

## Exam 1

1. When early psychologists approached the field from three different ways, they often referenced the “trilogy of the mind” (Hilgard, 1980). Which was not one of the three components to that trilogy?

- A. cognition
- B. motivation
- \*C. biology
- D. emotion

% Correct: 95.2380952380952%

Comments: The trilogy of the mind theory references the notion that to understand the mind, we need to understand the interaction between our cognitions, emotions, and drives (or motivations). Though our body definitely is involved in the functioning of our mind, it is not a part of this theory.

2. If Gary were applying a reductionist approach to his research on memory, he would prefer to study which of the following?

- \*A. cells
- B. individuals
- C. groups
- D. structures of the brain

% Correct: 54.2857142857142%

Comments: The reductionist approach to science attempts to explain processes in the most basic form possible. Since attempting to explain things at the cellular level is the most basic approach listed in the answers above, that makes it the correct response for this question.

3. Scientific approaches to studying psychology have been around since the

- A. early to mid-1600’s
- \*B. early to mid-1800’s
- C. early 1900’s
- D. late 1900’s

% Correct: 70.4761904761904%

Comments: Though the theoretical study of the mind through philosophy has been around for centuries, it wasn’t until the early to mid-1800’s that people started studying the processes of the mind in a scientific manner. Though the tools and techniques used at those times would be considered overly simplistic in our current era, they did eschew in a new era of research.

4. The corpus callosum is a critical structure in your nervous system. This is because it connects

- A. our nerves to our spinal cord.
- B. our eyes to our brain.
- \*C. the two hemispheres of the brain.
- D. each of our lobes together.

% Correct: 97.1428571428571%

Comments: The corpus callosum is a collection of nuclei in the brain that are structurally similar to rubber bands. They are connected in the center of the brain and keep the two hemispheres of our brain attached. This creates structural support and also allows for communication between the hemispheres.

5. Cranial nerves are different from other nerves in our body because

- A. they don’t use neurons for communication.
- \*B. they don’t connect to the spinal cord.

- C. they fire at a much more rapid pace.
- D. they fire at a much slower pace.

% Correct: 78.0952380952381%

Comments: Though we have only a few cranial nerves in our body, they have been examined a lot by researchers that study the processes of the mind through biological structures. This is because these nerves connect to critical structures of our every-day life and also do not travel through and from the spinal cord like the other nerves that are a part of our peripheral nervous system.

6. The human brain has \_\_\_ lobes on the left and right side of our brains.

- A. 1
- B. 2
- C. 3
- \*D. 4

% Correct: 91.4285714285714%

Comments: The four lobes of our brain are the frontal, parietal, temporal, and occipital lobes. Each lobe has cells contained within it that have been linked to specific functions of the mind.

7. People studying phrenology attempted to link \_\_\_\_\_ with individual differences and mental activity.

- A. hormones
- \*B. bulges in the skull
- C. specific cell clusters
- D. genetics

% Correct: 86.6666666666666%

Comments: Though many theories of phrenology are no longer considered outdated, this approach to linking the skull with different aspects of the mind was once a very interesting and novel concept. Researchers today have linked different areas of the brain to different aspects of our mental functioning, but unlike phrenologists, these researchers do not examine bulges in the skull in order to try to determine individual differences, or different aspects of cognitive functioning in an individual.

8. The EEG measures electrical activity that occurs \_\_\_\_\_ in order to determine brain activity.

- A. between the hemispheres
- B. in synapses
- \*C. near the surface of the skull
- D. as a result of neurotransmitters mixing

% Correct: 54.2857142857142%

Comments: The electroencephalogram (EEG) is a tool used by neuroscientists that are interested in looking at areas of the brain that are active during different mental tasks. To determine this activity, electrodes are placed on the surface of the skull in order to detect tiny changes in electrical charges that occur along the surface of the skull. These changes detected along the skull are then linked to neural activities that are occurring in the brain regions located beneath the corresponding section of the skull.

9. If a neurotransmitter is being used by a neuron in order to get the neuron that it is connected to stop working, we would call this neurotransmitter

- A. excitatory.
- \*B. inhibitory.
- C. active.
- D. inactive.

