

## Fall 2014 Exam 1 Answer Key

1. Early psychologists like E. R. Hilgard spoke of studying mental processes by breaking up research into three sections. Often they called these sections the trilogy of the mind. Which of the following areas of study was not a part of this trilogy of the mind?

- A. Cognition
- B. Motivation
- \*C. Behavior
- D. Emotion

Correct Proportion: 0.902654867256637

Though the study of behavior is often considered a critical aspect of psychologists in today's society—especially after the behaviorist movement—behavior was not actually a component of the trilogy of the mind. Cognition, motivation, and emotion were considered the three main aspects of the mind that needed to be examined in order to understand ourselves.

2. Of the following levels of explanation, which of the following would be considered the highest (broadest) approach to understanding the forces behind a person's behavior?

- A. chemical
- B. biophysical
- C. psychological
- \*D. sociocultural

Correct Proportion: 0.5

This question merely examined if students had reviewed the hierarchy of exploration covered by Dr Kihlstrom in the class lectures. In this portion of the lecture, Dr Kihlstrom indicated that scientists often assume that each approach holds value, allowing us to examine human behavior from a number of different perspectives, but they all answer the questions of human behavior in very different ways.

3. A reductionist studying psychology would make which of the following statements?

- A. "There is no reason to study anything other than the field of psychology when explaining human behavior."
- B. "Societies must be considered when attempting to explain a person's behaviors."
- C. "Human behavior is caused by an interaction of multiple levels of factors that can be examined within the field."
- \*D. "We should always strive to reduce the explanations for human behavior down to the biological or physics based causes if possible."

Correct Proportion: 0.868421052631579

The reductionist philosophy in psychology—or almost any science for that matter—is based on an attempt to break down the explanation for a phenomenon in the smallest form possible. There are many scientists that firmly believe in this philosophy, while others insist that this perspective cannot explain many aspects of psychology. In this philosophy, there is a large stress on either biology, or even physics in an attempt to explain many phenomena.

4. The philosophical position that every behavior has a cause is known as

- A. free will.
- \*B. determinism.
- C. hereditarianism.
- D. environmentalism.

Correct Proportion: 0.929824561403508

The debate over free will and determinism raged on for years amongst psychologists that were found in both the branches of developmental psychology and behaviorism. Though many psychologists now believe that our daily actions and our characteristics are a byproduct of both features, early determinists believed that all human behavior could be whittled down to a simple stimulus-response relationship. The struggle was merely in finding these two components.

5. "In a universe composed of matter and energy, why is there such a thing as consciousness?" This question relates most closely to the philosophical issue of

- A. nature and nurture
- B. free will and determinism
- C. ethics and consequences
- \*D. mind and brain

**Correct Proportion: 0.850877192982456**

This question epitomized the mind and brain debate that we still sometimes discuss today. Researchers and philosophers have attempted to determine through a variety of different modes of exploration if there is any way to either a) find the various aspect of the "mind" in the actions of our brain and nervous system, or b) prove conclusively that there is some aspect of the "mind" that operates independently of the brain and nervous system.

6. Which kind of psychologist is most concerned with how other people influence our behavior?

- A. cognitive psychologist
- B. evolutionary psychologist
- C. quantitative psychologist
- \*D. social psychologist

**Correct Proportion: 1.00**

Apparently this was a REALLY easy question. Though evolutionary, cognitive, and quantitative psychologists all COULD examine how our behavior is influenced by others, their goals are not usually centered on that topic. Explaining how others impact us is a primary goal of social psychologists.

7. What employment opportunity is available for people with only a bachelor's degree in psychology?

- A. They can set up an independent practice to provide psychotherapy.
- B. They usually work as psychotherapists under someone's supervision.
- C. Most get jobs doing psychological research.
- \*D. Most take jobs not closely related to psychology.

**Correct Proportion: 0.72807**

Alas, this is the sad truth about the field. Though psychology is one of the most popular majors, many students do not go into a profession related to psychology after graduating with psychology as a major or minor. Most people that practice something specifically related to the field have earned at least a Masters degree, Psy D, or PhD in one of the branches of psychology.

8. \_\_\_\_\_ are clusters of neurons found in the brain. \_\_\_\_\_ are clusters of neurons found outside of the structures of the central nervous system.

