

To regulate the autonomic nervous system

To slow activity in the nervous system

Correct answer: To speed transmission in and between neurons

The myelin sheath is an insulating, fatty layer surrounding the axon that speeds transmission from one neuron to the next. It is part of the neuron, the building block of the nervous system.

The primary purpose of the myelin sheath is not to protect neurons from necrosis, nor does it regulate the autonomic nervous system. Myelin does not slow activity in the nervous system; rather, it speeds the transmission of impulses between neurons.

52.

Huntington's disease, a movement disorder, is closely associated with the degeneration of what neurotransmitter?

Dopamine

Gamma-aminobutyric acid

Norepinephrine

Serotonin

Correct answer: Dopamine

Huntington’s disease (HD) is an incurable, inherited, progressive neurodegenerative disorder that is defined by a combination of motor, cognitive, and psychiatric features. Pre-clinical and clinical studies have demonstrated the role of the dopamine (DA) system in HD with dopaminergic dysfunction at the level of both DA release and DA receptors.

53.

A six-year-old girl was born with a seizure disorder. When she has a seizure, the girl loses consciousness, her body stiffens, and her arms and legs jerk uncontrollably. What type of seizures does this child have?

Tonic-clonic generalized seizures

Petit-mal seizures

Idiopathic seizures

Focal seizures

Correct answer: Tonic-clonic generalized seizures

There are many different types of seizures. Generalized seizures affect both sides of the brain, while focal or partial seizures affect only one part of the brain. A tonic-clonic generalized seizure, or grand-mal seizure, results in a loss of consciousness, a stiffening of the body, and repetitive jerking of the arms and legs. An absence seizure, or petit-mal seizure, is when an individual appears to be "zoned out" and simply stares blankly into space.

54.

Which of the following clients would most benefit from a combination of Guanfacine and behavioral modification therapy?

A 10-year-old child with ADHD

A 20-year-old woman experiencing her first episode of schizophrenia

A 50-year-old man experiencing memory loss

A 70-year-old woman with depression

Correct answer: A 10-year-old child with ADHD

A child with ADHD would most likely benefit from a combination of Guanfacine and behavioral modification therapy. Guanfacine is a non-stimulant medication used in the treatment of ADHD, but it may not be as beneficial as stimulant medications like Ritalin or Concerta.

The remaining options are incorrect. A woman with symptoms of schizophrenia may benefit from an antipsychotic medication rather than a non-stimulant ADHD medication. Memory loss is a normal part of the aging process, but some medications called cholinesterase inhibitors can alleviate the symptoms of dementia. An individual with depression would probably benefit from an SSRI or another antidepressant medication rather than a non-stimulant ADHD medication.

55.

Which of the following would be most likely to be experienced by someone with post-concussion syndrome?

Disordered sleep and irritability

Manic episodes and elevated mood

A change in cognition not explained by dementia

Loss of long-term memory and flat affect

Correct answer: Disordered sleep and irritability

Post-concussion syndrome occurs in people who experience lingering symptoms related to a concussion. These symptoms persist for over three months and can last for years; symptoms involve a triad of cognitive, somatic, and behavioral side effects. These can include disordered sleep and irritability, as well as dizziness, sensitivity to light, headaches, nausea, anxiety, depression, and difficulty with concentration and organization.

The remaining options are incorrect, as they are not typical symptoms of post-concussion syndrome. Sufferers of post-concussion syndrome are not likely to experience manic episodes and elevated mood; instead, they are likely to experience depression and fatigue. A change in cognition not explained by dementia is associated with delirium, and post-concussive syndrome does not cause a loss of long-term memory coupled with flat affect. It may lead to apathy or depression, but memory disturbances with post-concussion syndrome are likely to affect short-term, rather than long-term, memory.

56.

The basal ganglia include all the following components **except**:

Cerebellum

Caudate nucleus

Putamen

Substantia nigra

Correct answer: Cerebellum

While the cerebellum is an extremely important part of the brain, it is not a part of the basal ganglia. The cerebellum is rich in neurons and comprises a gray matter cortex and white matter that provides connections to other areas of the brain.

