

## Learning

1. Pavlov presented the sound of a tuning fork as a stimulus and then gave the dog food. After a few repetitions, the dogs started to salivate in response to the sound of the tuning fork. At this stage of training, the sound of the tuning fork is a(n)
  - A. unconditioned stimulus
  - B. conditioned response
  - C. neutral stimulus
  - D. conditioned stimulus
2. To encourage her son to complete his homework on time, his mother tells him he won't be required to help with the after dinner dishes. This is an example of
  - A. negative reinforcement
  - B. positive reinforcement
  - C. shaping
  - D. negative punishment
3. To treat bedwetting in a child, a pad is placed at night that sounds an alarm when wet. After several weeks a full bladder wakes the child without the need for the alarm. This is an example of learning occurring through
  - A. positive punishment
  - B. negative reinforcement
  - C. classical conditioning
  - D. negative punishment
4. Rats in the first experimental group were allowed to roam a maze for several hours with absolutely no reinforcement. Then they learned to navigate the maze for a food reward. Compared to a second group of rats experiencing the maze for the first time, the rats in the first group were able to learn to navigate the maze for a food reward much more quickly. The difference between the two groups is an example of
  - A. positive reinforcement
  - B. latent learning
  - C. insight learning
  - D. backward conditioning
5. Which of the following is not an example of learning through operant conditioning?
  - A. a pidgeon turning in a circle to get food
  - B. a dog runs to the kitchen at the sound of a can-opener
  - C. a child learns the habit of lying to avoid punishment
  - D. after receiving an expensive speeding ticket a driver no longer habitually speeds
6. In a famous experiment, Garcia and Koelling showed that certain associations between conditioned and unconditioned stimulus were easier to form than others. For example, a loud noise could be more readily associated with a shock and fear response than water could be similarly associated. The experiment illustrated
  - A. higher-order conditioning
  - B. discrimination
  - C. biological preparedness
  - D. backward conditioning

7. Which of the following statements are true regarding reinforcement schedules in operant conditioning?
- I. Continuous reinforcement works best when teaching a new behavior
  - II. Variable schedules are more resistant to extinction
  - III. Ratio schedules tend to yield higher rates of response than interval schedules
  - IV. Variable schedules tend to yield more consistent rates of responding than fixed schedules
- A. II only  
B. I and II  
C. I, III and IV  
D. I, II, III and IV
8. Which of the following is an example of a primary reinforcer?
- A. applause after a musical performance  
B. a trip to McDonalds for a child's good behavior  
C. a salary increase for introducing efficiencies in the work-place  
D. a good grade on an essay assignment
9. The form of classical conditioning procedure in which the CS is presented a short time before the US is known as
- A. backward conditioning  
B. simultaneous conditioning  
C. temporal conditioning  
D. forward conditioning
10. Driving across Wyoming parents ask their children to be patient and they will stop in the next town for an ice cream treat. One hundred and fifty miles later, a sign showing a giant ice cream cone comes into view. In this context the sign of the ice cream cone is a(n)
- A. conditioned stimulus  
B. unconditioned stimulus  
C. discriminant stimulus  
D. secondary reinforcer
11. Ignoring a child's whining, a parent is attempting to
- A. punish behavior  
B. condition behavior  
C. reinforce behavior  
D. extinguish behavior
12. High levels of the neurotransmitter dopamine in the ventral tegmental area of the brains of dogs have been shown to decrease latent inhibition. A study would likely find that compared to a general population of dogs who have also been conditioned to salivate in response to the sound of a bell, such dogs
- A. after this prior conditioning, could be more easily conditioned to respond with fear the sound of a bell than other dogs  
B. would more easily experience renewal of the salivation response following extinction of the response  
C. would be less likely to exhibit the same salivation response after hearing the sound of a tuning fork  
D. would be less successful in higher-order conditioning

