ITCP Assignment Explanation

Week 0

1. The statement is true because the experimental method is designed to establish cause-and-effect relationships between variables. This is achieved by manipulating one variable (the independent variable) and observing the effect on another variable (the dependent variable) while keeping all other variables constant.

2. The statement is false because it is actually easier to recognize the letter "X" presented on its own than within a word. This is because when presented in isolation, the letter "X" has a unique shape that makes it easier to identify compared to when it is part of a larger word.

3. The correct answer is b) top down processing. This is because top-down processing refers to the use of prior knowledge, expectations, and context to interpret sensory information. In this case, the prior knowledge of the brand name "Honda" influenced the interpretation of the incomplete information ("—nda") to arrive at the correct answer.

4. The optimal method for improving the accuracy of eyewitness testimony is c) cognitive interview. This method involves techniques such as open-ended questions, asking the witness to recall the event from different perspectives, and encouraging the use of mental imagery to enhance memory recall.

5. The correct answer is a) primacy effect. This effect refers to the tendency to remember the first items in a list better than the middle or last items. In this case, Ramu remembered the initial instructions better than the subsequent ones.

6. The belief that most of our abilities and tendencies are with us from birth is known as nativism. This view emphasizes the role of innate factors such as genetics and biology in shaping human behavior and development.

7. Noam Chomsky revolutionized the field of linguistics and showed how behaviorism could not adequately explain language. He argued that humans possess an innate ability to learn and use language, which is not solely determined by environmental factors and reinforcement.

8. The cognitive process being illustrated in this scenario is recognition, which refers to the ability to identify previously encountered stimuli based on familiarity.

9. The belief that psychological phenomena cannot be reduced to simple elements but must be studied in their entirety is central to the school known as Gestalt psychology. This approach emphasizes the importance of studying perceptual and cognitive processes as holistic and integrated wholes.

10. A body of knowledge structured according to what its proponents consider important, which guides research topics and research methods, is called a paradigm. A paradigm is a framework that provides a shared understanding of a particular subject matter and shapes how researchers approach and study it.

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Week 1

1. The correct answer for the first question is "cognitive revolution". This is because during the cognitive revolution in psychology, which occurred in the 1950s and 1960s, psychologists rejected the behaviorist approach that dominated psychology at the time. Instead, they believed that mental events, such as perception, attention, and memory, were important and could be studied using scientific methods. This marked a major shift in psychology, leading to the development of cognitive psychology as a discipline.

2. The correct answer for the second question is "networks of connections among simple processing units". The connectionist approach to cognition is based on the idea that mental processes, such as memory and learning, can be explained by networks of simple processing units called neurons. These neurons are connected to each other, and when they activate together, they form a representation of a concept or idea.

3. The correct answer for the third question is "localization of function". This concept is based on the idea that different cognitive processes are located in specific regions of the brain. For example, language processing is thought to be primarily located in the left hemisphere of the brain.

4. The correct answer for the fourth question is "case studies". This research methodology involves intensive analysis of a single individual or group of individuals, often in a real-world setting. Case studies are useful for exploring complex phenomena in detail, but they are limited in their generalizability to larger populations.

5. The correct answer for the fifth question is "human beings can only do so many things at once". The term "limited capacity processors" refers to the idea that human cognitive processing is limited in terms of the amount of information that can be processed at any given time. This limitation can affect performance on complex tasks that require multiple cognitive processes to be performed simultaneously.

6. The correct answer for the sixth question is "behaviorism". This school of psychology emphasized the importance of observable behavior in studying human and animal behavior, and rejected the study of mental processes as subjective and unscientific.

7. The correct answer for the seventh question is "representationalist". This approach to cognition sees the mind as a computer that processes information through a series of representations of the external world. This model has been used to explain a variety of cognitive phenomena, including perception, memory, and language processing.

8. The correct answer for the eighth question is "type of memory errors". Cognitive researchers use a variety of methods to measure mental processing, including reaction times, brain imaging techniques, and memory errors. The type of memory errors that occur can provide insights into the underlying cognitive processes involved in memory retrieval.

9. The correct answer for the ninth question is "empiricism". This philosophical position asserts that all knowledge comes from sensory experience and observation, rather than innate ideas or abilities.