- A. Nerves; Nuclei
- \*B. Nuclei; Nerves
- C. Peripherals; Centrals
- D. Centrals; Peripherals

**Correct Proportion: 0.654867256637168**

This was a definition question. In particular, it dealt with the terms we use to discuss the collections of neurons—the key cells of our nervous system—that are found within our central and peripheral nervous systems. Though the terms “centrals” and “peripherals” might have looked appealing, we don’t use those terms to describe these two types of neuron clusters.

9. Neurons that travel from the brain to the body are called \_\_\_\_\_ neurons.

- A. afferent
- \*B. efferent
- C. inter
- D. pathway

**Correct Proportion: 0.8333333333333333**

This question required knowledge of general terminology that was covered when discussing the reflex arc. This model of this reflex arc was meant to provide a simplified explanation for how our sensory and motor system worked. In the arc, our afferent neurons are activated by an outside stimulus. They communicate with an interneuron. This interneuron passes that information to an efferent neuron, which is then responsible for the response to that stimulus. Though this arc can actually explain very basic reflexes, it is often just used as a model to explain many complex interactions between the environment, our minds, and the body.

10. The depolarization of a neuron occurs because of the exchange of \_\_\_\_\_ along the axon.

- A. dendritic activity
- \*B. ions
- C. neurotransmitters
- D. glia cells

**Correct Proportion: 0.824561403508771**

Dendrites are not located along the axon of a neuron. Neurotransmitters are released during an action potential in a synapse, the space between two neurons. Glia cells are cells that help support the neurons of our nervous system, but are in no way exchanged along an axon. The particles that are exchanged along the axon during the action potential are primarily sodium and potassium ions.

11. Which lobe of the cerebral cortex includes the motor cortex, which controls fine movements?

- \*A. frontal
- B. temporal
- C. occipital
- D. parietal

**Correct Proportion: 0.885964912280701**

The occipital lobe is linked to vision. The parietal lobe is linked to our sense of touch (the primary somatosensory cortex). The temporal lobe is linked to a series of mental functions like language, mathematics, spatial reasoning, and artistic ability to name a few. The lobe of the brain that contains the primary motor cortex and other areas for fine motor movement is the frontal lobe.

12. The corpus callosum connects which two structures?

- A. the sensory areas of the cortex and the motor areas
- B. the intellectual areas of the cortex and the emotional areas
- \*C. the left and right hemispheres of the cortex
- D. the brain and the spinal cord

**Correct Proportion: 0.956140350877193**

The corpus callosum is a structure in the center of the cerebrum that looks like a series of intertwined rubber bands. It not only connects the left and right hemispheres of our brain at several junctures, but it also allows for coordination between these two structures.

13. The area of the brain most closely linked to memory is the \_\_\_\_\_.

- A. hypothalamus
- \*B. hippocampus
- C. thalamus
- D. diencephalon

**Correct Proportion: 0.929824561403508**

Though we have begun linking a number of different areas of the brain to the function of memory, the hippocampus is still considered to be the central hub for our neurons to store a large portion of our memories. Some neuroscientists might contend that there is a way to connect the other structures to different aspects of the memory process, but are in nowhere near as related to memory as the hippocampus.

14. The limbic system is a part of the \_\_\_\_\_.

- \*A. sub-cortical regions of the brain.
- B. hindbrain
- C. midbrain
- D. cerebellum.

**Correct Proportion: 0.745614035087719**

This was a fairly challenging question. To know the answer to this, one had to understand where the limbic system was and the name of the portions of the brain related to that section. Some portions of the limbic system are parts of the medial temporal lobe, while others are a part of the diencephalon—which is sometimes called the inner brain. We describe both of these areas as sub-cortical regions of the brain in neuroscience.

15. Though outdated, phrenology is seen by many psychologists as an early attempt at studying the brain through the doctrine of \_\_\_\_\_.

- A. interactionism
- \*B. modularity
- C. discrete functionality
- D. brain imaging

**Correct Proportion: 0.561403508771929**

I think this might have simply been a difficult question because of the wording. Interactionism is usually a term used to explain how human experience comes from a mixture of the human mind and the environment. Brain imaging is extremely new in the field if we compare it to our earliest attempts to study the brain. Discrete functionality, though an attractive looking term, was entirely made up. That leaves us with the correct answer for this question, modularity. This was the notion that each and every aspect of the mind could be traced back to a specific region of the brain—or at least the interaction of different regions of the brain.

