Exam 1

1. Which statement about the trilogy of the mind in psychology is true?
A. Psychologists tend to try to explain the mind through the cognitive perspective whenever possible.
B. Psychologists tend to try to explain the mind through the motivation perspective whenever possible.
C. Psychologists tend to try to explain the mind through the emotion perspective whenever possible.
*D. Psychologists can explain almost any mental activity through all three perspectives.
% Correct: 93.16%
Comments: The trilogy of the mind theory suggests that our actions can be explained through three components of the mind—cognitions, motivations, and emotions. Some skepticism has been raised about the necessity of these elements to explain behavior when the field of behaviorism arose in the early 1900's, but this notion still embodies the trilogy of the mind philosophy.

2. The early and continual debate about the application of reductionism in psychology revolves around our ability/benefit of
*A. explaining processes of the mind at the smallest level possible.
B. minimizing the harm to subjects in psychological experiments.
C. finding effects that can be applied to everyone.
D. being able to successively separate nature and nurture when explaining behavior.
% Correct: 79.49%
Comments: The reductionist approach to any science Is an aim to explain phenomena at the most simplistic level possible. In psychology, this goal led researchers to study the brain, then neurons, and now even the chemicals and elements that make up these neurons. Though some have questioned how much this approach can explain, each step has been used in an attempt to study the basic processes of the mind.

3. Which statement about the beginning of psychology as a science is FALSE?
A. Most early research on psychology focused on basic identification and recognition of stimuli
B. It wasn't until the mid to late 1800's that researchers started conducting experiments on psychological topics
*C. Our very first psychologists and labs in psychology both came from the United States
D. After psychology started with basic mental processes, the second generation of psychologists began studying "higher" level mental processes like memory and thinking
% Correct: 73.50%
Comments: In psychology's infancy, more researchers aimed to find verifiable ways to test very basic processes of the mind. Since we did not have the electronic, statistical, and scientific advances of our era, coming up with a means to explore psychological concepts from a scientific perspective was very challenging. This is why most researchers focused on very basic concepts like sensation and perception.

4. The reflex arc involves communication between ___ types of neurons.
A. 2
*B. 3
C. 4
D. 5
% Correct: 69.23%
Comments: The reflex arc is a simplistic description of how the neurons in our nervous system can detect and react to stimuli in the environment. In this arc, there is the afferent neuron (sensory neuron), the interneuron (central nervous system neuron), and the efferent neuron (motor neuron).

This arc does help us understand the sensory/motor system, but it is admittedly a simplified description of how these systems work in even the most basic species.

5. Which statement about concepts occurring after the activation of neurons is FALSE?
A. We say that depolarization has occurred along the axon
B. Neurotransmitters are released into synapses
C. The activated cell can either excite or inhibit the adjacent cells based on the chemicals released
*D. The refractory period varies based on the strength of the activation that occurred
% Correct: 61.74%
Comments: The action potential is a very complex but fast-acting process. Within a few milliseconds, tiny pores along the axon of a neuron begin opening and closing in order to allow the exchange of ions inside and outside the axon of the cell. We call this exchange depolarization. This exchange eventually works its way down the axon to the terminal branches where it causes the terminal buttons of the cell to release neurotransmitters into the microscopic gap between the neuron and adjacent cells. This gap is called the synapse. Depending upon the neurotransmitter that the cell is using, this cell that has released the neurotransmitter will either excite or inhibit the receiving cell found in the synapse.

6. The receiving portion of a neuron is called the _____.
A. terminal button.
*B. dendrite.
C. axon.
D. synapse.
% Correct: 93.16%
Comments: Each neuron has at least one dendrite—though many possess multiple dendrites. Dendrites either reach out into synapses (most of them) or into areas where they can sense specific stimuli (neurons of our sensory organs). Their goal in either situation is to receive information so the cells that they connect to can either be activated or deactivated.

7. The sympathetic and parasympathetic nervous systems are the two subsystems of our
A. central nervous system.
B. peripheral nervous system.
C. somatic nervous system.
*D. autonomic nervous system.
% Correct: 90.60%
Comments: When separating out our nervous system, there are a multitude of subsystems that neuropsychologists can study. The first split is typically between the central (brain and spinal cord) and peripheral (nerves extending throughout the body) nervous systems. The second split occurs within the peripheral nervous system. This split is between the autonomic (unconscious actions) and somatic nervous system (conscious actions). This autonomic nervous system is the one that is separated into the sympathetic (fight or flight) and parasympathetic (rest and digest) systems.