The basal ganglia are composed of the caudate nucleus, putamen, globus pallidus, subthalamic nucleus, and substantia nigra. All these components work together to control the coordination and rhythm of movement.

57.

Which of the following is the **most** delicate and highly vascular membrane in the brain?

Pia mater

Falx cerebri

Arachnoid mater

Skull

Correct answer: Pia mater

The pia mater is extremely delicate and highly vascular. It closely follows the contours of the brain and is the layer of protection closest to the brain.

The skull is the bone structure that forms the cranial vault in which the brain sits. The falx cerebri is formed by a fibrous membrane that folds down between the two hemispheres of the brain. The arachnoid mater is a thin membrane separated from the dura by the subdural space.

58.

What is the difference between fissures and gyri in the human brain?

Fissures are the folds, and gyri are the smooth hills of the human brain

Fissures are the smooth ascents, and gyri are the descents of the human brain

They are different names for the same structure

Fissures are the lateral ventricles of the brain, and gyri are the dorsal ventricles

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Correct answer: Fissures are the folds, and gyri are the smooth hills of the human brain

Fissures and gyri exist in tandem to increase the surface area of the cortex. The cortex is comprised of six layers of cell bodies and interconnections.

These structures are not types of ventricles but ways to describe the methods in which the surface area of the cortex is increased.

59.

Which part of the brain is responsible for performing important attention and perceptual functions?

Thalamus

Amygdala

Brainstem

Hippocampus

Correct answer: Thalamus

The thalamus is connected to specific cortical regions in the brain and is responsible for performing important attention and perceptual functions. The thalamus also performs many critical relay functions between the cortex and brainstem.

The amygdala is involved in processing olfactory stimuli and emotions. The brainstem is involved in the control and regulation of autonomic functions and maintaining homeostasis. The hippocampus is involved in memory formation.

60.

What term describes the biochemical and physiological effects of drugs on the body?

Pharmacodynamics

Biogenetics

Pharmacokinetics

Neurology

Correct answer: Pharmacodynamics

Pharmacodynamics describes the biochemical and physiological effects of drugs on the body. It is important for psychologists to be familiar with pharmacodynamics for many reasons, including recognizing possible side effects of medications on clients.

Biogenetics is the processing of studying and manipulating genes to produce desired effects. Pharmacokinetics describes how the body handles drugs through various processes. Neurology is the study of the brain and nervous system.

Part 1-Knowledge, Domain 2: Cognitive-Affective Bases of Behavior

61.

Which of the following was developed by Tulving (1972) and is also known as autobiographic memory?

Episodic memory

Nondeclarative memory

Sensory memory

Semantic memory

Correct answer: Episodic memory

The concept of episodic memory was developed by Tulving (1972) and is also known as autobiographic memory. Everyday experiences are recorded in episodic memory and are stored automatically. This is one reason that hands-on learning is easier to retain than lecture-based learning.

Tulving did not propose other types of memory. Nondeclarative memory consists of items the person is unaware of knowing but can still demonstrate knowledge. Sensory memory is based on retaining visual images and auditory inputs for milliseconds. Semantic memory refers to factual knowledge of the world such as concepts, meanings, and cultural rules.

62.

What theory helps explain the relationship of facilitative and inhibitory mechanisms at work in the brain?

Attentional load theory

Stroop Effect

Attentional control theory

Homeostasis

Correct answer: Attentional load theory

Attentional load theory helps explain the relationship between facilitative and inhibitory mechanisms at work in the brain. It helps explain how the reduction of interference caused by distractors is greatest when the processing demands of the stimulus are highest.

The Stroop Effect shows how attention to objects takes precedence over attention to attributes. Attentional control refers to an individual's ability to choose what they pay attention to and what they ignore. Homeostasis refers to the tendency of living things to create a sense of balance and constancy.

63.

Declarative and nondeclarative are two categories of which of the following?

Long-term memory

Short-term memory

Semantic memory

Episodic memory

Correct answer: Long-term memory

Declarative and nondeclarative are two categories of long-term memory, which is all the information someone has learned that is not necessarily needed at the moment. Declarative memory is made up of the information someone knows and can access, while nondeclarative memory consists of the items someone is unaware of knowing yet can access when needed. For example, the skill of riding a bike is part of the nondeclarative memory.