16. The homunculus is used by neuroscientists to better explain how our \_\_\_\_\_ is/are linked to the brain.

- A. memory
- \*B. sensory and motor systems
- C. visual abilities

D. ability to regulate our emotions

**Correct Proportion: 0.903508771929824**

The homunculus, the extremely disfigured individual that you can find on database searches, represents the proportion of our neocortex that we dedicate to sensation (the primary somatosensory cortex) and motion (the primary motor cortex).

17. Within the lobes of the brain, folds called \_\_\_\_\_ develop in order to allow the surface area of or neocortex to cover significantly more area.

A. nerve endings

B. gyri

\*C. sulci

D. clusters of fat in the brain

**Correct Proportion: 0.570175438596491**

Though simply a definition question, many of you struggled with this one. Looking at the statistics, it appears that most of you narrowed the response down to gyri and sulci. About 33% of you guessed incorrectly in that dyad. Sulci are indeed the small folds in our brain that occur as a result of the expansion of the surface area of our neocortex. Gyri are the bulges that result from this expansion. Fissures, the last term related to this expansion, are the extremely deep grooves that develop. They are often the folds that we can use to identify the different lobes of the brain.

18. Bob suffered a stroke recently. After the stroke, he lost his ability to speak clearly. What concept in neuroscience could best explain his eventual ability to regain his language abilities as time passes?

A. the law of mass action

\*B. neuroplasticity

C. hemisphere neglect

D. the law of modularity

**Correct Proportion: 0.842105263157894**

Neuroplasticity is an amazing concept to behold for a neuroscientist. It is related to the amazing ability that our nervous system has to rewire itself in the event of cortical damage or developmental issues. It provides us with the opportunity to regain a mental function after losing it through damage or decay, without needing to regenerate neurons after they die or are destroyed. Though research has suggested that we have some degree of neuroplasticity throughout our lives, brains seem best equipped to reallocate their neural resources during our younger, more formative years.

19. Karl Lashley's work with cortical damage and his maze running rats (1933) showed evidence AGAINST the \_\_\_\_\_ when attempting to explain all of our mental functioning.

A. law of mass action

B. concept of neuroplasticity

C. concerns with hemisphere neglect

\*D. law of modularity

**Correct Proportion: 0.456140350877192**

Karl Lashley's controversial work where he took successive slices of the brains of his rats while monitoring their ability to run a maze provided neuroscientists with a challenging set of findings. They indicated that it wasn't that maze running was dedicated to one specific part of the brain (the law of modularity), but instead it was that maze running ability was directly linked to the overall proportion of the brain of a rat's that was still intact.

20. A researcher that is using gender as a variable—with males being represented as 0's, females being represented as 1's, and other gender identifications being associated with different numbers—is using a(n) \_\_\_\_\_ when studying gender.

- \*A. nominal
- B. interval
- C. ordinal
- D. ratio

**Correct Proportion: 0.736842105263157**

Though numbers are used in this example for the identification of the genders, any time that a researcher is comparing groups where order in the operational definition of variable is completely arbitrary, the researcher is dealing with a nominal variable.

21. The mean, median, and mode of variables are all types of \_\_\_\_\_.

- A. measures of variability
- B. measures of frequency
- \*C. measures of central tendency
- D. inferential statistics

**Correct Proportion: 0.807017543859649**

This was a definition question. Measures of central tendency (the mean, median, and mode) are all ways for researchers to determine the “middle” of a distribution of scores. The other concepts (except for measures of frequency—a made up term) are valuable to a researcher, but indicate very different things (like spread—measures of variability; and ability to apply a statistic of a sample to a population—inferential statistics).

22. Theresa is teaching the same class at two different times this semester. In one class, she acts mean. In the other, she treats the students with a large of amount of kindness. She is doing this to see how this treatment impacts the performance of her students. We would call the performance of her students in this experiment her \_\_\_\_\_.

- A. criterion variable
- B. predictor variable
- C. independent variable
- \*D. dependent variable

**Correct Proportion: 0.823008849557522**

Criterion and predictor variables both come from research where we find a relationship between two variables and then try to use one (predictor) to predict where the other will lie (criterion). They are not terms that we use for an experimental design like the one listed above. In an experimental design, the variable that we change to see if it impacts the other variable is called the independent variable. The variable that we examine to see if it has been impacted by the independent variable is called the dependent variable.