10. The correct answer for the tenth question is "structuralism". This school of psychology aimed to break down mental processes into their simplest components, such as sensations and perceptions, in order to understand how they combine to form complex experiences.

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Week 2

1. The correct answer is "prototype matching." This model of perception proposes that a percept is compared to idealized representations (prototypes) in memory of every class of information, and matched to the one it most closely resembles. For example, when we see a bird, we compare it to our mental representation of a bird prototype and categorize it as such.

2. The correct answer is "Prägnanz." This principle states that our perception tends to organize sensory stimuli into the simplest and most stable form possible. For example, we tend to perceive a set of circles as a single unit (a circle) rather than as separate parts.

3. The correct answer is "good continuation." This principle states that elements that appear to follow in the same direction tend to be grouped together. For example, we perceive an airplane as continuing along its flight path even when it disappears from our view because we assume it will continue on its trajectory.

4. The correct answer is "the retinal image." This phenomenon is known as size constancy and occurs because objects that are closer to us project larger images onto our retinas, even though they may be the same size as objects farther away.

5. The correct answer is "visual and auditory." These are the two most extensively studied senses when it comes to perception.

6. The correct answer is "bottom-up processing." This process begins with small bits of information gathered from the environment and puts them together in various ways to form a percept. This is the opposite of top-down processing, which starts with preexisting knowledge and expectations.

7. The correct answer is "sensory system." The sensory system processes the sensations coming into each sense organ, allowing us to understand and interpret the sensations we receive. The brain plays a role in processing this information but is not solely responsible for it.

8. The correct answer is "affordances." Affordances refer to the possibilities for action that an object or environment offers to a perceiver. When making a decision, we weigh the affordances of each choice before choosing.

9. The correct answer is "figure-ground organization." This process involves segregating a whole display into objects and background. This can occur through various cues, such as contrast, size, and position.

10. The correct answer is "template matching." This theory proposes that a percept is matched to an idealized representation (template) in memory. This can be compared to a stencil, where an object is matched to a preexisting shape.

Week 3

1. Broadbent's filter theory of attention proposes that an attentional filter allows some information to pass through and blocks out the rest. The filter is based on the physical characteristic of the message, such as its location. This means that if a message is presented in a certain location, it has a higher chance of passing through the filter and being attended to.

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2. Treisman's feature integration theory argues that we perceive objects in two distinct stages. First, we detect features such as color and shape, and then we integrate these features into a coherent object representation. This means that attention is required for the integration stage, but not for the detection stage. Additionally, we have a flexible capacity for processing information, meaning that we can attend to a variable number of objects depending on the complexity of the task.

3. Automatic processing occurs when a task becomes so well-learned that it can be performed without conscious attention. In this case, an experienced skier beginning a route she has skied five times before would be most likely to engage in automatic processing.

4. The concept of attention capture explains that we automatically notice an object, sound, or scent that differs from the rest. This means that attention is captured by salient or novel stimuli in the environment, even if we are not intentionally trying to attend to them.

5. Stroop interference is a phenomenon in which the automatic processing of reading interferes with the controlled processing of naming colors. This interference can be reduced by giving participants more practice at naming colors, which strengthens the controlled processing of the task.

6. The attention hypothesis of automatization suggests that attention is needed during the practice phase of a task, and that attention determines both what is learned during practice and what will be remembered from the practice. This means that attention is crucial for the learning and retention of new skills.

7. Noticing a red flower among a field of purple flowers illustrates the attention capture phenomenon. The salient color of the red flower automatically captures attention, even if the observer is not intentionally trying to attend to it.

8. Walking is to automatic processing as learning a new language is to controlled processing. Walking is a well-learned task that can be performed without conscious attention, while learning a new language requires conscious attention and effort.

9. According to Kahneman's model of attention, the allocation of mental resources is affected by enduring dispositions. These are preferences for certain kinds of tasks over others, which influence the amount of attentional resources allocated to the task.

10. According to the schema theory of attention, we never actually acquire unattended material at all. This means that we only attend to information that is relevant to our current goals or schemas, and that unattended information is never fully processed or remembered.