% Correct: 94.2857142857142%

Comments: though the process of an action potential always results in the release of neurotransmitters of a neuron, the neurotransmitters released into synapses can have a variety of effects on the adjacent cells to which the neurons releasing the neurotransmitter are connected. If the neurotransmitters released reduce the likelihood of the adjacent cell from firing, these neurotransmitters are called inhibitory.

10. Gyri are

A. the terms we use to describe the 3 lobes of the brain.

\*B. bulges of the cerebral cortex.

C. gaps in the cerebral cortex.

D. tools used to look for neural activity deep within the brain.

% Correct: 89.5238095238095%

Comments: This was a definition question. Gyri is the term used for the variety of bulges that we find along the cerebral cortex. Interestingly, as we age and our neuron connections become greater, more gyri begin to form along the surface of the brain.

11. The primary motor cortex is found along the

\*A. frontal lobe.

B. parietal lobe.

C. temporal lobe.

D. strip that contains all 3 lobes.

% Correct: 90.4761904761904%

Comments: The primary motor cortex is a term used to describe a strip of cells located along the back of the frontal lobe. As the name implies, the cells located along this strip of the brain have been linked to the initiation of movement in the body. Several other areas of the brain are eventually involved in this process, but research shows that this process is initiated in that primary motor cortex.

12. Aphasia relates primarily to challenges with

A. memory.

\*B. language.

C. emotion.

D. motivation.

% Correct: 97.1428571428571%

Comments: The term aphasia is used to describe a language-related deficiency. There are several different types of aphasia that can occur, with two of the prominent ones that have been discovered being Wernicke's and Broca's aphasia. These two types of aphasia relate to struggles with the production of and organization of language respectively.

13. Our left hand is most often controlled by the

A. left side of our brain.

B. two hemispheres of our brain.

\*C. right side of our brain.

D. side of our brain that is "dominant"—which depends on the person.

% Correct: 98.095238095238%

Comments: Though there are some exceptions to this rule, the vast majority of us have a brain that is designed to communicate with the body through something called contralateral communication.

Essentially, this process involves the different hemispheres of the brain communicating with the opposite side of the body during our motor and sensory activities.

14. Veronica is struggling with the ability to speak due to brain damage. This would suggest that she has damage to her

- A. occipital lobe.
- B. right hemisphere of her brain.
- \*C. left hemisphere of her brain.
- D. thalamus.

% Correct: 90.4761904761904%

Comments: This question is referencing the specialization of the different hemispheres of the temporal lobe. Though a very small percentage of the population dedicates either their right hand or both sides of their temporal lobe to language-related mental activities, the vast majority of humans engage in language-related mental activities through the work of cells located in the left hemisphere of our temporal lobe (and a few adjacent areas on the left hemisphere).

15. The “plasticity” of our brain relates to our

- A. ability to make sense out of nonsense.
- \*B. ability to recover from damage to structures of the brain.
- C. constant movement of neurons throughout the brain.
- D. ability of the brain to stretch and bend without being damaged.

% Correct: 77.1428571428571%

Comments: This is a definition question. Plasticity is a term used to describe the brain’s ability to adapt to structural or cellular changes/damages that can occur. Though plasticity can sometimes be a frustration for researchers interested in studying the brain, our brain’s ability to adapt to these changes is a very big asset for us using our brain that want to maintain the various functions of that organ.

16. A person that takes a test and is found to have be a negative standard deviation in their score \_\_\_\_\_ on that test.

- A. didn’t even try
- \*B. performed below the group average
- C. performed well above the group average
- D. performed too inconsistently to determine how they did with respect to the group

% Correct: 81.9047619047619%

Comments: The term standard deviation refers to a person’s deviation from the average on a scale variable with respect to the group to which this person is being compared. If you have a “negative” standard deviation, it means that your score is below the average on that variable.

17. In an experiment, the \_\_\_\_\_ is the variable being manipulated.

- A. critical
- B. impact
- C. dependent.
- \*D. independent.

% Correct: 82.8571428571428%

Comments: Experimental researchers use specific terminology when discussion the variables used in their experiments in order to infer concepts like causality and order. The term independent variable is used for variables in experimental studies that are manipulated. This manipulation of the independent

variable is done in order to determine how the manipulation impacts another variable—called the dependent variable.