Short-term memory can only be retained for a brief time and represents the information we are thinking about at a given moment. It does not include declarative and non-declarative memory. Semantic and episodic memory are both types of declarative memory. Semantic memory is knowledge of facts, concepts, and rules, whereas episodic memory is related to memory of everyday, personal experiences.

64.

When Sarah is anxious about her dancing performance, she tends to excessively fixate on her dancing skills, to the point that her performance worsens. She is showing evidence that which of the following theories is true?

Conscious processing hypothesis

Processing efficiency theory

Conservation of resources theory

Learned helplessness theory

Correct answer: Conscious processing hypothesis

The conscious processing hypothesis says that when anxiety increases, people consciously focus on their performance of a particular skill, which actually leads to worse performance due to disruption in smooth, automatic processing. Sarah is anxious about her performance and thus fixates, leading to a worse performance. This aligns with the conscious processing hypothesis.

The processing efficiency theory states that stress reduces the capacity for working memory, thereby also reducing cognitive resources available for task completion. This then causes people to focus more attention on a task, which can lead to increases in performance. This theory does not align with Sarah's situation.

The conservation of resources theory also does not align with Sarah's situation. This theory states that performance is a result of individual and group resources. According to the theory, when a person is lacking resources, they show reduced performance in the face of stress.

Finally, learned helplessness theory is not applicable to this situation. This theory states that people who believe they cannot escape emotional pain will become helpless, leading to depression.

65.

What paradigm holds that a stimulus preceding a behavior that leads to something pleasant or desired will tend to be repeated?

Operant conditioning

Pavlovian conditioning

Reinforcement scheduling

Verbal learning

Correct answer: Operant conditioning

The operant conditioning paradigm states that a stimulus that precedes a behavior that leads to something pleasant or desired will tend to be repeated. This differs from classical conditioning in that it includes the element of choice.

Pavlovian conditioning typically refers to classical conditioning in which a response to a stimulus is elicited in response to a previously neutral stimulus. Reinforcement scheduling refers to the frequency at which the learning situation is likely to appear. Verbal learning is a learning style that involves both the spoken and written word.

66.

Which element is missing from the Cannon-Bard theory of emotional experience listed below?

Stimulus -> **?** -> Thalamic processing -> Behavior

Cortical processing

Emotional response

Autonomic arousal

Cognitive interpretation

Correct answer: Cortical processing

According to the Cannon-Bard theory of emotional experience, in the presence of a possible threat, an individual processes that information and recognizes the threat (cortical processing). The individual then experiences an emotion, such as fear, and subsequently runs away.

The emotional response occurs in the thalamus, which is the step after cortical processing. Autonomic arousal and cognitive interpretation are steps in the "two-factor" model of emotion developed by Schachter and Singer.

67.

Which of the following is a key critique of the James-Lange theory?

Physiological responses could be a consequence of an emotion and not necessarily a precursor

It is too focused on an individual's inability to perceive autonomic responses

It is outdated

It is oversimplified and only applies to fear

Correct answer: Physiological responses could be a consequence of an emotion and not necessarily a precursor

There are many critiques of the James-Lange theory, which posits that emotions emerge as a result of a physiological response. However, many psychologists maintain that physiological responses happen after an emotion rather than the other way around.

Most critics of the James-Lange theory do not believe that the theory is too focused on an individual's inability to perceive autonomic responses, that it is outdated, or that it is oversimplified. Fear is often used as an example when demonstrating the James-Lange theory, but the theory can apply to other emotions as well.

68.

The basic emotion model posits that humans acquire six core emotions at what point in development?

Birth

Late childhood

Adolescence

Middle adulthood

Correct answer: Birth

The basic emotion model, developed by Ekman and Friesen (1971), posits that humans acquire six core emotions at birth: happiness, sadness, surprise, disgust, anger, and fear. Supporters of the basic emotion model claim that these emotions are hard-wired and any other emotions are simply a mixture or variation of these basic emotions.

Secondary emotions, which are combinations of the basic emotions, may be developed during childhood, adolescence, or adulthood.

69.