Week 4

1. The recency effect is thought to result from participants' use of either sensory or short-term memory:

The recency effect refers to the phenomenon in which people remember items that are presented to them most recently better than items that were presented earlier. The answer to the question correctly states that the recency effect can be attributed to either sensory or short-term memory because both of these memory systems are involved in processing and retaining information that has been presented recently.

2. The fact that the size of the memory set does affect search time in short-term memory suggests that search is a serial process:

This question is referring to the process of searching through information in short-term memory. The answer states that because the size of the memory set affects search time, the search process is likely to be serial, meaning that information is searched for one item at a time. This is because if search were parallel, meaning that multiple items were searched for simultaneously, the size of the memory set would not affect search time.

3. The phonological loop is to sounds as the visuospatial sketchpad is to images:

The phonological loop and the visuospatial sketchpad are both components of working memory, which is the system responsible for holding and manipulating information for short periods of time. The answer correctly states that the phonological loop is specialized for processing sounds, while the visuospatial sketchpad is specialized for processing visual images.

4. This process best illustrates a partial-report method:

The question describes a situation in which participants are asked to report only one specific line of a larger array of letters. This is an example of a partial-report method, which involves asking participants to report only a portion of the information that they have been presented with, rather than the entire set.

5. Higher working memory capacity means that an individual is better able to control his/her cognitive focus:

Working memory capacity refers to the amount of information that an individual can hold and manipulate in their working memory system. The answer correctly states that individuals with higher working memory capacity are better able to control their cognitive focus, meaning that they can selectively attend to relevant information while ignoring irrelevant information.

6. The main distinction between "short-term memory" and "working memory" hinges on the emphasis on static structure vs. active processing:

Short-term memory and working memory are both memory systems that are responsible for holding and manipulating information for short periods of time. The answer correctly states that the main difference between the two systems is that short-term memory is more focused on the storage of information, while working memory places greater emphasis on the active processing and manipulation of information.

7. The correct order of memory formation is encoding, storage, retrieval:

Memory formation involves the process of acquiring new information, storing it, and then later retrieving it when needed. The answer correctly lists the order of these processes as encoding, storage, and retrieval.

8. Long-term memory storage appears to be unlimited:

Long-term memory is the memory system responsible for storing information for long periods of time, potentially for a lifetime. The answer correctly states that the capacity of long-term memory appears to be unlimited, meaning that we are capable of storing an immense amount of information over the course of our lifetime.

9. Unattended information is stored briefly in sensory memory:

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Sensory memory is the memory system responsible for briefly storing sensory information, such as visual or auditory information, for a brief period of time before it is either transferred to short-term memory or forgotten. The answer correctly states that unattended information is stored briefly in sensory memory before it is either attended to or forgotten.

10. The phenomenon in which words from the beginning of a list are more likely to be recalled than words from the middle of the list is known as the primacy effect:

The primacy effect refers to the phenomenon in which people are more likely to remember initial part.

Week 5

1. Ebbinghaus's forgetting curve demonstrates that forgetting is rapid at first and then levels off. Ebbinghaus conducted experiments on himself to study how much information he could retain over time. He found that forgetting occurs rapidly within the first few hours or days after learning, but then slows down and levels off over time.

2. A retrieval cue will be most effective when it is highly distinctive or unusual, according to the principle of cue overload. When we try to retrieve information from memory, we use retrieval cues - hints or reminders that can help us access the information we are looking for. According to the principle of cue overload, a retrieval cue will be most effective when it is highly distinctive or unusual, as it will help to differentiate the target information from other memories that might interfere with its recall.

3. You meant to visit the campus bookstore before it closed, but you do not remember that you wanted to do that until two hours after closing time. This scenario is a failure of prospective memory. Prospective memory refers to our ability to remember to perform an action in the future, such as remembering to take medication or attend an appointment. In this case, the failure to remember to visit the campus bookstore before it closed is an example of a failure of prospective memory.

4. Processing the meaning of information is known as elaborative encoding. Elaborative encoding is a type of encoding that involves processing the meaning of information and linking it to other knowledge in long-term memory. This type of processing can lead to better memory retention compared to shallow processing, such as simply repeating the information or focusing on its physical features.