18. Correlation coefficients measure

- A. how well a person did in comparison to a group.
- \*B. how well two or more variables “go together”.
- C. if there was a change in a group across experimental conditions.
- D. the statistical difference in averages of two groups.

% Correct: 77.1428571428571%

Comments: The correlation coefficient, often represented by the letter “r”, is a measurement used to determine the strength of the relationship between two variables. Though it can be calculated out in some rare cases when looking at the relationship between two groups and another variable, it is usually calculated when researchers are examining the relationship between two scale variables.

19. The rooting and sucking of babies are both examples of \_\_\_\_\_.

- A. taxis
- \*B. reflexes
- C. learned responses
- D. instincts

% Correct: 80%

Comments: These terms are both examples of early infant reflexes that should be present at birth. Coincidentally, both reflexes are supposed to disappear over time. Several other reflexes (sneezing, coughing, etc.) persistent throughout life.

20. Out of all the automatic responses to stimuli, which are most complex?

- A. taxis
- B. reflexes
- \*C. instincts
- D. they are all equally complex—they just involve different parts of the body

% Correct: 62.8571428571428%

Comments: For this question, the concept of complexity relates to the number of organs involved in a reaction to a stimulus and the time/processes involved with that reaction. Based on that definition of complexity, instincts are undoubtedly the most complex automatic reaction on the list above.

21. Imprinting is an example of a \_\_\_\_\_.

- A. taxis
- B. reflex
- C. learned response
- \*D. instinct

% Correct: 75.2380952380952%

Comments: Imprinting is an interesting instinct displayed by many different bird species. It involves the quick attachment and subsequent following of the first moving object that newborn birds see after hatching. The researcher most often linked to this concept was the scientist named Konrad Lorenz.

22. The parts of neurons that releases neurotransmitters are called

- A. dendrites.
- B. axons.
- \*C. terminal buttons.

D. synapses.

% Correct: 38.095238095238%

Comments: This is a question asking about one of the various structures of the neuron. At the end of our axons are tiny branches called terminal branches. At the end of these branches are tiny "pores" called terminal buttons. These buttons contain the neurotransmitters that are used by neurons during the process of cell communication in the synapse.

23. Classical conditioning and operant conditioning are both types of

A. taxis.

B. reflexes.

\*C. learned responses.

D. instincts.

% Correct: 100%

Comments: CC and OC are the most commonly studied forms of learning. They are a large part of the branch of psychology that we call behaviorism.

24. Gary has learned that the sound of the bathroom faucet indicates that his mom will soon be coming into the room to wake him. Because of this, Gary has started to come out of his sleep when he hears the faucet. This type of learning would be called \_\_\_\_\_ by a behaviorist.

\*A. classical conditioning

B. conditional learning

C. operant conditioning

D. varied learning

% Correct: 82.8571428571428%

Comments: Since this example involves the learning of the connection between stimuli, this example is tied to the concept of classical conditioning. The terms used when describing these classically conditioned responses include unconditioned stimulus, conditioned stimulus, neutral stimulus, unconditioned response, and conditioned response.

25. What is necessary for "learning" to occur in classical conditioning?

A. The conditioned stimulus to be paired with the conditioned response

B. The conditioned stimulus to no longer be paired with the unconditioned stimulus

\*C. The unconditioned stimulus to be paired with the neutral stimulus

D. The unconditioned stimulus to no longer be paired with the unconditioned response

% Correct: 43.8095238095238%

Comments: Since classical conditioning involves the learning of how two stimuli are paired together, the first thing necessary for this process to take place is for two stimuli to be paired together. No other answer outside of C involves that process.

26. Backward conditioning is a type of

A. operant conditioning.

B. varied learning.

C. conditional learning.

\*D. classical conditioning.

% Correct: 75.2380952380952%

Comments: Once the topic of classical conditioning began to be explored by researchers like Ivan Pavlov, the effects of different versions of the first process of classical conditioning have been explored. One of those versions of classical conditioning that have been explored is called backward conditioning.