William James was the first psychologist to do what?

Propose a theory about emotional experiences

Conduct experiments on operant conditioning

Outline the modal model of information processing

Develop a sophisticated appraisal model of emotion

Correct answer: Propose a theory about emotional experiences

William James (1884) was the first psychologist to produce a theory about emotional experiences. He posited that physiological changes are the primary elements of emotional experience. The James-Lange theory maintains that emotion is the psychological response to the changes in the physical systems of the body.

Operant conditioning was first studied by Edward Thorndike (1898). The modal model of information processing originated with Waugh and Norman (1965). Richard Lazarus (1966) was the first to develop a sophisticated appraisal model of emotion.

70.

According to Waugh and Norman (1965), which of the following is **not** a part of information processing?

If-then connections

Sensory memory

Short-term memory

Long-term memory

Correct answer: If-then connections

According to the work of Waugh and Norman (1965), information processing consists of three levels: sensory memory, short-term memory, and long-term memory.

If-then connections do not refer to a part of information processing, according to Waugh and Norman.

71.

How do the affective and cognitive systems differ?

The affective system is faster than the cognitive system

The affective system is more analytical than the cognitive system

The affective system is related to short-term memory, and the cognitive system is related to long-term memory

The affective system is about comprehension, and the cognitive system is about interpretation

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Correct answer: The affective system is faster than the cognitive system

Affective memories are different than other types of memories, as explored by Greenwald and Leavitt (1984). The affective system is faster than the cognitive system. The affective system also picks up the stimulus as a source of threat, whereas the cognitive system analyzes the stimulus to determine more information.

The affective system is not more analytical than the cognitive system. Both the affective system and the cognitive system are associated with short- and long-term memory, and both systems play a role in comprehension and interpretation.

72.

Which of the following refers to an item to which an organism instinctively responds?

Unconditioned stimulus

Conditioned stimulus

Unconditioned response

Conditioned response

Correct answer: Unconditioned stimulus

In classical or Pavlovian conditioning:

- *An **unconditioned stimulus** is an item to which an organism instinctively responds without any prior training or conditioning. It directly triggers a natural, instinctive response known as the unconditioned response.*
- *A **conditioned stimulus** becomes associated with an unconditioned stimulus through conditioning. It will eventually elicit a conditioned response from the organism, which has been trained to respond to it.*
- ***Unconditioned and conditioned responses** are the reactions or behaviors elicited by the unconditioned and conditioned stimuli, respectively, not the stimuli themselves.*

73.

Constance is seeking therapy because she struggles with negative thinking about herself, leading her to experience depressive episodes. Constance holds the belief that she must be perfect at all times, or else she is not worthy of love and happiness.

Constance is showing evidence of:

Cognitive distortions

Learned helplessness

Specificity

Externality

Correct answer: Cognitive distortions

Cognitive distortions are negative thinking patterns that involve distinct themes. The belief that one must be perfect is a cognitive distortion. Aaron Beck believed that cognitive distortions are associated with mood disorders like depression.

Learned helplessness refers to the belief that people who feel they cannot escape pain will eventually stop trying to do so, leading to depression. Evidence of this concept is not present in the question.

Specificity is part of Weiner's attributional style. Specificity refers to whether a person views events as situation-specific. There is no mention of this concept in the question.

Externality is also part of Weiner's theory. This concept, which is also not present in the question, refers to the belief that events are caused by the external environment.

74.

Which theory is associated with homeostasis (i.e., the idea that an individual operates in a manner that maintains equilibrium)?

Drive theory

Motivational theory

Need-based theory

Learning theory

Correct answer: Drive theory

Drive theory supports the idea that individuals work to maintain a constant balance or homeostasis. When this equilibrium is upset or altered, an individual takes action to recreate balance. Clark Hull is one of the most influential psychologists who described drive theory.

Motivational theories include a wide range of theories that focus on the concept of motivation, which is the internal force that pushes an individual toward action. Need-based theories are based on the idea that individuals have various levels of need that motivate their actions. Learning theories focus on a person's motivation for behavior.

75.

What do structural interference, general resources, and behavioral coherence have in common?