13. If a bell that has been conditioned to prompt salivation in a dog is paired with a flashing light, the light could begin to prompt salivation on its own. This is called
- A. operant conditioning
  - B. delay conditioning
  - C. second order conditioning
  - D. forward conditioning
14. A dormitory resident has been told by the R.A. that they are not permitted to use the common kitchen for one week because of a mess left in the kitchen. This is an example of
- A. negative punishment
  - B. negative reinforcement
  - C. positive punishment
  - D. positive reinforcement
15. A rat in a Skinner box presses a lever then receives a food pellet. Which of the following has occurred with regard to the behavior of pressing the lever?
- A. positive reinforcement
  - B. forward conditioning
  - C. backward conditioning
  - D. simultaneous conditioning
16. A dog is rewarded for coming to attention in front of the trainer. Then it is rewarded for standing on its hind legs. Then, the dog is rewarded for hopping. Finally, it is rewarded for hopping in a circle. What conditioning scenario does this training scenario exemplify?
- A. shaping
  - B. contiguity approach
  - C. secondary reinforcement
  - D. chaining
17. Pigeons were taught to peck for food when shown a picture of a tree. They learned to peck even when presented with images of trees they had never seen before. These results suggest the pigeons had undergone
- A. vicarious learning
  - B. insight learning
  - C. observational learning
  - D. abstract learning
18. Researchers in New Zealand presented crows with a problem to secure a food reward. The crows had to get a short stick by pulling up a string, use that stick to winkle out a long stick from a toolbox, and then use the long stick to extract food from a hole. Several of the captive crows were able to manage the task successfully, demonstrated that crows are capable of
- A. abstract learning
  - B. insight learning
  - C. observational learning
  - D. positive reinforcement
19. Stomach virus symptoms arrived for Bill an hour after he finished a burrito. For years afterwards, Bill could not eat a burrito without feeling nauseous. What occurred is a kind of
- A. positive reinforcement
  - B. negative reinforcement
  - C. classical conditioning
  - D. secondary reinforcement

20. In a classical conditioning experiment involving the sea slug *Aplysia* in which the animal was taught to retract its gill under a light touch, Kandel demonstrated that synapses were strengthened between sensory and motor neurons. This is known as
- A. synaptic pruning
  - B. neurogenesis
  - C. long-term potentiation
  - D. stimulus generalization
21. Which reinforcement schedule produces a behavioral response that is most resistant to extinction?
- A. variable ratio
  - B. fixed ratio
  - C. continuous
  - D. variable interval
22. Escape conditioning and avoidance conditioning are both forms of
- A. classical conditioning
  - B. punishment
  - C. negative reinforcement
  - D. secondary reinforcement
23. Ronaldo almost fell from a balcony as a child and has suffered from acrophobia (an irrational fear of heights) for his entire life. He consistently avoids even moderate high places. This behavior pattern is
- A. the result of classical conditioning
  - B. conditioned by negative reinforcement
  - C. will likely go away after a period of time if he avoids high places
  - D. results from spontaneous recovery
24. A pet parrot has a habit of squawking and chattering at the sound of the doorbell. The doorbell is replaced with a door-knocker. After six months, the doorbell is returned to operation and it is discovered that the sound of the bell no longer elicits the response. However, one day the distinctive pattern of squawking and chattering reappears, but now in response to the sound of the cell-phone vibrating on the counter-top. Which of the following best describes what happened?
- A. disinhibition
  - B. spontaneous recovery
  - C. stimulus generalization
  - D. second-order conditioning
25. First year medical school students often report difficulty retaining and recalling the large amounts of material they are expected to learn at the required pace. However, by the third or fourth month, most have developed a repertoire of learning strategies that make the process manageable. This process of 'learning to learn' is described as
- A. insight learning
  - B. abstract learning
  - C. learning sets
  - D. modelling
26. Which of the following is an example of positive punishment?
- A. loudly reprimanding a child in the grocery store
  - B. taking a television from a child's room for one week
  - C. encouraging homework by removing chores from the schedule
  - D. throwing a child into a pool to teach swimming the old-fashioned way