In it, the unconditioned stimulus comes BEFORE the neutral stimulus is presented. Researchers studying this pairing have often found that this form of pairing either produces weak learning, or sometimes even learning that runs counter to the learning that occurs in the traditional version of classical conditioning.

27. Yelena is learning to clean up by watching her classmates get praise for this behavior. This would be an example of what behaviorists call \_\_\_\_\_.

A. informational norms

\*B. vicarious learning

C. positive punishment

D. classical conditioning

% Correct: 86.66666666666666%

Comments: The process of learning through the reinforcement and punishment of behaviors is at the heart of operant conditioning. Since the example above involves this learning taking place through the observation of others being reinforced or punished, this special type of operant learning is called vicarious learning.

28. Research on different stimulus response learning theories have DISPROVEN all but which theory about humans and other species?

\*A. we learn associations by contingency.

B. most species are "passive" organisms.

C. most species come into this world as "empty" organisms.

D. we learn associations by contiguity.

% Correct: 60.9523809523809%

Comments: This is a pretty straightforward identification question. Since early forms of learning were researched by behaviorists and cognitive psychologists in the early 1900's, a lot of attention has since been drawn to the different aspects of the learning process. The one statement above that is believed to be true (hence, it hasn't been disproven) is answer A. We do appear to learn many of our associations by contingency.

29. Seligman and Maier studied the topic of learned helplessness by

A. making students fail a test.

B. making mice run on a wheel that wouldn't stop.

C. presenting people with a "no-win" scenario.

\*D. shocking dogs in a cage that they couldn't escape.

% Correct: 93.33333333333333%

Comments: Seligman and Maier's research on learned helplessness will be revisited several times in this class. That is because this study where they shocked dogs in a variety of different conditions can be applied to not only the topic of learning, but also the branches of personality and clinical psychology.

30. Most of Mineka et al.'s research on the topic of vicarious learning and how it worked (this was discussed extensively in the lectures) focused on the learning of

\*A. a fear of snakes.

B. the ability to obtain food.

C. a means of completing a complex puzzle.

D. mastering language.

% Correct: 94.2307692307692%

Comments: Mineka's research on vicarious learning often involved measuring the fear reaction of monkeys to snakes after having encountered a variety of different situations. Through this research, we

discovered some important information about the critical nature of vicarious learning in the process of developing phobias—or at least a fear reaction to something.

31. Albert Bandura's famous "Bobo Doll" experiment with children highlighted the importance of \_\_\_\_\_ in the formation of new behaviors.

- A. motivation
- B. memory
- \*C. social learning
- D. humor

% Correct: 93.33333333333333%

Comments: Much like Mineka, Bandura was interesting in determining the source of different behaviors that humans exhibit. Bandura's specific topic of interest in his "Bobo Doll" experiments was in the development of aggressive behaviors. Through his research, Bandura was able to convincingly show that it was very likely that many aggressive tendencies (and other personality related behaviors as well) can emerge through the observation of adults or authority figures that display these tendencies.

32. Visual information is processed in our visual cortex through neural activity that travels from \_\_\_\_\_ in this cortex.

- \*A. back to front
- B. front to back
- C. bottom to top
- D. top to bottom

% Correct: 43.8095238095238%

Comments: This question was simply getting at the path of activity in the lobes of the brain. Though information does indeed travel from our eyes to the back of our brain, the activity within the cerebral cortex when visual information is processed travels from back to front.

33. The first cells that allow us to differentiate between the colors on the color spectrum—the ones linked to the trichromatic theory—are called

- \*A. cones
- B. rods
- C. bipolar cells
- D. occipital cells

% Correct: 92.3809523809523%

Comments: Cones—named thus because of their structure that can be seen under a microscope—are the cells that we now link to the initial processing of color. The trichromatic theory has been applied to explain how these cells are capable of allowing us to differentiate between the different colors on the visual light spectrum.

34. The afterimage effect is best explained by the \_\_\_\_\_ theory of color vision.

- A. hierarchical
- B. consistency
- \*C. opponent process
- D. Gestalt

% Correct: 90.4761904761904%

Comments: The afterimage effect relates to our mind's perception of opposing colors after we stare at an image for some time, then look at a white screen. The theory that explains how this effect occurs is the opponent process theory.