8. Transcranial Magnetic Stimulation (TMS) is an approach of studying the brain that is most like
*A. a lesion study.
B. an electroencephalogram (EEG).
C. functional magnetic resonance imaging (fMRI).
D. a positron emission tomography (PET) scan.
% Correct: 23.93%

Comments: Transcranial magnetic stimulation is a process that is partially explained by its name. When utilizing this technique, researchers stimulate a region of the brain with a repetitive series of magnetic pulses. Over time, these pulses fatigue and temporarily deactivate the region of the brain that was being hit. This allows researchers to determine the necessity of specific regions of the brain—similar to what a lesion study can accomplish.

9. The limbic system, which contains our hippocampus and amygdala to name a few parts, is located
A. on top of our cerebral cortex.
*B. within the casing of our cerebral cortex.
C. directly below our cerebral cortex.
D. both inside and outside of our cerebral cortex—it's the biggest system in the brain.
% Correct: 36.75%
Comments: The limbic system of our brain has been tied to emotions, memory, and several other important processes of the mind. Most of the structures located within this system are either a part of the cerebral cortex or they are considered internal structures that are linked to the cortex. With that being said, all of the structures of the limbic system are found in the medial (inside) casing of the cerebral cortex.

10. Damage to portions of the brainstem will result in
*A. different types of loss of function, which depend upon where the damage occurs.
B. coma every single time.
C. loss of sleep functioning every time.
D. memory impairment.
% Correct: 90.60%
Comments: The brainstem is the region of our central nervous system located between the spinal cord and cerebral cortex. It is critical for relaying information between these two areas. It has also been linked to the regulation of our basic bodily functions. Depending upon where damage occurs along this brain stem, different functions will either be shut off or greatly reduced. Knowing the location of the damage is essential to determine the type of impact that the damage will have.

11. Nearly each portion of the lobes of our brain are visibly separated by
A. folds in the skull.
B. gyri.
*C. sulci.
D. a synaptic cleft.
% Correct: 80.17%
Comments: As the neurons and connections in our brain expand as we age, there becomes a need to find a way to fit the entire surface area of the cerebral cortex within our skulls. To accomplish this, the brain begins to develop folds. We call these folds sulci. We call the bulges from these folds gyri.

12. Which statement about the location of the primary motor cortex and primary somatosensory cortex is true?
*A. The motor cortex is located in the frontal lobe, the somatosensory cortex is located in the temporal lobe
B. The motor cortex is located in the temporal lobe, the somatosensory cortex is located in the parietal lobe
C. The motor cortex is located in the parietal lobe, the somatosensory cortex is located in the temporal lobe

D. Both the motor and somatosensory cortex are located in the parietal lobe
% Correct: 56.41%
Comments: The primary motor cortex and somatosensory cortex are located right next to each other on the cerebral cortex. They are, however, separated by a sulcus. This sulcus is what is used to separate what we define as the parietal lobe—the lobe containing our somatosensory cortex—and what we define as the frontal lobe—the lobe containing our primary motor cortex.

13. The path of processing in the brain for visual information advances from _____ along the visual cortex.
*A. back to front
B. front to back
C. top to bottom
D. bottom to top
% Correct: 30.77%
Comments: Though all of our visual information is first processed in the brain in the very back of our occipital lobe, the information contained within the visual stimulus determines where than information travels afterward. With that being said, regardless of the exact path that this information takes, all visual processing of stimuli must work their way forward in some manner after visual information starts to be processed.

14. Broca's Area and Wernicke's Area about both portions of the brain that we link to
*A. language.
B. memory.
C. a sense of touch.
D. motor coordination.
% Correct: 95.73%
Comments: Broca's and Wernicke's aphasia are both examples of a loss of language skills. In Wernicke's, the ability to generate good structure and comprehensive statements is disrupted. In Broca's, the ability to find specific words and articulate sentences is hindered. These two areas reveal the complexity of language, as well as the importance of interaction between areas of the brain when we engage in cognitive skills.