27. A parent is employing Bandura's techniques for observational learning to help their child become more courteous. As a first step they might
- A. provide positive reinforcement to encourage polite conversational styles
  - B. demonstrate the impolite forms of behavior they are interested in reducing
  - C. point out positive aspects in the behavior of the child's favorite fictional character
  - D. help the child remember episodes from the past where they acted with courtesy
28. Which of the following is a common factor in all forms of observational learning?
- A. imitation
  - B. reinforcement
  - C. latent learning
  - D. modelling
29. The behaviorist law of equipotentiality held that all forms of associative learning involve the same underlying mechanisms, suggests that any two stimuli can be associated in the brain, regardless of their nature. Which of the following observed phenomena poses the most direct challenge to the law of equipotentiality?
- A. avoidance
  - B. instinctive predispositions
  - C. social learning
  - D. play behavior
30. Fear conditioning is thought to depend on an area of the brain called the
- A. amygdalla
  - B. substantia nigra
  - C. hypothalamus
  - D. reticular formation
31. Which of the following brain structures is not a link in the mesolimbic pathway?
- A. ventral tegmental area
  - B. medial forebrain bundle
  - C. nucleus accumbus
  - D. hippocampus
32. Which of the following phenomena in existing at all challenges to tenets of Skinnerian behaviorism?
- I. Observational learning
  - II. Overjustification
  - III. Latent learning
  - IV. Spontaneous recovery
- A. I only
  - B. II and III
  - C. I, II and III
  - D. I, II, III and IV
33. Which of the following describes sensitization of the sea slug *Aplysia* withdrawal reflex?
- A. A habituated sea slug is given a strong, noxious stimulus and responds to the next weak stimulus to the siphon by a rapid, enhanced withdrawal of the gill.
  - B. A sea slug is touched 10 – 15 times in rapid sequence, and the gill-withdrawal response decreases to about one-third of its initial intensity.
  - C. A weak touch to the siphon (CS) is followed immediately by a sharp blow to the tail or head (US), which evokes a marked gill-withdrawal response. After a series of such trials, the gill-withdrawal response to the CS alone is substantially enhanced.
  - D. A sharp blow to the tail or head (US) is followed immediately by a weak touch to the siphon (CS) which evokes a marked gill-withdrawal response. After a series of such trials, the gill-withdrawal response to the CS alone is substantially enhanced.

- 34.** Habituation and sensitization are both forms of
- A.** long-term potentiation
  - B.** classical conditioning
  - C.** non-associative learning
  - D.** negative feedback
- 35.** Rats were placed in a T-maze with one arm coloured white and the other black. One group of rats had 30 mins to explore this maze with no food present, and the rats were not removed as soon as they had reached the end of an arm. Food was then placed in one of the two arms. According to Skinnerian behaviorism, how would rats in the exploratory group be expected to perform in this experiment compared to a group that had not previously explored the maze?
- A.** The exploratory group would learn to go down the rewarded arm faster than the group that had not previously explored the maze.
  - B.** The exploratory group would not accept “escape” or “avoidance” in this situation though such behavior would likely be effective.
  - C.** No significant differences in behavior would be observed between the experimental and control groups.
  - D.** The exploratory group would be expected to perform less well on this task than the control group.
- 36.** When a novel stimulus such as Pavlov’s bell is presented for the very first time, the dog shows a reflexive orienting response -- perhaps a startle response -- to that stimulus. With successive applications of the stimulus, the magnitude of the orienting response will progressively diminish. If this process of diminishing the orienting response is carried out prior to pairing the bell with the unconditioned stimulus
- A.** Conditioning will occur, but the CR will be acquired at a slower rate than if there had been no prior work to diminish the orienting response.
  - B.** Conditioning will occur with the CR being acquired at faster rate than if there had been no prior work to diminish the orienting response.
  - C.** Conditioning will occur with the learning curve exhibiting a hyperbolic shape instead of the sigmoidal shape typical of trials with no prior work to diminish the orienting response.
  - D.** Conditioning will not occur.
- 37.** If neuron A synapses onto neuron B, and the two repeatedly fire together, A comes to release more neurotransmitter into the synapse with B than it did before conditioning. This is called
- A.** long-term potentiation
  - B.** neuromodulation
  - C.** neurotransmission
  - D.** presynaptic facilitation