35. Both the Muller-Lyer and Ponzo illusions highlight how our perception of \_\_\_\_\_ can be thrown off when we are given cues in our environment.

- A. color
- \*B. size
- C. continuity
- D. sound

% Correct: 93.33333333333333%

Comments: Both illusions utilize different tools that we use to determine depth. By doing this, they mess with our ability to accurately judge the size of lines. There are other illusions that can trick our mind, but the two listed above are considered some of the first illusions generated in an attempt to understand how the mind perceives the visual world around us.

36. If Reese is using his memory and the light in the environment to determine the color of the shirt of the student sitting next to him, we would say that Reese is using \_\_\_\_\_ processing.

- \*A. top-down
- B. bottom-up
- C. inside-out
- D. outside-in

% Correct: 51.4285714285714%

Comments: This question is getting at the difference between bottom-up and top-down processing. Bottom-up processing involves our use of only the stimuli present in order to make sense of the world around us. If we start incorporating memory and expectation into our perception of the world around us, we are then using top-down processing.

37. For sensation and perception research, our ears are considered a

- A. proximal stimulus.
- \*B. sensory organ.
- C. projection area.
- D. afferent tract.

% Correct: 95.2380952380952%

Comments: In the path from stimulus to perception, stimuli activate a number of places. The sensory organs are those that first allow us to convert energy from our environment into some type of a neural signal that our brain can eventually process.

38. Each of our senses are thought to be “experienced” only after activation of the

- A. sensory organ.
- \*B. projection area.
- C. afferent tract.
- D. nerve endings.

% Correct: 56.1904761904761%

Comments: Though the process of sensation requires many steps along the way, research has conclusively shown that our experience of a sensation only occurs as a result of activation of areas of the brain. We call each sense-specific area of the brain a projection area. In other words, if your brain doesn't tell you that you sensed something, your mind doesn't have the ability to sense something.

39. Which of the following is NOT a part of the body linked with one of the different senses of touch?

- A. the inner ear

- B. the cerebellum
- C. the epidermis
- \*D. the temporal lobe

% Correct: 50.4761904761904%

Comments: The temporal lobe is linked to our sense of hearing, but there are no projection areas found on the temporal lobe that help with an aspect of touch. The other areas listed above do play a role in at least one of the many different types of touch that we experience.

40. What is meant by subliminal perception?

- A. Intuitively understanding someone's emotional condition based on nonverbal signals
- B. A behavioral influence based on something that did not reach any of your sense organs
- \*C. A behavioral influence based on something you didn't perceive consciously
- D. Incorrectly reporting the presence of a stimulus that was actually absent

% Correct: 88.5714285714285%

Comments: This was a definition question. There are many different types of subliminal mental aspects that have been studied over the years, with subliminal perception being one of the few that seems to be scientifically verified.

41. A jury's verdict risks either convicting an innocent person or freeing a guilty person. In the terminology of signal-detection theory, convicting an innocent person is which of the following?

- A. A correct rejection
- B. A hit
- \*C. A false alarm
- D. A miss

% Correct: 87.6190476190476%

Comments: This question was getting at your ability to apply the terminology used in signal-detection theory. False alarms occur when a stimulus is detected, even though it is not present. This can occur more often when there are strong incentives for identifying a stimulus—or there are costs to not identifying a stimulus. This concept best relates to the example given in the question.

42. Imagine someone reporting whether he does or does not see a faint light that appears on some trials and not others. If you offer a reward for every time he correctly reports its presence, and no penalty for errors, what will be the result?

- \*A. More hits and more false alarms
- B. More hits and fewer false alarms
- C. Fewer hits and more false alarms
- D. Fewer hits and fewer false alarms

% Correct: 80.9523809523809%

Comments: This question is referencing the different effects of signal-detection scenarios. The conditions set in the description creates a liberal response bias. That means more hits, but also more false alarms.

43. For us to be able to use convergence in order to judge the depth and distance of something, we are required to use

- A. memory.
- B. another person's opinion.
- C. head movement.
- \*D. two eyes.