23. Rita is studying the relationship between age and levels of creativity. She finds a negative correlation ( $r$  is negative) when examining her subjects. What does this imply?

- A. age is independent of creativity
- \*B. increases in age are linked to a decrease in creativity
- C. increases in age are linked to an increase in creativity
- D. there is a third factor that must be causing the relationship between these variables

**Correct Proportion: 0.858407079646017**

Despite what intuition might push you conclude, very “negative” relationships in correlation based research does not indicate that there is no relationship between two variables. What it means, is that as one variable changes (going up or down), the other variable predictably changes in the opposite manner (going down or up).

24. Who was Clever Hans?

- A. a dog that seemed to speak in German.
- B. Clever Gretel's brother.
- \*C. a horse that seemed to do arithmetic.
- D. a psychic who was popular in the 1930s.

**Correct Proportion: 0.982456140350877**

This was a concept check question. Clever Hans was a horse that was touted to be able to do many amazing things, including being able to do arithmetic. In reality, Clever Hans was merely a very perceptive horse that was picking up on subtle social cues. We still discuss Clever Hans to indicate the need for psychologists to be parsimonious in their attempts to examine various topics in the field.

25. The behavior of a hiccup would be considered a(n) \_\_\_\_\_ by psychologists.

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

**Correct Proportion: 0.911504424778761**

Since a hiccup is an innate response (doesn't have to be learned) of the body that does not require conscious effort and only requires a small collection of muscles, we call the hiccup a reflex. The other behaviors listed above involve either more complex responses (taxis and instinct), or more involved interaction between the individual and the environment (learning).

26. The process of imprinting found in birds and potentially other species is a great example of a(n) \_\_\_\_\_.

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

**Correct Proportion: 0.771929824561403**

Since imprinting involves a complex mixture of different aspects of our nervous system, is inborn, and requires a physiological response to the environment around us—as well as not requiring prior exposure or conscious decision—we call imprinting an instinct. Reflexes and taxis are both simplified responses that cannot explain the complexity of the imprinting activity. And, since this behavior is innate (doesn't require experience to be displayed), we cannot call it a learned response.

27. In behaviorism, the type of a response that is said to best allow us to adapt to a changing environment was called a \_\_\_\_\_.

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

**Correct Proportion: 0.850877192982456**

The only term listed above that allows for adaptation is the learned response. All others are programs within us, and have no way of being altered or stopped once triggered—even if we wanted to stop them. Though those other responses are valuable to our existence, many psychologists believe that our ability to learn from our environment is what sets us apart from many other species.

28. Your clock makes a clicking sound just before the alarm goes off. Even though you didn't wake up to the clicking sound initially, now you do, due to classical conditioning. The loud alarm is a/an

- \*A. unconditioned stimulus.
- B. unconditioned response.
- C. conditioned stimulus.
- D. conditioned response.

**Correct Proportion: 0.561403508771929**

Since there was nothing that had to be learned to make a loud sound make you wake up, we would say that the relationship between the loud sound and waking up is an unconditional reflex. That would make the loud sound the unconditioned stimulus that is producing an unconditioned response of a waking up.

29. The procedure for producing extinction in classical conditioning is to present

- A. the conditioned stimulus, then the unconditioned stimulus.
- B. nothing.
- C. the unconditioned stimulus, followed by nothing.
- \*D. the conditioned stimulus, followed by nothing.

**Correct Proportion: 0.850877192982456**

In classical conditioning, forgetting occurs when a conditioned stimulus and unconditioned stimulus are no longer presented together. This causes the conditioned stimulus to revert back to being a neutral stimulus. In operant conditioning, extinction occurs when there is no longer any incentive (reinforcer) or consequence (punishment) that would change the rate of a behavior that was initially increased or decreased due to the aforementioned outcomes.

30. A dog is conditioned to salivate when it hears one sound but not another. This effect is called

- \*A. discrimination.
- B. spontaneous recovery.
- C. stimulus generalization.
- D. extinction.

**Correct Proportion: 0.850877192982456**

This question related to something called generalization gradients. It was a topic explored by behaviorists that were interested in determining if similar, but not identical, stimuli to a conditioned stimulus could produce identical conditioned responses. This question is indicating that the dog did NOT respond to the new sound the same way that it responded to the original sound. We would call this action “discrimination”.