38. According to B.F. Skinner, a proper analysis of an individual's personality will focus on
- I. Traits
  - II. Dispositions and motives
  - III. Discriminative stimuli in their environment
  - IV. Reinforcement history
- A. I and II  
B. I and IV  
C. III and IV  
D. I, II, III and IV
39. Which of the following statements is consistent with Thorndike's empirical law of effect?
- A. Reinforcement contingency is determined by the probability of the event given a particular response.  
B. The value attached to any potentially reinforcing event is subjective.  
C. The individual's cognitive expectations influence the degree of reinforcement.  
D. Choice manifests itself in behavior.
40. As opposed to the contiguity model, according to the contingency model of classical conditioning
- A. conditioning depends on how well the US predicts the CS  
B. the CS eventually substitutes for the US  
C. timing is critical for behavioral conditioning  
D. conditioning depends on a thought process
41. According to Bandura, which of the following represents the best example of learning through percept?
- A. improving tennis form by watching a professional tennis match  
B. gaining the understanding of the function of a hormone in a physiology lecture course  
C. internalizing parental habits of argumentativeness  
D. learning by direct consequence not to touch a hot stove
42. According to Bandura's cognitive theory of learning, students in MCAT preparatory courses who take a practice test prior to content review may impede learning if the experience lowers which of the following?
- A. social reinforcement  
B. response consequences  
C. learned helplessness  
D. self-efficacy expectations
43. Analyzed within the Skinnerian framework, what aspect of gambling behavior makes the behavioral pattern so difficult to stop for many people?
- A. habituation  
B. vicarious imitation of successful models  
C. the pattern of reinforcement  
D. learned helplessness

44. A real estate sales agent paid on commission is rewarded on what type of schedule?
- A. fixed interval
  - B. fixed ratio
  - C. variable interval
  - D. variable ratio
45. In a major break from earlier theories of social learning, Bandura disagreed with the idea that
- A. imitative behavior patterns are acquired primarily through reinforcement
  - B. reinforcement values are defined subjectively
  - C. reinforcement is necessary for learning to occur
  - D. curiosity is an intrinsic motivation
46. The family dog associates the sound of the doorbell with a visitor at the door and barks every time they hear a doorbell, even if the doorbell is coming from the TV. Eventually, they learn that only the real doorbell means a visitor is present and no longer bark at the TV. This is an example of
- A. second-order conditioning
  - B. negative reinforcement
  - C. stimulus discrimination
  - D. response extinction
47. It takes longer for a familiar stimulus to become a CS than it does for a novel stimulus to become a CS, when the stimulus is subsequently paired with an effective US. This is due to
- A. the blocking effect
  - B. latent inhibition
  - C. conditioned suppression
  - D. conditioned inhibition
48. After maintaining a strict calorie restricted diet for a week, you give into temptation and eat three donuts in the breakroom at work. Next, you're out to lunch and eat a double cheeseburger and fries. When you get home, you say 'what the heck? why not?' and so you eat a whole pizza and drink two liters of soda. Within the framework of classical and operant conditioning you just experienced
- A. a positive reinforcement loop
  - B. an extinction burst
  - C. reinstatement
  - D. learned helplessness
49. Habituation is different from extinction in that
- A. Habituation usually refers to a reduction of response to an unconditioned stimulus or an innate behavior.
  - B. Extinction is a form of learning in which an organism decreases or ceases to respond to a stimulus after repeated presentations.
  - C. Many anxiety disorders represent a failure to become habituated to aversive stimuli.
  - D. Habituation is a form of respondent fatigue.
50. Change in behavior or potential behavior that occurs as a result of experience must be the product of
- A. reinforcement
  - B. conditioning
  - C. adaptation
  - D. learning