15. The hemispheres of our brain communication with each other through the connected tissue found in the
A. hypothalamus.
B. thalamus.
*C. corpus callosum.
D. cerebellum.
% Correct: 94.02%
Comments: This was a definition question. The complex band of fibers that connect our two hemispheres of the brain is called the corpus callosum. When this band was originally discovered, not much was known about its utility. Because of this, several clinicians began severing these bands in an attempt to help with issues like severe mental impairments and epilepsy. Though this severing sometimes worked, we quickly realized that there was an unexpected side effect to this procedure. Namely, people lost the ability for communication between the two hemispheres—something that is critical in several of the tasks that we engage in throughout the day.

16. Karen has just undergone split brain surgery. Which of the following tasks would she be UNABLE to accomplish?
A. Reading a word presented only to her right visual field
*B. Reading a word presented only to her left visual field
C. Catching a ball located in her left visual field with her left hand
D. Catching a ball located in her right visual field with her right hand
% Correct: 47.86%
Comments: As described above, the area connecting our two hemispheres is called the corpus callosum. When severed through split-brain surgery, the two hemispheres lose their ability to communicate with each other. This impacts the ability for our language (something controlled by the left side of or temporal lobe) to be utilized when describing something presented only to the right side of our brain. The physical task mentioned above that would be processed by the right side of the brain is described in answer B.

17. Neuroscientists like Penfeld who struggled to find the "Grandmother Neuron", and Lashley who worked with rats in his quest to find the "Engram", all attempted to grapple with the possible existence of
A. the permanence of memory.
*B. the localization of mental components in the brain.
C. a maximum speed that regions of the brain could travel when communicating with each.
D. a pattern of activation in the brain that could be definitively linked to different cognitive functions.
% Correct: 46.15%
Comments: The quest for the engram—something some memory psychologists still pursue today—is linked to the notion that our mental processes and memories can be reduced down to the activation of just a single (or small cluster of) cell(s). Though researchers like Penfeld have reported findings to suggest that these localizations exist, our inability to reproduce these findings have led us to question the validity of this idea.

18. An investigator finds that measurement A is a moderately accurate predictor of measurement B. From this information we can conclude that the correlation between A and B is
*A. either positive or negative but not zero.
B. zero.
C. negative.
D. positive.
% Correct: 70.09%
Comments: This question is referencing the topic of correlational research. In correlational research we can study the strength of the relationship between variables, or use our knowledge of the nature of the relationship and information about one variable to predict where a subject will be on the second variable. For this prediction process to have any value, one needs a significant correlation between the variables of interest. It is critical to note here that significant correlations can be both positive and negative—just not zero.

19. A professor provides a review session for half the students, and later compares their scores to the other students. What is the independent variable in this experiment?
A. the test scores of the students
B. the total number of students
*C. the review session
D. the difficulty of the test

% Correct: 74.36%
Comments: In experimental designs, researchers manipulate one variable to see how the manipulation impacts another. The variable being manipulated is called the independent variable. The variable that is being measured to see how the manipulation impacts it is called the dependent variable. Since the variable being manipulated in this example is the existence of the review session (having one or not), the review session is called the independent variable.

20. Which statement about the average score of a group of scores is FALSE?
A. If the average score is the arithmetic average of the group, we call it the mean
B. The average score should have a Z-score of 0 if the group distribution is normal
C. The average score should be in the 50th percentile if the group distribution is normal
*D. The mean, median, and mode will all be the same value as the average score if the group distribution is skewed
% Correct: 82.91%
Comments: This question combines the concepts from several aspects of measures of central tendency and variability. The term "average" is considered to be synonymous with the term "mean". It is the arithmetic average of the collection of scores. Because it is the average, it will always be in the 50th percentile. And because z scores indicate the distance (by standard deviations) from the mean, its z-score will always be 0. In normally distributed groups, the mean, median, and mode will all be the same. However, when the distribution is not normal, this is not the case.

21. A puff of air in your eye automatically causes your eye to blink after the air has been detected. This reaction to the puff of air would be called a
*A. reflex.
B. instinct.
C. taxis.
D. classically conditioned response.
% Correct: 94.83%
Comments: Since we're looking at a single muscle reaction to a stimulus in this example, we're looking at the most basic automatic response to a stimulus that can be displayed. Because of this, we call this response a reflex. If there were more structures involved in an immediate response, we could call it a taxis. If the response was much more complex over a larger span of time, it would have been called an instinct.