5. Memories that are consciously recollected are called explicit memories. Explicit memories are also known as declarative memories, as they involve the conscious recollection of information that can be expressed in words or symbols. Examples of explicit memories include recalling the name of a childhood friend, or remembering a specific event that occurred in the past.

6. Bartlett's research on the retelling of stories shows that over time, the same person's recall becomes more distorted. Bartlett conducted experiments in which participants were asked to read and then recall stories from other cultures that were unfamiliar to them. He found that over time, participants' recall of the stories became more distorted and influenced by their own cultural biases and expectations.

7. A retrieval cue will be effective if and only if it reinstates the context of the to-be-remembered event, according to the principle of encoding specificity. The principle of encoding specificity states

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that the effectiveness of a retrieval cue depends on how well it matches the context in which the information was encoded. Therefore, a retrieval cue will be most effective if it reinstates the context of the to-be-remembered event.

8. A neural process by which memories are strengthened and more permanently stored in the brain is consolidation. Consolidation is the process by which memories are transferred from short-term to long-term memory, and are strengthened and more permanently stored in the brain. This process is thought to involve the reactivation and strengthening of neural connections between brain regions involved in the encoding and retrieval of memories.

9. Proactive interference refers to the fact that previously learned material can disrupt the learning of new material. Proactive interference occurs when previously learned information interferes with the learning and recall of new information. This can occur because the previously learned information has become strongly associated with particular cues, making it harder to retrieve new information that shares those cues.

10. Your memory for how to ride a bicycle is an example of procedural memory. Procedural memory is a type of implicit memory that involves the unconscious learning of skills and procedures, such as how to ride a bicycle or tie a shoelace. These memories are typically difficult to put into words

Week 6

1. Properties and facts are stored at the highest level possible, according to the principle of:

Answer: cognitive economy

Explanation: Cognitive economy is the principle that the human mind organizes and stores information in the most efficient and economical way possible. This means that properties and facts are stored at the highest level possible to reduce the cognitive load and make it easier for the brain to process and retrieve information.

2. In Anderson's ACT model, that part of declarative memory that is very highly activated at any particular moment is called:

Answer: working memory

Explanation: In Anderson's Adaptive Control of Thought (ACT) model, working memory is a component of declarative memory that holds the information that is currently being used and is very highly activated at any particular moment. It is responsible for temporarily holding and manipulating information during cognitive tasks.

3. A result in which more common members of a category show a processing advantage is known as the _____.

Answer: typicality effect

Explanation: The typicality effect refers to the phenomenon that more common members of a category are processed faster and more accurately than less common members of the same category.

4. Which of the following is an example of a less typical member of the category of "furniture"?

Answer: lamp

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Explanation: A lamp is a less typical member of the category of "furniture" because it is not commonly used for sitting or storing things, which are typical functions of furniture.

5. The word superiority effect is related to the idea of:

Answer: spreading activation

Explanation: The word superiority effect refers to the finding that people are faster and more accurate at recognizing letters and words when they are presented in the context of other letters and words. This effect is related to spreading activation, which is the process by which activation spreads from one node in a network to other nodes that are connected to it.

6. Contrary to the predictions of hierarchical models, Rips, Shoben, and Smith have found that people can verify the statement "A pig is an animal":

Answer: faster than "A pig is a mammal."

Explanation: Rips, Shoben, and Smith found that people can verify the statement "A pig is an animal" faster than the statement "A pig is a mammal," which is contrary to the predictions of hierarchical models that suggest that verifying a more general category should take longer than verifying a more specific category.

7. According to Anderson, procedural memory represents information as:

Answer: production rules.

Explanation: According to Anderson's ACT model, procedural memory represents information as production rules, which are if-then statements that specify how to perform a particular action or task.

8. Which of these examples is the poorest fit for the concept of a game?

Answer: a spinning top

Explanation: A spinning top is the poorest fit for the concept of a game because it is not typically thought of as a game, but rather as a toy or a device for creating visual effects.

9. Collins and Loftus's spreading activation theory differs from the hierarchical network theory in that:

Answer: it dispenses with the idea of cognitive economy

Explanation: Collins and Loftus's spreading activation theory differs from the hierarchical network theory in that it dispenses with the idea of cognitive economy, which is the principle that the human mind organizes and stores information in the most efficient and economical way possible.