## Answer Key

### Learning

- 1. D**—The sound of the tuning fork is a conditioned stimulus (CS) and salivation is the conditioned response (CR). Before conditioning, the sound of the tuning fork had been a neutral stimulus.
- 2. A**—Negative reinforcement is the strengthening of behavior by the removal or avoidance of some aversive event.
- 3. C**—The second best answer is ‘positive punishment’ here. Positive punishment is the addition of an aversive consequence after an undesired behavior to decrease future responses. However, the behavioral response being conditioned is not whether to urinate or not but whether to wake up or not. The best choice would still be classical conditioning which involves pairing a neutral stimulus (full bladder) with an unconditioned stimulus (alarm) to transform the neutral stimulus into a conditioned stimulus.
- 4. B**—Edward Toleman used a similar experiment to reach the conclusion that these rats must have learned their way around the maze during the first half of the experiment. The learning occurred without any conditioning. This represented a major break with the strict behaviorism of Skinner. Toleman believed that their dramatic improvement in maze-running time was due to latent learning. He suggested they made a mental representation, or cognitive map, of the maze during the first half of the experiment and displayed this knowledge once they were rewarded.
- 5. B**—The dog running to the kitchen has learned to associate a neutral stimulus (the can-opener) with an unconditioned stimulus (food). The can-opener is now a conditioned stimulus.
- 6. C**—Preparedness is a concept developed to explain why certain associations are learned more readily than others.
- 7. D**—All four statements are correct. Each is an important aspect of reinforcement schedules in operant conditioning, and each makes sense if you think about it. 1) Continuous reinforcement works best when teaching a new behavior. When first learning a behavior, a clear association between the behavior and the reward assists learning. 2) Variable schedules are more resistant to extinction. Once a subject becomes accustomed to a fixed schedule a break in the pattern quickly leads to extinction. 3) Ratio schedules tend to yield higher rates of response than interval schedules. This makes intuitive sense. If a rat gets a treat every five times they press a bar, they will press the bar more often. 4) Variable schedules tend to yield more consistent rates of responding than fixed schedules. If the subject doesn’t know when the next treat is coming, it makes sense to keep emitting the response to ensure it’s been emitted enough times to earn the reward.
- 8. B**—Primary reinforcers are biological in nature. Food, drink, and physical pleasure are primary reinforcers. However, most human reinforcers are secondary, or conditioned. Examples include money, praise, grades in schools, and applause.
- 9. D**—In most classical conditioning procedures the CS is presented first. This is forward conditioning.
- 10. C**—A discriminant stimulus is any stimulus that signals the presence of reinforcement.
- 11. D**—In operant conditioning, extinction occurs when reinforcement is no longer delivered to a previously reinforced behavior. The behavior gradually declines and disappears.
- 12. A**—Latent inhibition in classical conditioning refers to the observation that a familiar stimulus takes longer to acquire meaning (as a signal or conditioned stimulus) than a new stimulus.

Dogs which are low in latent inhibition would more easily associate a new conditioned response to a previously conditioned stimulus.

13. **C**—Second-order conditioning or higher-order conditioning is a form of learning in which a stimulus is first made meaningful or consequential for an organism through an initial step of learning, and then that stimulus is used as a basis for learning about some new stimulus.
14. **A**—The difference between reinforcement and punishment is that reinforcement is designed to increase the probability of a behavior and punishment is designed to reduce the probability of a behavior. Negative punishment occurs when a behavior (response) is followed by the removal of a stimulus, such as taking away kitchen privileges following an undesired behavior, to decrease the probability of the behavior.
15. **A**—In operant conditioning positive reinforcement occurs when a behavior is either rewarding in itself or the behavior is followed by another stimulus that is rewarding, increasing the frequency of that behavior. If a rat in a Skinner box gets food when it presses a lever, its rate of pressing will go up.
16. **D**—Chaining involves reinforcing individual responses occurring in a sequence to form a complex behavior. In shaping successive approximations are reinforced, moving through increasingly accurate approximations of a response desired by a trainer.
17. **D**—Abstract learning is a type of learning that involves understanding concepts rather than simply learning to exhibit a behavior in order to secure a reward.
18. **B**—Insight learning is a type of learning or problem solving that happens suddenly through understanding the relationships of various parts of a problem rather than through trial and error.
19. **C**—Conditioned taste aversion occurs when

an animal associates the taste of a certain food with symptoms caused by a toxic, spoiled, or poisonous substance or by an illness. Generally, taste aversion is developed after ingestion of food that causes nausea, sickness, or vomiting. It is an example of classical conditioning or Pavlovian conditioning. Conditioned taste aversions can develop through association of a neutral stimulus (eating the food) and the unconditioned stimulus (illness) so that eating the food acts as a conditioned stimulus in the future.