22. Which of the following responses to stimuli are thought to be innate?
A. reflexes
B. instincts
C. taxis
*D. all are innate
% Correct: 85.34%
Comments: All three of the concepts listed here are defined as innate responses to stimuli. This means that they do not have to be learned. It also means that they are nearly impossible to alter, and that they almost always are impossible to stop once initiated.

23. Pavlov's early work with classical conditioning involved the pairing of the process of learning with an inherently built-in _____.
*A. reflex
B. instinct

C. taxis
D. previously learned response
% Correct: 65.52%
Comments: Pavlov's classical conditioning technique involve the pairing of a natural reflex reaction to a stimulus to a new stimulus that initially produces no automatic response. Though terms in classical conditioning like unconditioned stimulus, unconditioned response, conditioned stimulus, conditioned response, and neutral stimulus don't indicate this, each classically conditioned response is linked to basic reflex responses.

24. The difference between the initial pairing/training and the process of extinction training in classical conditioning is the removal of the
A. conditioned stimulus.
*B. unconditioned stimulus.
C. conditioned response.
D. unconditioned response.
% Correct: 55.17%
Comments: Extinction of a classically conditioned response involves the breaking of the conditioned stimulus from the conditioned response. To accomplish this, the conditioned individual needs to identify that the conditioned stimulus is no longer being linked with the unconditioned stimulus. This cannot be done if the unconditioned stimulus is just introduced on its own. Instead, it can only be accomplished if the conditioned stimulus is continually presented without the unconditioned stimulus for a sustained period of time.

25. Generalization in classical conditioning is said to occur when stimuli that are similar to the _____ stimulus produce _____ responses.
A. conditioned; different
B. unconditioned; different
*C. conditioned; similar
D. unconditioned; similar
% Correct: 87.07%
Comments: Generalization and discrimination are topics that have been tied to both classical and operant conditioning. In classical conditioning, generalization focuses on the generalization of the conditioned stimulus. If someone is generalizing, it means that they are responding to new stimuli that are similar to the conditioned stimulus as if they are the same thing as the conditioned stimulus. If they are not responding to stimuli that are similar to the conditioned stimulus in a similar manner, we call this action discrimination.

26. The concept of operant conditioning is said to have developed from Edward Thorndike's law of
*A. effect.
B. readiness.
C. exercise.
D. recency.
% Correct: 93.10%
Comments: Thorndike was interested in determining laws that could explain the actions—sometime ones that seemed random—of individuals. His primary subjects in his research studies were cats. He would place them in puzzle boxes and then detail the actions they displayed while in these tight and uncomfortable conditions. From his observations, many laws including the law of effect were defined

by Thorndike. The law of effect focuses on the impact of desirable and undesirable outcomes on actions. It was the basis of operant conditioning.

27. In the presence of a light, an animal makes a response that is followed by food. The food is given only when the animal makes the response. Which type of learning is this?
A. classical conditioning
*B. operant conditioning
C. social learning
D. counter conditioning
% Correct: 79.31%
Comments: Since this example involves the process of learning the consequences of a behavior in a specific environment, we can identify this as a type of operant conditioning. Skinner often called these examples the A-B-C's of learning. "A" was the antecedent (environment). "B" was the behavior that was displayed. "C" was the consequence that followed the behavior in the environment. If the "C" was desirable, the behavior was more likely to occur in that environment in the future.

28. What is a secondary reinforcer?
A. a reinforcer that is offered if the first reinforcer is ineffective
B. a relatively weak reinforcer
C. a reinforcer that is received vicariously
*D. something that became reinforcing by previous experience
% Correct: 74.14%
Comments: This question is asking for a definition of a term found in the operant conditioning literature. It is referencing the topic of primary and secondary reinforcers. Primary reinforcers are consequences that are universally desirable on their own. In essence, learning and/or pairing does not have to occur for the individual receiving the consequence to realize that it is a reinforcer. Secondary reinforcers are reinforcers that only become such after they have been paired with other things. An example of this would be money, credits, or a high letter grade for an action.