They are all reasons for limitations in attentional resources

They are all regulated by the basal ganglia

They are all symptoms of depression

They are all examples of executive functioning

Correct answer: They are all reasons for limitations in attentional resources

Structural interference, general resources, and behavioral coherence are all reasons for limitations in attentional resources. When people are taxed through an increased processing load, performance usually decreases.

Structural interference, general resources, and behavioral coherence are regulated by various parts of the brain working together, not just the basal ganglia. They are not symptoms of depression or examples of executive functioning.

76.

Some psychologists consider short-term memory to be equivalent to what?

Consciousness

Experience

Dreaming

Aging

Correct answer: Consciousness

To some people, short-term memory (STM) is equivalent to consciousness. STM requires information to be accessible and active, but it may only be stored for a short time. This is also called working memory and represents the material we are thinking about at a given moment.

STM is not necessarily equivalent to experience, as it includes the process of interpreting and storing information gained from experiences. Psychologists also do not consider STM to be equivalent to dreaming or aging.

77.

All the following are accurate statements regarding intelligence tests **except**:

Women tend to outperform men on spatial cognition tasks

They have applications in the identification of individuals with autism

They typically take about 1 to 2 hours to administer, depending on compliance

They include the WISC-V and the Stanford-Binet

Correct answer: Women tend to outperform men on spatial cognition tasks

According to developmental research on models of intelligence, women tend to outperform men in verbal abilities. Men tend to outperform women on spatial cognition tasks, indicating that most intelligence measures contain some sort of gender bias.

Intelligence tests have applications in the identification of individuals with many types of disorders, including autism; they typically take about 1 to 2 hours to administer, and examples of intelligence tests include the WISC-V and the Stanford-Binet.

78.

Which of the following explanations for fear aligns with the James-Lange theory of emotion?

A person experiences physiological arousal after seeing a frightening object, notices the arousal, and then concludes they are afraid.

A person experiences fear because it is one of the six basic emotions hardwired into humans at birth.

A person experiences fear in response to a threat and then also experiences an increase in heart rate because of that fear.

A person experiences fear after becoming physiologically aroused in response to a threat and then cognitively appraises the situation.

Correct answer: A person experiences physiological arousal after seeing a frightening object, notices the arousal, and then concludes they are afraid.

The James-Lange theory of emotion states that emotion results from psychological responses to bodily changes after the presentation of a stimulus. In the explanation given in the correct answer option, the person experiences bodily changes in the form of arousal after experiencing a threat. They then conclude they are afraid. This aligns with the James-Lange theory of emotion.

The belief that a person experiences fear because it is one of the six basic emotions hardwired into humans at birth aligns with basic emotion theory.

The belief that a person experiences fear in response to a threat and then also experiences an increase in heart rate would align with the Cannon-Bard theory, which states that physiological responses are a consequence of experiencing emotions.

Finally, the belief that a person experiences fear after becoming physiologically aroused in response to a threat and then cognitively appraises the situation aligns with the two-factor model of emotion.

79.

A new advertisement for a cell phone shows two attractive people talking to each other on their new phones. The two people then agree to meet in person, realize they have the same phone, and fall in love. In this example, what is the conditioned stimulus?

The cell phone being advertised

The pleasant feelings associated with the advertisement

The attractive couple

The result of falling in love

Correct answer: The cell phone being advertised

Most advertisements aim to use some type of classical conditioning, in which a conditioned stimulus (i.e., the cell phone being advertised) is associated with an unconditioned stimulus (i.e., an attractive couple), eventually leading to an unconditioned response (i.e., pleasant feelings in the viewer). This type of cognitive learning situation is used widely in the advertising and marketing worlds.

80.

A rat presses a lever and is rewarded with a food pellet every third time. This is an example of which of the following reinforcement schedules?

Fixed ratio

Variable ratio

Fixed interval

Variable interval

Correct answer: Fixed ratio

A fixed ratio refers to a reinforcer that is given at predictable intervals, such as every third time a rat presses the lever. This is an essential component of operant conditioning in which an individual has the choice of whether to respond to a stimulus.