31 What did Thorndike mean by the Law of Effect?

- A. Changes in an animal's level of motivation can alter its speed of learning.
- \*B. Responses that are followed by reinforcement become more probable.
- C. The easiest way to train an animal to do a difficult trick is to start with easier tricks.
- D. The rate of responding depends on the schedule of reinforcement.

**Correct Proportion: 0.894736842105263**

The law of effect, essentially the framework for the concept of operant conditioning, suggested that desirable consequences that followed a behavior led to that behavior occurring more frequently, while undesirable consequences that followed a behavior led to that behavior occurring less frequently. This seems rather obvious if you think about it, but it was very useful for studying the field of psychology through the lens of a behaviorist.

32. In operant conditioning, unlike classical conditioning,

A. individuals associate one event with another event that happens a long time later.

B. individuals change internal, automatic responses such as salivation.

C. the response strength depends on a stimulus associated with it.

\*D. the individual's behavior controls the delivery of food or other stimuli.

**Correct Proportion: 0.771929824561403**

Operant conditioning is sometimes called consequence learning because it focuses on how one learns to change their behaviors based on the consequences that follow each behavior. In that sense, the actor does have absolute control over their behaviors, and is merely adjusting them as a result of how the behaviors he or she elicits impacts the outcome of an event. The other responses are all related to the concept of classical conditioning, or are just random (answer A).

33. An event that can serve as a reinforcer only because of its previous association with other reinforcers is known as

\*A. a secondary reinforcer.

B. a primary reinforcer.

C. a conditioned stimulus.

D. an operant.

**Correct Proportion: 0.745614035087719**

This question related to the concept of higher order conditioning. In it, we see how one can begin to associate multiple consequences with each other, and in doing so, increase or decrease the rate of a behavior through things that aren't directly related to tangible reinforcers or punishers. An example of this would be when we start to link a good grade with things like candy, smiles, or hugs from our caregivers. Though the grade might not have any value to begin with, when we associate the grade with these good things, we value it in the same way that we value the other reinforcers.

34. You reward yourself with a snack every other time you finish reading a chapter in your text. This is an example of which type of schedule of reinforcement?

\*A. fixed ratio

B. variable ratio

C. fixed interval

D. variable interval

**Correct Proportion: 0.649122807017543**

This question is examining the topic of schedules of reinforcement—moments where a behavior is not rewarded continuously. Since the reinforcer is given on a basis of the number of responses, we call it a ratio scale reinforcer. Since the number of actions required to receive the reinforcer is set, we call it a fixed schedule. Put the two together and you get a fixed ratio schedule of reinforcement.

35. Researchers studying learning through an evolutionary perspective might argue that one species might be more capable of learning a particular type of connection in comparison to another species. We call this the

A. difference principle.

- B. evolutionary benefits effect.
- \*C. preparedness principle.
- D. genetic biasing effect.

**Correct Proportion: 0.69298245614035**

This question is merely referencing the definition of the preparedness principle. It was a concept introduced by learning researchers that discovered that learning did not happen at the same rate across different situations for various species. These other terms were merely made up.

36. Which form of classical conditioning pairs actually produces the opposite effect (an inhibited learned response) that Ivan Pavlov first found with his dogs when getting them to salivate to a bell?

- A. trace conditioning
- B. higher order conditioning
- \*C. backwards conditioning
- D. delay conditioning

**Correct Proportion: 0.848214285714285**

These versions of classical conditioning, all covered in the learning lecture, all explored alternate ways that classical conditioning pairs could be generated. Though all of these pairing techniques alter the rate and strength of learning, the only one that has shown to produce a reversed effect in several situations is backwards conditioning.

37. Edward Tolman, the psychologist that our current psychology building is named after, was famous for showing the importance of studying cognitive aspects of learning when he showed \_\_\_\_\_ in his rats that he had run mazes.

- A. learned helplessness
- \*B. latent learning
- C. the inhibition effect
- D. the generalization gradient

**Correct Proportion: 0.921052631578947**

The work of Tolman showed how learning could not always be measured in animals by examining immediately visible changes in behavior. In his experiments, he ran rats in a maze over and over again without a reward. They showed no increased efficiency in their maze running over time. But these same rats, when they began receiving a reward for running the maze efficiently, suddenly revealed in their behavior that they actually had learned the maze. We called this effect latent learning.