10. A schema for a routine event, such as going to the dentist, is called a:

Answer: script.

Explanation: A script is a schema for a routine event, such as going to the dentist or ordering food at a restaurant. It specifies the typical sequence of actions and events that occur during the event and provides a mental framework for organizing and interpreting the experience.

Week 7

1. The prototype of a category is a(n) _____ of the important features of its members.

- Answer: weighted average

- Explanation: A prototype is a mental representation of an average or typical member of a category that includes the most common and important features shared by members of that category. It is not a detailed list or discussion of features or an exemplar, which is a specific member of a category.

2. A _____ is a mental representation of some object, event, or pattern.

- Answer: concept

- Explanation: A concept is a mental representation of a category or class of objects, ideas, or events that share common features or characteristics. Concepts help us organize and understand the world around us.

3. Implicit learning is also known as:

- Answer: nonanalytic concept formation.

- Explanation: Implicit learning is the acquisition of knowledge or skills that occurs without conscious awareness or deliberate effort. Nonanalytic concept formation is the process by which we acquire knowledge of complex concepts or rules implicitly, without being able to articulate or describe them explicitly.

4. The _____ view of concepts argues that concepts include representations of at least some individual instances and not only abstract summaries.

- Answer: both exemplar and schemata

- Explanation: The exemplar view of concepts proposes that concepts are represented by specific examples, or exemplars, that are stored in memory. The schema view of concepts suggests that concepts are represented by abstract summaries or mental frameworks that are derived from our experiences with multiple examples. Both of these views propose that individual instances play a role in our understanding of concepts.

5. Which of the following factors does NOT encourage a person to store information about particular exemplars, according to Brooks?

- Answer: We know in advance how we will be called upon to use our newly acquired information later.

- Explanation: Brooks' research suggested that people are more likely to remember specific exemplars when the task requires them to learn information that distinguishes between individual instances, when the relevant dimensions of the stimuli are not obvious, or when instances can belong to many categories simultaneously. Knowing in advance how we will use the information later does not necessarily encourage us to remember specific exemplars.

6. Which of the following is true regarding schemata?

- Answer: Schemata can indicate relationships among various pieces of information

- Explanation: A schema is a mental framework or organized pattern of thought that represents our knowledge of a concept or situation. Schemata can help us organize and integrate new information

into our existing knowledge structures and can indicate relationships among various pieces of information.

7. The _____ view of concepts argues that a person uses his/her theories about the way the world works to justify the classification of instances in the same category.

- Answer: knowledge-based

- Explanation: The knowledge-based view of concepts proposes that our understanding of concepts is based on our knowledge and theories about how the world works. We use this knowledge to classify instances into categories based on our assumptions and expectations.

8. Which of the following is NOT TRUE of the classical view of concepts?

- Answer: It accurately predicts the typicality effect.

- Explanation: The classical view of concepts proposes that concepts are represented by a set of defining features that are necessary and sufficient for membership in a category. This view assumes that membership in a category is clear-cut and that all members are equally representative of the category. However, it does not accurately predict the typicality effect, which is the phenomenon in which some members of a category are considered more typical or central than others.

9. "Characteristic features" and "family resemblance" are important aspects of the _____ view of concepts.

- Answer: prototype

- Explanation: The prototype view of concepts proposes that concepts are represented by a prototype, which is an average or typical member of a category that includes the most common

10. Which of the following is a good example of a superordinate level of categorization?

Answer: Fruit

Explanation: In a hierarchical organization of categories, superordinate levels are broader and more general than the subordinate levels. In this case, "Fruit" is the most general or superordinate category, while "apple" and "banana" are subordinate categories, and "Fuji apple" is a specific example or instance of the subordinate category "apple." Therefore, "Fruit" is the best example of a superordinate level of categorization among the given options.

Week 8

1. Several mnemonic devices, including the method of loci, the pegword method, and the method of interacting images, have in common their reliance on: verbal rehearsal, creating a story, visual imagery, connecting new information to well-known information. The correct answer is "connecting new information to well-known information." All these mnemonic devices rely on linking new information with previously known information to make it easier to remember.