Variable ratios are randomly spaced, with no fixed ratio of reinforcers. For instance, with a variable ratio schedule, the rat may be rewarded after two lever presses, and then not be rewarded again until after five presses. With a fixed interval schedule, a reinforcer is given after a specific amount of time, such as every 30 seconds. With a variable interval schedule, a reward is given after an "average" amount of time. The average interval may be 30 seconds, but some intervals could be as short as 15 seconds, whereas others could be 90 seconds.

81.

Johnny has a difficult time copying notes from the board at school. When he looks up at the board, he is only able to remember two or three words at a time to copy them down into his notebook. He often falls behind when note-taking, because he cannot hold much information from the board in his mind long enough to copy it down without constantly looking back up at the board.

Johnny most likely has a deficit in which of the following executive functions?

Working memory

Inhibitory control

Planning

Time management

Correct answer: Working memory

Working memory is an executive function that refers to the ability to temporarily hold information in the mind in order to manipulate it. Johnny is having a difficult time holding information from the board in his mind, so that he can manipulate it in the form of copying it down into his notebook. He therefore has a working memory deficit.

Inhibitory control, planning, and time management are also among the executive functions, as they allow a person to be successful with independent, self-directed behavior. However, these specific executive functions are not described in the question.

82.

Which of the following does **not** describe attention?

Perception

Wakefulness

Attending to a stimulus

Concentration

Correct answer: Perception

Attention can have more than one meaning, depending on the context in which it is being used. It can mean attending to a particular stimulus, it can simply mean being awake, or it can mean concentrating purposefully on one thing.

Perception deals with the detection and interpretation of sensory stimuli. It is a separate cognitive function from attention and does not describe attention accurately.

83.

Attention selects for all the following **except**:

Sound

Objects

Location

Motion

Correct answer: Sound

To many people, sound can be distracting, but people tend to pay attention to other stimuli before paying attention to sound.

Attention selects for objects, location, and attributes such as motion within the visual field. This means that, in a situation involving lots of stimuli, a person focuses mostly on objects, location, and motion before other things.

84.

All the following are examples of marker signals referenced in the somatic marker hypothesis (SMH) **except**:

Smells

Blood pressure

Increased heart rate

Glandular secretion

Correct answer: Smells

SMH posits that decision-making is influenced by marker signals that arise from conscious and unconscious operations. These signals include various somatic changes such as heart rate, blood pressure, and glandular secretion. These responses "mark" potential behavioral choices as good or bad.

Smells are not an example of marker signals referenced by SMH.

85.

Which of the following is not true of sensory memory?

Psychologists commonly consider it an important type of memory

It is brief in duration, lasting just milliseconds

It refers to the ability to retain visual and auditory inputs

People can experience it in the form of an after-image

Correct answer: Psychologists commonly consider it an important type of memory

While sensory memory is absorbed under the general category of short-term memory, it is now considered too brief to actually be considered memory. It may be categorized as such, but it's not commonly considered an important part of memory in psychology, given its brevity.

All of the other listed statements pertaining to sensory memory are true.

86.

When using the example of fear, which of the following would be the fourth and final stage of the James-Lange theory?

The individual concludes that they are experiencing fear

The individual observes a threat

The individual tries to escape and experiences autonomic activity

The individual observes the physiological reaction and acknowledges that they are trying to escape

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Correct answer: The individual concludes that they are experiencing fear

The James-Lange theory includes four steps, in order:

1. *The individual observes a threat.*
2. *The individual tries to escape and experiences autonomic activity.*
3. *The individual observes the physiological reaction and acknowledges that they are trying to escape.*
4. *The individual concludes that they are experiencing fear.*

These steps can be repeated for any emotion.

87.

Watson showed that phobias often develop as a result of which phenomenon?

Classical conditioning

Irrational thinking

Operant conditioning

Verbal learning

Correct answer: Classical conditioning

Classical conditioning occurs when a response to a certain stimulus is reinforced many times until the response occurs even in the absence of the stimulus. Watson is known for (unethically) conditioning a boy to fear a white rat in only a few trials, and the boy also began to fear other furry white animals. His work applies to individuals with phobias, as often simply talking or thinking about the phobia will elicit an anxious response.

88.

Which *specific* type of memory would be responsible for a person's ability to explain the composition of the United States Senate?