29. Negative reinforcement is a procedure in which a response
A. is weakened because it leads to the omission of a favorable stimulus.
*B. is strengthened because it removes an unfavorable stimulus.
C. is weakened because it leads to an unfavorable stimulus.
D. is weakened because it is followed by nothing.
% Correct: 68.10%
Comments: This is a definition question. In operant conditioning, consequences that are defined as "negative" are ones where something is removed or doesn't occur as a result of an action taking place. Though they sound bad, they are not inherently bad just because they are defined as negative. Reinforcers are defined as such because they are consequences that encourage a behavior to occur more often in the environment that they were displayed in. The answer that reflects both of these concepts is found in answer B.

30. Albert Bandura's Bobo Doll experiment is best described as an example of
A. classical conditioning.
B. operant conditioning.
*C. vicarious learning.
D. counter conditioning.
% Correct: 80.00%

Comments: Albert Bandura studied the topics of personality psychology, social psychology, and even cognitive psychology during his many years as a researcher. His famous Bobo Doll experiment asked children to observe a model while she either acted aggressively or passively towards a Bobo Doll (a giant blow-up clown). Bandura then allowed the children in both conditions to play in a room that was filled with toys and the doll. He found that many of the children displayed the same behaviors as the model after viewing her actions. This action has come to be known as vicarious learning (or modeling).

31. What does most research on observational learning in other species suggest?
A. humans are the only species that can learn through observation
B. primates are the only species that can learn through observation
*C. many species seem to be able to learn through observation
D. because of conflicting information, we're still uncertain if other species can learn through observation
% Correct: 89.66%
Comments: Though we were convinced for decades that humans were the only species to display vicarious learning, we now know that vicarious learning occurs for a large number of different species. Chimpanzees can learn how to sign, share, and display phobias (just to name a few skills) by simply observing others. Dogs can learn how to behave, operate an object, and even react to a stimulus through observation. Many other discoveries like this have been found since the topic of vicarious learning started being examined.

32. You attend every new movie that appears at your local theater. You find that most of them are dull (not reinforcing) but really enjoy about one-fourth of them overall. This is an example of a _____ schedule of reinforcement.
A. fixed-ratio
*B. variable-ratio
C. fixed-interval
D. variable-interval
% Correct: 64.66%
Comments: This was a slightly tricky question. Though most people identified that the number of responses was a key player in this schedule of reinforcement example (meaning that the answer had to be A or B), many missed on the second aspect of the scenario. Though the average number of movies watched that were reinforcing was 1 in 4, this did not imply that each 4^{th} movie was the one that was entertaining. Because of the variability of when the movies would be entertaining, this is part of a variable schedule of reinforcement.

33. The hair cells in our inner ear, rods, cones, and our taste buds are all similar in that they
A. are all activated through chemical reaction.
B. are all activated through physical stimulation.
*C. are all activated by a proximal stimulus.
D. each require expectation in order to be appropriately activated.
% Correct: 76.72%
Comments: These cells are all parts of what we call receptor organs. These organs all find ways—through the receptor cells—to convert the energies outside of our body into some type of a neural signal that our brain can eventually process. These cells all initiate the sensation portion of the sensation and perception process.

34. Which statement about the doctrine of specific nerve energies is FALSE?
A. The doctrine has proven to be false

B. The doctrine focuses on how we are able to experience sensations
C. The doctrine contends that our sensations come from the activation of nerves in our body
*D. The doctrine suggests that areas of the brain are equally important for the process of sensation
% Correct: 42.24%
Comments: This doctrine suggests that the actual experience of a sensation results from activity in the brain, not activity at the sensory organ. Though it is difficult to untangle the two, people technically can have activity of the brain that mimics a sensation, even if the sensory organ/cells are never activated. This occurrence is precisely what occurs during phantom limb sensation/pains, and some of the more profound mental disorders that exist.

35. Pitch in hearing and color in vision are both determined by the _____ a proximal stimulus.
A. molecules that are present for
B. intensity of
*C. frequency of
D. areas of the receptor site present in
% Correct: 59.48%
Comments: Though we don't often think of either sense as differentiated by the way they reach our sensory organs, the frequency of the stimuli reaching these organs is indeed the characteristic that allows us to separate out colors and sounds. The frequency of light (colors) is differentiated in nanometers, while the frequency of sounds (pitch) is differentiated in hertz. For color, we measure the space in between each pulse of electromagnetic energy to determine its frequency. For sound, we measure the rate of air pressure wave occurrences to determine its frequency.