20. **C**—Long-term potentiation is a persistent strengthening of synapses based on recent patterns of activity.
21. **A**—A variable ratio reinforcement schedule is the type which is most resistant to extinction, although original conditioning takes longer. Variable interval schedules are more resistant to extinction than fixed interval and fixed ratio schedules but not as resistant as a variable ratio schedule.
22. **C**—Negative reinforcement increases the probability of a behavior because it causes a decrease in an aversive stimulus.
23. **B**—Very often a phobia is the result of classical conditioning. However, the avoidance behavior results from operant conditioning. Regarding the phobia itself, the original fear of almost falling down is associated with being on a high place, leading to a fear of heights. In other words, the CS (heights) associated with the aversive UCS (almost falling down) leads to the CR (fear). The avoidance behavior, on the other hand, is the result of negative reinforcement in which a behavior pattern is promoted because it reduces an aversive stimulus.
24. **A**—Within the realm of classical (Pavlovian) conditioning, disinhibition is a fundamental process of associative learning characterized by the recurrence of a conditioned response after extinction trials have eliminated said response

elicited by the presentation of a novel stimulus. Disinhibition is the temporary increase in strength of an extinguished response due to an unrelated stimulus effect. This differs from spontaneous recovery, which is the temporary increase in strength of a conditioned response, which is likely to occur during extinction after the passage of time.

25. **C**—A learning set is a readiness or predisposition to learn developed from previous learning experiences. In the laboratory context an organism learns to solve each successive problem in fewer trials. New problems can be solved more quickly when the learner is allowed to practice similar problems. Learning set is the psychological concept encompassing the idea of ‘learning to learn’.
26. **A**—Positive punishment works by presenting a negative consequence after an undesired behavior is exhibited, making the behavior less likely to happen in the future. Choice ‘B’ is an example of negative punishment. Choices ‘C’ and ‘D’ are both examples of negative reinforcement.
27. **C**—Bandura’s social cognitive learning theory states that there are four stages involved in observational learning. This question is addressing the first step: attention. Learning is influenced by characteristics of the model, such as how much one likes or identifies with the model, and by characteristics of the observer, such as the observer’s expectations or level of emotional arousal. The last three stages are retention, imitation, and motivation.
28. **D**—Observational learning is learning that occurs through observing the behavior of others. It is a form of social learning which takes various forms, based on various processes. Observational learning differs from imitative learning in that it does not require a duplication of the behavior exhibited by the model. For example, the learner may observe an unwanted behavior and the subsequent consequences, and thus learn to refrain from that behavior. Specific

types of observational learning without imitation include stimulus enhancement, in which individuals become interested in an object from watching others interact with it, and goal emulation, in which individuals are enticed by the end result of an observed behavior and attempt the same outcome but with a different method.

29. **B**—In his seminal work on taste aversion, Garcia demonstrated that the particular stimulus used in classical conditioning does matter. In his experiment, Garcia showed that rats could learn to avoid flavored water if it were associated with radiation induced nausea but he could not form an association between a buzzer and nausea. This is due to the instinctive predisposition to associate nausea with drinking something poisonous.
30. **A**—Fear conditioning is thought to depend upon an area of the brain called the amygdala. Ablation or deactivating of the amygdala can prevent both the learning and expression of fear.
31. **D**—The mesolimbic pathway is a collection of dopaminergic neurons that project from the ventral tegmental area to the nucleus accumbens. It is one of the component pathways of the medial forebrain bundle, which is a set of neural pathways that mediate brain stimulation reward.
32. **B**—Latent learning and over-justification both directly challenge the tenets of Skinnerian behaviorism. Latent learning is a form of learning that is not immediately expressed in an overt response; it occurs without reinforcement of the behavior or conditioned associations. The over-justification effect occurs when an expected external incentive such as money or prizes actually decreases a person’s motivation to perform a task. Regarding choice I, observational learning, many kinds of observational learning, such as mobbing behavior by birds, are explicable in terms of behaviorism. Choice IV, negative reinforcement, is a core concept of Skinnerian behaviorism.