Semantic

Declarative

Episodic

Prospective

Correct answer: Semantic

Semantic memory is a type of declarative, or explicit, memory. Semantic memory includes knowledge of the world, such as facts and concepts. The example given falls under semantic memory, as it includes facts.

While the example given aligns with semantic memory, which falls under the category of declarative memory, the question asked which specific type of memory is responsible for the given ability. Declarative memory is not a specific form of memory but, rather, a general category of memory that contains the things a person explicitly knows. Episodic memory is also a form of declarative memory, but it includes a person's memory for personal, everyday experiences. Prospective memory is the ability to remember to complete a planned action in the future, such as stopping by the grocery store on the way home from work.

89.

Which of the following is not one of the levels in Luria's three-level theory of higher cortical functions?

Modulation of emotional responses

Regulation of cortical arousal and attention

Receiving, processing, and retention of information

Programming, regulation, and verification of behavior

Correct answer: Modulation of emotional responses

Luria's three-level theory of higher cortical functions is an alternative to purely cognitive British and North American models. Modulation of emotional responses is not one of the three levels in Luria's theory.

The three levels of Luria's model are:

- *Regulation of cortical arousal and attention*
- *Receiving, processing, and retention of information*
- *Programming, regulation, and verification of behavior*

90.

What is one drawback of the dominant learning theory of the early 20th century?

It was based only on observations of animals and behavior in lab environments

It was too academic and lofty in its description

It applied only to homogeneous populations

It excluded factors such as instinct and animal behavior

Correct answer: It was based only on observations of animals and behavior in lab environments

In the early 20th century, the dominant learning theory was based only on observations of animals and behavior in lab environments. They were not translated into studies involving humans and, therefore, were not evidence-based in their applicability.

The dominant learning theory in the early 20th century was based solely on observable qualities and is not criticized for being too academic in its description. It did apply to some heterogeneous populations and focused on select animal behaviors and instincts.

91.

The Cannon-Bard theory of emotional experience focuses on what part of the brain?

Thalamus

Basal ganglia

Cerebellum

Frontal lobes

Correct answer: Thalamus

The Cannon-Bard theory of emotional experience identifies emotional experiences within the brain, influencing behavior. The theory focuses on the thalamus, which is thought of as the sensory-relay area. The thalamus is also involved in emotional processing.

The basal ganglia and cerebellum are responsible for the coordination and rhythm of movement. The frontal lobes manage higher cognitive functioning.

92.

Which of the following is the correct definition of cognitive dissonance theory?

Individuals have the urge to change beliefs that are inconsistent with behaviors and vice versa

Automatic thoughts and cognitive distortions disrupt emotional functioning

When individuals feel they cannot escape pain, they eventually stop trying to avoid it

Individuals work to maintain balance and homeostasis

Correct answer: Individuals have the urge to change beliefs that are inconsistent with behaviors and vice versa

Cognitive dissonance theory (Festinger, 1957) proposed that individuals who behave in a manner that is inconsistent with their attitudes or beliefs will experience the urge to change their beliefs or vice versa. Most people will change their beliefs to remain in line with behaviors rather than alter behaviors to be consistent with beliefs.

Cognitive therapy is based upon the belief that automatic thoughts and cognitive distortions disrupt emotional functioning. The theory of learned helplessness states that when individuals feel they cannot escape pain, they become helpless and stop trying to escape it. This theory has been used to explain depression. The belief that individuals work to maintain balance and homeostasis can be explained by drive theory.

93.

Which of the following theories focuses on emotion and its role in decision-making?

Somatic marker hypothesis

Dimensional model

Basic emotion model

The Cannon-Bard theory

Correct answer: Somatic marker hypothesis

The somatic marker hypothesis (SMH) is a relatively new emotional theory that focuses on emotion and its role in decision-making. It is based on observations of individuals who have had brain damage and are sometimes unable to draw on emotions to direct future behavior based upon their past experiences.

The dimensional model considers emotions to be a combination of several dimensions of physiological and psychological phenomena. Most dimensional models focus on the valence or pleasantness of a stimulus, and the arousal, or autonomic response associated with a stimulus. The basic emotion model theorizes that all emotions can be described by a few specific emotions, such as happy and sad. The Cannon-Bard theory asserts that physiological responses are the consequence of experiencing emotions rather than a precursor to emotions.