2. When comparing people's speed at reasoning with abstract concepts (smarter-dumber), spatial concepts (above-below), and visual relationships (cleaner-dirtier), Knauff and Johnson found that _____ relationships had the slowest performance. The correct answer is "visual." The study found that people's performance was slower when reasoning with visual relationships than with abstract or spatial concepts.

3. When an experimenter gives subtle cues to participants about how to behave, we say that a(n) _____ has occurred. The correct answer is "experimenter-expectancy effect." This occurs when the experimenter's expectations about the outcome of the study influence the behavior of the participants.

4. Stephen Kosslyn believes that mental images are represented _____. The correct answer is "spatially." Kosslyn argues that mental images are not just propositions or verbal descriptions but also contain spatial information.

5. Paivio's _____ hypothesis argues that long-term memory contains two separate systems that represent information in verbal and visual forms, respectively. The correct answer is "dual code." This hypothesis proposes that information is stored in both verbal and visual codes, making it easier to remember.

6. Your mental map of your campus is probably: larger than reality, smaller than reality, more regular, with more straight lines and right angles, than reality, less regular, with fewer straight lines and right angles, than reality. The correct answer is "more regular, with more straight lines and right angles, than reality." Our mental maps tend to simplify and regularize complex environments to make them easier to remember and navigate.

7. Objects are usually easier to remember because they are _____, whereas concepts tend to be harder to remember because they are _____. The correct answer is "concrete; abstract." Concrete objects are easier to remember because they can be experienced through the senses, while abstract concepts are more difficult to remember because they lack sensory qualities.

8. You vividly remember the place and time you first heard that a favorite relative of yours was seriously ill. This is an example of a _____ memory. The correct answer is "flashbulb" memory. Flashbulb memories are vivid and long-lasting memories of emotionally significant events.

9. The relational-organizational hypothesis is supported by: the effectiveness of the method of loci, the fact that concrete words are recalled better than abstract words, the fact that noninteractive images do not facilitate recall whereas interactive images do facilitate recall, the effectiveness of the pegword method. The correct answer is "the fact that noninteractive images do not facilitate recall whereas interactive images do facilitate recall." This hypothesis proposes that organizing information into meaningful relationships and connections can improve memory recall.

10. A propositional representation is thought to be _____ in nature. The correct answer is "neither verbal nor visual." Propositional representations are thought to be abstract and non-sensory in nature, representing the meaning of a concept or idea without relying on sensory information.

Week 9

1. Infinite combinations of ideas can be expressed in language. In other words, language is:

The answer is "productive". Language is productive because it allows us to create an infinite number of novel sentences to express an infinite number of ideas. We can combine words and rules of grammar in new and creative ways to convey meaning.

2. Which of the following is an example of a directive speech act?

The answer is "Open the door". Directive speech acts are those that are intended to get the listener to do something. In this case, the speaker is directing the listener to open the door.

3. We notice ambiguities in sentences:

The answer is "in 'garden path' sentences". Ambiguities in sentences can occur for a variety of reasons, such as when words or phrases have multiple meanings or when the syntax of a sentence is unclear. "Garden path" sentences are a particular type of ambiguous sentence that are structured in a way that initially leads the reader down a wrong path of interpretation.

4. According to most experts in the field, what is the primary purpose of language?

The answer is "communication". The primary purpose of language is to communicate ideas, thoughts, and feelings between individuals.

5. Which of the following is NOT true of story grammars?

The answer is "We typically have better recall of stories that do not conform to expected story grammars, because they warrant more attention". Story grammars are frameworks that help us to understand and remember stories by identifying their underlying structure. They do not necessarily have variables that are filled in differently for different stories, but they do help identify units of a story and specify how these units relate to each other.

6. Did she say "many" or "men knee"? This type of ambiguity is referred to as:

The answer is "phonetic". Phonetic ambiguity occurs when two words sound alike but have different meanings.

7. Meaning is to _____ as grammar is to _____.

The answer is "semantics; syntax". Semantics is concerned with the meaning of language, while syntax is concerned with the structure and rules of language.

8. While sitting in class listening to your professor's lecture, a student sneezes. Miraculously, you still understand the point the professor was attempting to make. This illustrates _____.