38. In her research on fear of snakes in Rhesus monkeys (in different environments with other monkeys), Susan Mineka found (1984) that \_\_\_\_\_ is critical when examining the concept of learning (at least in primates and other complex organisms).

- \*A. vicarious learning
- B. delayed responses
- C. genetic predispositions
- D. imprinting

**Correct Proportion: 0.771929824561403**

Mineka's research revealed that many changes in behavior can occur through learning that doesn't involve individual exposure to a stimulus or environment. Namely, she revealed that monkeys could learn to fear a snake just by watching another monkey display a fear of snakes. This form of learning is called vicarious learning.

39. When describing the way we interact with the world around us, the process of converting details from stimuli in our internal or external environment in order to generate a neural signal that our brain can use is called \_\_\_\_\_.

- \*A. sensation
- B. perception
- C. transition
- D. transduction

**Correct Proportion: 0.219298245614035**

This was apparently a poorly designed question. The correct answer for this question was sensation. However, the majority of the class answered transduction. Transduction is the process of transporting information from one area of our body to another. It plays a role in human experience, much like perception does, but it doesn't match the definition above. However, since so many students got this question wrong, I deemed this question "invalid" and everyone was given credit for the question.

40. Most of our receptor organs, except for our nose, send information first to our \_\_\_\_\_, before sending information to the cerebral cortex.

- A. pituitary gland
- B. cerebellum
- \*C. thalamus
- D. corpus callosum

**Correct Proportion: 0.8333333333333333**

This question relates to one of the more interesting facts about our nervous system that has intrigued neuropsychologists and neuroscientists for decades. Our thalamus does indeed appear to be our filter for all of our sensory systems except for smell. We have come to conclude that this pathway might help us better filter information coming in from all of our senses, allowing us to both block unimportant details from our conscious experience and also quickly switch from one sensory medium to another if necessary.

41. If you want to see something in detail you focus it on the

- \*A. fovea.
- B. cornea.
- C. periphery.
- D. iris.

**Correct Proportion: 0.81578947368421**

The fovea is the area of our retina that is located near the center of the back of our eyes. This area contains a large percentage of our cones, which are cells critical to the detection of color and fine details. Rods, which are located throughout the retina, can also help us with visual processing, but they are not very good with processing fine detail and cannot process colors.

42. Which of the following colors is NOT a part of the trichromatic theory of color vision?

- \*A. yellow
- B. green
- C. red
- D. blue

**Correct Proportion: 0.894736842105263**

This was a question that was referencing how we are able to differentiate between the different colors in our visual world. The trichromatic theory—which originally started as a theory—has now been linked to the activity of our cones in the fovea. We now know that our cones come in three forms. Some are

sensitive to the color of green, others to red, and the final set are sensitive to the color of blue. The ratio of the activity of our different cones located in different places along our fovea allow us to determine the color of the stimuli in our environment.

43. Our ability to distinguish one high-frequency sound from another—for example, 8000 Hz from 9000 Hz—depends on

- \*A. which part of the basilar membrane has hair cells with the greatest activity.
- B. the frequency of action potentials produced by each axon in the auditory nerve.
- C. differences in response between cells in the left ear and cells in the right ear.
- D. differences in the velocity of individual action potentials of the auditory nerve.

**Correct Proportion: 0.657894736842105**

This question references the ability for our ears to convert the changes in air pressure in our environment into a neural signal that our brain can process. Though the frequency of air pressure alters the reaction of many things in the structure of our ear--the vibration frequency of the ear drum, the rates of movement of the ossicles, and the movement of the fluid in our cochlea—our nervous system doesn't have the ability to detect sound until our basilar membrane, the flap of skin that is connected to hair-like follicles, moves. This basilar membrane can tell us about amplitude by how much it is moved by the sound waves, and frequency by the different spots on the membrane being activated as a result of variations in frequency of the sound waves. Detection of frequency is not about activation patterns, just activation locations.

44. What causes a phantom limb sensation in an amputated limb?

- \*A. rewiring of the cerebral cortex
- B. irritation at the point of the amputation
- C. psychological conflict and depression
- D. backward messages from the tip of an axon toward the cell body

**Correct Proportion: 0.622807017543859**

Phantom limb experiences are when individuals feel some sense of touch (pain, itch, warmth, etc.) on a body part that no longer is intact. This experience has been linked to the structures of the cerebral cortex (brain) that were originally responsible for processing information from the nerves located in the body part that was lost. We have seen that re-wiring and random responses of that area seem to trigger these phantom limb sensations. This provides us with very concrete proof that our processing of our senses occurs in the brain, not the body.