36. The oddly colored American flag that was painted by Jasper Johns that we covered in lecture was a great example of the importance of the _____ in color vision.
A. trichromatic theory
B. retinex theory
C. Gestaltist approach
*D. opponent-process theory
% Correct: 62.07%
Comments: This painting really exemplifies what is called the after-image effect. When staring at this green, yellow, and black flag for some time, people eventually fatigue some of the receptor cells in their eyes. As a result of this fatigue, when individuals then look at white canvas, they actually see the flag in its traditional red, white, and blue colors. The only concept that can explain this phenomenon is the opponent-process theory.

37. When researchers argue that we have 9 senses instead of just 5, they are typically adding extra senses linked to _____ to the list of senses.
A. vision
*B. touch
C. special abilities
D. social/mental interaction
% Correct: 68.97%
Comments: Though we usually discuss the 5 senses of taste, smell, vision, touch, and hearing, there are technically 9 senses that sensation researchers have identified. The 4 other senses all involve the activation of sensory organs found within our bodies. Each of these senses are all linked to different aspects of touch. Though related to touch, they are defined as different from touch because they don't involve the mechanical activation of follicles located on the surface of our skin.

38. All of our senses (except for smell) travel through the _____ before reaching their respective projection area of the brain.
A. spinal cord
*B. thalamus
C. cerebellum
D. frontal lobe
% Correct: 74.14%
Comments: Each sensory system that we possess have a sensory organ, neural pathway to the brain, and area of the brain dedicated to the early processing of this neural information. Along the pathway, many of our senses meet at one juncture. This juncture is the thalamus. Research on this structure has suggested that this channeling of the information through the thalamus can be linked to the topic of attention and filtering.

39. Sensation based laws like those that came from Fechner's Law, Stevens' law, and Weber's law all attempt to predict our ability to successfully
A. detect the presence of a stimulus.
B. recognize the removal of a stimulus.
*C. identify some type of change to the intensity of a stimulus.
D. determine how nerves actually allow us to make sense of a stimulus.
% Correct: 77.39%
Comments: When exploring the topic of sensation, our early psychologists often attempted to understand some basic principles of this process across a variety of different sensory organs. They studied the timing of sensation, the mental experience of sensation (perception), the threshold required for stimuli before they are perceived, and the degrees of change required in a stimulus for a person to detect the change. The laws listed above all relate to the last concept—the ability to detect changes in a stimulus.

40. Subliminal perception and research on the signal detection theory all attempt to predict our ability to successfully
*A. detect the presence of a stimulus.
B. recognize the removal of a stimulus.
C. identify some type of change to the intensity of a stimulus.
D. determine how nerves actually allow us to make sense of a stimulus.
% Correct: 83.62%
Comments: Though the term "subliminal" started out in the realm of Freudian psychology, it currently resides in research done by cognitive researchers. Their focus on subliminal perception (and all things subliminal for that matter) resides in measuring the point where people can react to a stimulus before they even consciously recognize that they are detecting the stimulus. Much of the research on this topic has involved our sensation of basic stimuli (sounds, light, etc.) that are presented right near our threshold for detection.

41. Which of the following is required for "subliminal perception" to occur?
*A. more hits occurring than false alarms
B. conscious recognition of a stimulus
C. a hit rate that is near 100%
D. no cases of misses occurring
% Correct: 72.41%

Comments: The moment where "subliminal perception" is said to occur is defined in answer A. In essence, it's the point where people start saying they detected a stimulus when it is present and don't say that they detected the stimulus when it was not present at a level just above chance. Once we get past that point, we're looking at conscious perception, not subliminal perception.

42. Bottom-up processing is best linked to the _____ view of perception.
*A. ecological
B. constructivist
C. subliminal
D. interactive
% Correct: 47.83%
Comments: Bottom-up processing of stimuli involves the combining of elements of these stimuli in order to perceive them in the mind. The key point to this notion is that we are only using what we are given in order to perceive the stimulus. This is the general concept of the ecological approach to perception. The counter to this process is called top-down processing. Top-down processing involves the combination of expectations and the environment in order to perceive something.