The answer is "the phoneme restoration effect". The phoneme restoration effect occurs when listeners "fill in" missing or obscured speech sounds based on context and prior knowledge.

9. Fodor's modularity hypothesis proposes that:

The answer is "certain language processes operate independently of other cognitive processes such as memory and attention." Fodor's modularity hypothesis suggests that certain mental processes, including language processing, are modular and operate independently of other cognitive processes.

10. Speech acts in which the utterance itself is the action—such as "You're fired!"—are considered to be which type of speech act?

The answer is "declaration". Declarations are speech acts in which the utterance itself performs the action, such as when a judge declares a couple married or when an employer declares an employee fired.

Week 10

1. A(n) _____ problem has a clear goal, a small set of starting information, and rules about how to attain the goal.

The answer is "well-defined." This is because a well-defined problem has a clear and specific goal, a limited amount of information to start with, and a set of rules or steps that can be followed to achieve the goal.

2. The General Problem Solver (GPS) is a computer program that solves problems in crypt arithmetic and logic using:

The answer is "means-end analysis." This is because means-end analysis is a problem-solving strategy used by GPS that involves identifying the difference between the current state and the goal state and then making small steps toward bridging that gap.

3. Peter Wason gave participants the sequence "2, 4, 6" and asked them to determine the rule used to generate the sequence. His findings suggest that:

The answer is "people generate a rule, then look for information that could support it." This is because Wason's research showed that people tend to come up with a rule based on the information they have been given and then try to find evidence that supports that rule, rather than considering other possible rules and actively seeking out evidence that would disconfirm their initial hypotheses.

4. Functional _____ is focusing on how things are usually used, while ignoring other potential uses.

The answer is "fixedness." This is because functional fixedness refers to the tendency to view an object or situation only in terms of its typical or "fixed" use, rather than considering other possible uses or applications.

5. How we mentally represent a problem _____ finding the solution.

The answer is "can both help and hinder." This is because the way we mentally represent a problem can sometimes provide useful insights or facilitate problem-solving, but it can also sometimes lead us down unproductive or misleading paths.

6. Which of the following is an example of an ill-defined problem?

The answer is "putting together your schedule of classes for next semester." This is because an ill-defined problem is one that does not have a clear goal or a set of well-defined steps or rules to follow to achieve that goal. Putting together a schedule of classes is a complex and open-ended task that does not have a clear and specific endpoint.

7. When you adopt a certain framework or strategy for solving a series of problems, you may fail to see other, more efficient ways of solving some of the problems. This is referred to as:

The answer is "mental set." This is because mental set refers to the tendency to approach a problem in a particular way based on past experience or training, which can sometimes lead to overlooking other possible approaches or solutions.

8. The strategy of working backward is most effective when:

The answer is "the backward path is unique." This is because the working backward strategy involves starting with the desired outcome and working backwards to identify the steps needed to reach that outcome. This approach is most effective when there is only one possible sequence of steps that can lead to the desired outcome.

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9. The productive processes involved in the Gestalt approach include creating _____ of information structured to achieve particular goals.

The answer is "mental representations." This is because Gestalt psychology emphasizes the importance of understanding how people mentally represent information and how those mental representations can be structured and manipulated to achieve specific goals.

10. A prescribed problem-solving strategy that always leads to the correct solution in problems with a single correct solution is a(n) _____, while a problem-solving strategy that does not always lead to the correct solution is a(n) _____.

The answer is "algorithm; heuristic." The terms "algorithm" and "heuristic" refer to problem-solving strategies. An algorithm is a step-by-step procedure for solving a problem that always leads to the correct solution in problems with a single correct solution. In contrast, a heuristic is a problem-solving strategy that does not always lead to the correct solution but can often be useful in finding a solution.

Week 11

1. Fred's reasoning is an example of the fallacy of affirming the consequent. This fallacy occurs when someone assumes that because the consequent of a conditional statement is true, the antecedent must also be true. In this case, Fred is assuming that because someone with five letters in their name is a Glirple, anyone who is a Glirple must have five letters in their name. This is not necessarily true, as there could be other requirements to be a Glirple.

2. Conclusions that agree with one's previous beliefs are often judged as valid even when they are not. This is known as confirmation bias, and it can lead to errors in reasoning and judgment.