45. Reese just had a nightmare and has become extremely prone to hearing every sound outside of his bedroom as an indication of a person moving around—something that is almost always not the case. This would suggest that we can say that Reese has a \_\_\_\_\_ of signal detection during this event.

- A. high sensitivity
- B. low sensitivity
- \*C. liberal bias
- D. conservative bias

**Correct Proportion: 0.464912280701754**

Though the term “liberal bias” admittedly feels like it shouldn't work here, this is the term that we use to describe when individuals have a very high hit and false alarm rate when attempting to detect a stimulus. Review the information on the sensory detection theory to learn more about the different ways that we can respond to stimuli that are present, not present, and right at our threshold of detection.

46. To show that subliminal processing has occurred during a sensory test, we would hope that the \_\_\_\_\_ are greater than the \_\_\_\_\_.

- \*A. hits; false alarms
- B. hits; misses
- C. misses; hits
- D. false alarms; misses

**Correct Proportion: 0.539823008849557**

In sensory detection research, a “hit” occurs when someone indicates that they perceived a stimulus when the stimulus was present. A “miss” occurs when someone does not indicate that they perceived a stimulus while the stimulus was present. A “false alarm” occurs when someone indicates that they perceived a stimulus when the stimulus was NOT present. To determine detection of information right at our threshold, researchers are looking to find people identifying a stimulus when it is there (hits) more often than they identify it when it is not (false alarms).

47. 3-D movies involve watching films with a pair glasses that filter two different images to your respective eyes. This indicates that these movies are using the cue of \_\_\_\_\_ to trick the brain into perceiving depth.

- A. convergence
- \*B. retinal disparity
- C. accommodation
- D. retinal collaboration

**Correct Proportion: 0.719298245614035**

This was a question about binocular cues that allow us determine depth and size. This specific cue was covered in lecture and in the readings. When we’re using the slightly varying images that hit both of our eyes to determine depth and distance, we’re using the binocular cue of retinal disparity. Convergence, the only other term that is also a binocular cue, involves using how much our eyes need to move to focus on an object. This usually only works for things that are fairly close to our face.

48. The discussion of binocular and monocular cues for interpreting depth and movement in vision were examples of the \_\_\_\_\_ view of perception.

- \*A. ecological
- B. constructivist
- C. interactionist
- D. cumulative

**Correct Proportion: 0.610619469026548**

This question referenced the section where Dr Kihlstrom was discussing the debate between perceptual psychologists that held the ecological and the constructivist views of perception. People that hold the ecological view believe that everything we perceive can be explained through the properties of what we are perceiving. People that hold the constructivist view believe that we need to consider both our expectations, interpretations, AND the properties of what we are perceiving to fully understand perception. The binocular and monocular cues were both examples of how the ecological view could explain some aspects of perception.

49. Gestaltist would be considered huge advocates of the \_\_\_\_\_ view of perception.

- A. ecological
- \*B. constructivist
- C. interactionist
- D. cumulative

**Correct Proportion: 0.654867256637168**

This question dealt with the topic above. Since Gestaltists believed that the world we perceive is greater than (or simply unequal to) the sum of all of its parts, they firmly believed in the constructivist view. Their work centered on tricks that our minds did to better understand the information presented to us.

50. Renee looks at her cat on the floor at the other end of her dorm room. After looking at the cat, the cat comes running over to her. Despite the fact that the image of the cat hitting Renee's eye is different, she sees her cat as being the exact same size. This ability to perceive size constancy is a big example of how \_\_\_\_\_ helps us during the process of perception.

- \*A. top-down processing
- B. interactive processing
- C. bottom up processing
- D. consistency processing

**Correct Proportion: 0.566371681415929**

This question indicates the end result of the constructivist view. Namely, it references the fact that our expectations of what we perceive (the top) has an impact on how we process the stimuli that we are sensing (the bottom). Since the mind is impacting our perception of the stimuli, we call this top-down processing. Researchers that look at how our mind makes sense of things by assessing details of the stimuli that we are perceiving study what we call bottom-up processing. Both are critical topics to explore when trying to fully understand the concept of perception.