94.

James has a master's degree in biology. When asked questions about biological concepts, he is able to access information in his long-term memory to answer such questions.

What is this process called?

Retrieval

Encoding

Storage

Disposal

Correct answer: Retrieval

There are three stages of memory: encoding, storage, and retrieval. Retrieval, described here, refers to accessing information stored in long-term memory.

Encoding refers to the initial learning of information.

Storage refers to maintaining memory over time.

Disposal is a fabricated term.

95.

Which of the following is considered to be a fast but inefficient way to learn?

CRF

VR

CR

UR

Correct answer: CRF

Continuous reinforcement (CRF) is considered by many psychologists to be a fast but sometimes inefficient way to learn because it requires many reinforcers. It works quickly because reinforcers are predictable and offered at regular intervals, unlike verbal learning.

Variable ratio (VR) refers to rewards that are randomly spaced instead of being administered at regular intervals. VR is a fairly quick way to learn and is more efficient than CRF. A conditioned response (CR) is an automatic response established by training to a neutral stimulus; it can be efficient depending on how rewards are administered. An unconditioned response (UR) is the unlearned response that occurs naturally in reaction to a stimulus.

96.

The results of Sternberg's *Project Rainbow* are consistent with which of the following?

Hispanic Americans often earn better undergraduate grades than their SAT scores would predict

Despite accounting for ethnic differences, whites still achieve higher intelligence scores than People of Color

African Americans score better than whites on reading and writing assessments and lower on math and science assessments

The most significant predictor of high income after college graduation is SAT scores

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Correct answer: Hispanic Americans often earn better undergraduate grades than their SAT scores would predict

Despite many efforts to reduce ethnic difference gaps in intelligence testing, a bias toward middle-class white Americans still remains in many assessments. Sternberg's Project Rainbow (2003) demonstrated that the SAT rarely predicts first-year undergraduate grades of ethnic minorities. Instead, practical and creative ability measures reduce the gap between whites and People of Color, particularly Hispanic Americans.

97.

What is the Stroop Effect?

The theory that objects take precedence over attributes when referring to attention

The impact of traumatic brain injuries on taste and smell

The fact that mental disorders are sometimes genetic

The fact that people in a group act differently than they would individually

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Correct answer: The theory that objects take precedence over attributes when referring to attention

The Stroop Effect is the theory that objects take precedence over attributes when referring to attention. For example, a word identity (object) captures more attention in most people than the color or font (attributes) of that printed word.

The Stroop Effect is not related to traumatic brain injuries, genetic origins of mental disorders, or group behavior.

98.

Which of the following is **not** a category of long-term memory (LTM)?

Recall

Declarative

Implicit

Emotional

Correct answer: Recall

Long-term memory (LTM) is known to contain three main categories: declarative (conscious) memory, implicit (unconscious) memory, and emotional (affective) memory.

Recall is not a term applied to long-term memory.

99.

Which of the following is an example of crystallized intelligence?

Vocabulary

Memory

Spatial coordination

Executive decision making

Correct answer: Vocabulary

Crystallized intelligence refers to skills and knowledge that are over-learned and familiar, such as vocabulary and general fund of information.

Memory, spatial coordination, and executive decision making are not kinds of crystallized intelligence.

100.

Schacter and Singer (1962) are known for their theory that individuals must do what before determining their emotional states?

Cognitively appraise a situation

Scan the environment for safety

Assess their automatic thoughts related to the situation

Identify options for coping

Correct answer: Cognitively appraise a situation

Schachter and Singer (1962) posited that individuals must first appraise a situation in order to determine their emotional states. This is also known as the "two-factor" model of emotion.

Schachter and Singer's model does not state that individuals must scan the environment for safety or assess their automatic thoughts before arriving at an emotional state. The model from Lazarus (1966, 1991) does state that the second stage of cognitive appraisal involves identifying resources and options to cope with a stimulus, which ultimately combines with the valence and threat of the stimulus to create a specific emotion.