43. When depth perception is successfully explained through different binocular are monocular cues, we would say that these cues help support the _____ view of perception.
*A. ecological
B. constructivist
C. subliminal
D. interactive
% Correct: 51.72%
Comments: Binocular and monocular cues are tools that can be used to determine depth and size based on information presented in the environment. Since binocular and monocular cues can both be explained through the elements of the stimuli/environment, we would stay that these support the ecological view of perception. The struggle with these cues is to determine if they are actually what we use, or simply what we could potentially use to determine size/depth.

44. The stereoscope and 3-D glasses both take advantage of a _____ cue of depth perception called _____.
A. monocular; convergence
B. binocular; convergence
C. monocular; retinal disparity
*D. binocular; retinal disparity
% Correct: 64.66%
Comments: Though the way that information can be split between the eyes varies in our more recent versions of 3-D glasses, they all still operate on the same principle. They allow us to determine depth by presenting different images to our two eyes—with the closer objects creating a larger difference between the images. We call this binocular cue (because both eyes are required) retinal disparity.

45. What is the emphasis of Gestalt psychology?
A. the physiological role of feature detectors in vision
*B. how we perceive a complex pattern as a whole
C. the elementary components of experience
D. interactions between visual and auditory experiences
% Correct: 92.24%

Comments: Gestalt psychologists study the collection or mental processes that we use in order to make sense of the stimuli in our environment. They essentially examine the top-down processes utilized to a) make sense of the complex, and b) fill in the gaps that might be missing from the stimuli that we are trying to perceive. They are considered advocates of the constructivist view if we link their research to the ecological/constructivist debate.

46. How was Steve Palmer's research at UC Berkeley in the 1990's and early 2000's related to the Gestalt view of perception?
A. he challenged the existence of several of the laws of perception
*B. he added some additional laws of perception
C. he argues that the laws of perception were unnecessary and could be better explained at the neural level
D. he provided a cognitive alternative to the laws of perception when explaining the process of perception
% Correct: 50.88%
Comments: This is a pretty self-explanatory question. As discussed in the presentation, after Gestaltists had assumed that they had discovered all of the laws and principles of perception, researchers like Palmer showed us that there were additional tricks that our mind apparently uses when making sense of the world around us.

47. Color constancy, shape constancy, and size constancy all suggest the importance of _____ in perception.
*A. top-down processing
B. bottom-up processing
C. interactive processing
D. spatial reasoning
% Correct: 48.25%
Comments: All of the constancy effects listed above describe our tendency to perceive stimuli as consistent, even when they change their form in some manner. To see these things as consistent, our expectations, memory, and judgment all must be adjusting to the stimuli within a split second. These are all aspects of top-down processing during the perceptual process.

48. Which part of the eye changes its shape to enable us to focus first on a distant object and then on a nearby object?
A. retina
B. cornea
C. pupil
*D. lens
% Correct: 81.90%
Comments: Many different structures within the eye play pivotal roles in our ability to convert electromagnetic energy into something that we can actually sense. Though we technically have two structures that bend light entering our eyes (the cornea and lens), the lens is the only structure that can change its shape for focusing purposes.

49. According to the trichromatic (Young-Helmholtz) theory, we perceive color by
*A. the relative levels of activity by three types of cones.
B. different velocities of impulses by each receptor in the retina.
C. different frequencies of impulses by each receptor in the retina.

D. a red-green system and a yellow-blue system.
% Correct: 83.62%
Comments: The trichromatic theory was introduced by Young and Helmholtz long before they could actually verify their theory. In it, they proposed that much of our color vision could result from only a small collection of different types cells within our eyes. Their theory suggested that we might have cells that are sensitive to just a small electromagnetic frequency bandwidth. Specifically, they said that we might have three types of cells in our eyes that are sensitive to their own bandwidths. Later research on cones and color deficiencies have proven the theory to be correct—but other studies have suggested that more is needed in our understanding of how we perceive color.

50. Size constancy depends judging the distances of objects. If we misjudge distances, what do we experience?
*A. optical illusions
B. opponent processes
C. negative afterimages
D. retinal disparity
% Correct: 78.26%
Comments: This was an odd question on second glance. Though we did discuss the fact that optical illusions come from misperceptions of stimuli, it still came across as awkward on second look. Fortunately, none of the other answers in this question are even remotely correct. All of the terms relate to vision, but have nothing to do with the topic of size constancy.