3. Manish would be most likely to use deductive reasoning, as this type of reasoning starts with general principles or premises and uses them to draw specific conclusions. Manish's preference for tried-and-true logic suggests that he would prefer deductive reasoning over other types of reasoning.

4. Participants in Wason's four-card task typically show understanding of modus ponens (the rule that if A implies B and A is true, then B must be true) but neglect modus tollens (the rule that if A implies B and B is false, then A must be false). In the task, participants are given four cards with a rule on one side and a set of conditions on the other side, and they are asked to determine which cards they need to flip over to test the rule.

5. Propositional statements are those that are either true or false. These statements are typically expressed in the form of a proposition or assertion that can be evaluated as either true or false.

6. The ease of reasoning about an analogy depends on all factors except for the reasoner's amount of training in formal reasoning procedures. The other factors that can affect the ease of reasoning about an analogy include the difficulty of comprehending the individual terms in the analogy, the reasoner's knowledge about the individual terms, and the difficulty of finding a relationship between the first two terms.

7. In the variation of the four-card task where participants are asked to test the rule "If a person is drinking a beer, then the person must be over 19 years old," most college students turn over the "beer" and "16 years old" cards. This is because they are testing the rule by looking for

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counterexamples - cases where the rule is violated. By flipping over the "beer" and "16 years old" cards, they can determine whether someone drinking a beer is under 19 years old and therefore a counterexample to the rule.

8. The statement "p Ú q" is true in three situations: when Mary and John both got A's, when Mary and John both got C's, and when Mary got an A and John got a C. The statement "p Ú q" means "Mary got an A on her exam or John got a C on his exam."

9. Patients with prefrontal cortex damage tend to show deficits in their inductive reasoning. Inductive reasoning involves using specific observations to make generalizations or predictions, and it is important for many everyday tasks such as problem-solving and decision-making.

10. An argument has deductive validity if it is impossible for the premises to be true and the conclusion false. In other words, if the premises are true, then the conclusion must also be true.

Week 12

1. Anita is blonde, extremely attractive, and lives in an expensive condo. If we judge the probability of Anita's being a model as quite high because she resembles our stereotype of a model, we are using the heuristic of representativeness. This heuristic involves judging the likelihood of an event based on how closely it resembles a typical example or stereotype. In this case, Anita fits our stereotype of a model, so we assume she is more likely to be a model.

2. In Kahneman and Tversky's prospect theory, they hypothesized that people tend to overweight low-probability outcomes and underweight high-probability outcomes. This means that people tend to give more weight to unlikely events and less weight to likely events when making decisions.

3. People overestimate the frequency of words beginning with the letter L, as compared to words that have L as the third letter, because of the heuristic of availability. This heuristic involves judging the likelihood of an event based on how easily it comes to mind. In this case, words beginning with L are more easily accessible in our memory than words with L as the third letter, leading us to overestimate their frequency.

4. Research on framing suggests that we treat losses more seriously than gains of an equivalent amount. This means that we are more averse to losing something than we are motivated to gain something of equal value.

5. Expected utility theory is usually regarded as a normative model of decision making. This means that it provides a framework for making rational decisions that maximize expected utility, or the expected value of an outcome multiplied by the probability of that outcome occurring.

6. The sunk cost effect occurs when we continue to invest resources into a decision because we have already invested resources into it, even if it is no longer rational to do so. In this case, the person has already invested time and effort into a problem and feels committed to continuing to solve it, even if it is no longer the best use of their time.

7. Multi-attribute utility theory (MAUT) is a normative model for integrating different dimensions and goals of a complex decision. It involves identifying the relevant attributes of a decision, weighting them based on their importance, and evaluating each option based on those attributes.

8. Recognition-primed decision-making is a model of decision making that suggests expert decision makers rely on their intuition and mental simulation to quickly and accurately evaluate options based on their past experiences and expertise.

9. The gambler's fallacy is the mistaken belief that previous independent events affect the probability of future independent events. In this case, the previous spins of the roulette wheel have no impact on the probability of the next spin landing on black or red.

10. The five phases of decision making, according to Galotti, are goal setting, information gathering, planning, implementing, and evaluating. Random choice is not one of the phases.

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