% Correct: 94.2857142857142%

Comments: This question is asking about the different cues that we can potentially use in order to determine the size and depth of images that hit our retina. Convergence involves our calculation of depth by determining the movement of our two eyes that are required to focus on an object that is up close. To make this calculation, two eyes are required. Nothing else listed is required.

44. Concepts like motion parallax, retinal disparity, and superposition were all used by perceptual psychologists who held and tried to push the \_\_\_\_\_ view on perception.

- A. Gestaltist
- B. constructivist
- \*C. ecological
- D. mixed mechanisms

% Correct: 46.6666666666666%

Comments: The ecological view of perceptions suggests that much of our perception of the world around us is merely a deconstruction of the stimuli presented in our environment. The tools listed above are all mechanisms that we can use to make sense of the visual environment around us without having to use memory or expectation to add more to the sensation process than just the information being presented.

45. How do we perceive the pitch of a low-frequency sound, such as 30 Hz?

- A. The number of hair cells responding is proportional to the sound frequency.
- B. The sound wave excites a particular location on the basilar membrane.
- \*C. Each hair cell produces an impulse for each sound wave.
- D. Each sound wave excites a group, or volley, of hair cells.

% Correct: 40.9523809523809%

Comments: Though we need to utilize a number of different techniques in order to determine pitch across the entire scale of perceivable sounds, for low-frequency sounds, we use the placement of active cells to differentiate between those pitches.

46. What does Gestalt psychology emphasize?

- A. How we coordinate vision with movement
- B. How unconscious motivations and emotions influence visual perception
- C. The function of each neuron as a feature detector
- \*D. How we perceive a complex pattern as a whole

% Correct: 88.5714285714285%

Comments: Gestalt psychology focuses on how our mind can help us decode the world around us. In particular, it examines how we are able to make sense of the vastly complex and ever-changing world around us. Their research on memory and rules revolutionized our understanding of perception and other mental activities.

47. What is a "top-down" approach to visual perception?

- A. First focusing on the details and then putting them together
- B. Starting with brain activity and proceeding to the muscles
- \*C. Applying expectations to guide interpretation of vision
- D. Asking the leader of each group of people to decide what the others will view

% Correct: 73.3333333333333%

Comments: The top-down approach to perception focuses on how our memories and expectations impact our perception of the stimuli presented to us in our environment.

48. One reversible figure can be seen either as a vase or as two profiles looking toward each other. Which principle does this observation illustrate?

- A. Proximity
- B. Similarity
- C. Continuation
- \*D. Figure and ground

% Correct: 79.047619047619%

Comments: This question is referencing the different aspects of perception that go beyond the information that is present in our environment. This particular question is referencing the Gestalt topic of ground and figure. It highlights how our attention to different aspects of our visual field can impact what it is that we see.

49. Many optical illusions in art result from which of these?

- A. The dominance of one eye over the other
- B. Distortions of light rays as they pass through the atmosphere
- C. The difficulty of holding our eyes completely steady
- \*D. Our tendency to interpret drawings as if they were three-dimensional

% Correct: 80.9523809523809%

Comments: Though optical illusions exist in a number of different forms, the most common ones involve illusions over depth and size. To trick the mind, most of these illusions utilize our brain's automatic attempts to convert all images that we see into three dimensions. This doesn't really cause problems for us in our every-day experiences, but it can cause some difficulties when looking at 2-dimensional images that we automatically convert into 3 dimensions.

50. The sympathetic nervous system does which of the following?

- A. It promotes digestion and other vegetative activities.
- \*B. It readies the body for vigorous emergency activity.
- C. It interprets other people's gestures and facial expressions.
- D. It controls the muscles of the arms and legs.

% Correct: 89.5238095238095%

Comments: This question is referencing the different systems of our nervous system. This system is often first broken up into the somatic and autonomic nervous system—the systems that control conscious and automatic mental functions. The autonomic nervous system is further broken up into a sympathetic and parasympathetic nervous system. Our parasympathetic nervous system is often called the “rest-and-digest” system, while the sympathetic is often referred to as the “fight-or-flight” system. As the correct response states, this sympathetic system readies the body for vigorous emergency activity.