33. **A**—Sensitization is an increase in behavior due to exposure to a noxious (painful) stimulus.
34. **C**—Sensitization and habituation are both forms of non-associative learning, learning that does not require linking or associating stimuli together. It is considered the simplest type of learning.
35. **D**—In the actual experiment conducted by John Seward in 1949, one of the classics demonstrating latent learning, the exploratory group learned to go down the rewarded arm much faster than the group that had not previously explored the maze. At the time of the experiment, interest in latent learning arose largely because the phenomenon seemed to conflict with the widely held view that reinforcement was necessary for learning to occur. The question asks which results would be predicted by Skinnerian behaviorism, in other words, the point of view prevalent in the years prior to this experiment. Skinnerian behaviorism would predict the exploratory group to respond more slowly, actually, than the second group to reward conditioning because of the principle of immediacy. If you answered choice ‘C’, that’s not too bad. This one is subtle. The principle of immediacy in reinforcement holds that an immediate consequence is more effective than a delayed consequence in reinforcement. The exploratory group experienced a period of behavior with no reward, so they should respond more slowly to conditioning. In other words, Skinnerian behaviorism would predict the exploratory group to learn more slowly. But this is not what happened! The exploratory group learned faster as a result of latent learning, learning requiring no reinforcement.
36. **A**—The CR will be acquired at a slower rate than if there had been no prior trials to diminish the orientation response. What occurred in those trials diminishing the orientation response is called habituation. Habituating a stimulus makes it more difficult to associate the stimulus with an unconditioned stimulus. This is known as latent inhibition.
37. **D**—Presynaptic facilitation and long-term potentiation are two different mechanisms for neural plasticity. In presynaptic facilitation, the change is occurring to the presynaptic neuron. However, long-term potentiation is more prevalent of the two. Long-term potentiation represents an increase in the sensitivity of a postsynaptic neuron as a result of repeated stimulation by a presynaptic neuron.
38. **C**—In Skinnerian behaviorism, stimulus control is the controlling principle underlying human behavior. Traits and motives or other cognitive constructs are not relevant but are themselves the result of conditioning. What determine individual behaviors are reinforcement history and stimuli.
39. **A**—The Law of Effect states that responses that lead to reward are strengthened, occurring more quickly and reliably, while responses that are unrewarded, or even punished, are weakened. This is a tenet of strict behaviorism. The break from the behaviorist view of social learning, in which reinforcement contingencies were defined objectively, was apparent in the Rotter’s Social Learning and Clinical Psychology, which appeared in 1954. Rotter defines reinforcement contingencies subjectively, in terms of an individual’s cognitive expectations.
40. **D**—In the Pavlovian framework, classical conditioning occurs according to the contiguity model. The CS is eventually substituted for the US. The contingency model is a cognitive framework. The CS signals to the organism that the US will follow. There is a thought process.
41. **B**—There are two basic forms of learning according to Bandura, learning by response consequences and learning by modeling. Learning by response consequences is similar to operant behaviorism of Skinner but with a cogni-

tive component. Modeling involves learning through vicarious experience as well as imitation. Modeling also covers learning through precept -- deliberate teaching and learning of-- often involving linguistic communication.

42. **D**—According to Bandura, in addition to expectations regarding the relationship of a particular behavior and an outcome, a person must have the expectancy that he or she can reliably produce the behavior in question. This is the concept of self-efficacy. An example of self-efficacy in the phenomenon of learned helplessness. Research subjects who have been exposed to unsolvable puzzles are hindered in solving subsequent puzzles they would normally be able to solve.
43. **C**—Gambling and lottery games are good examples of a reward based on a variable ratio schedule. In operant conditioning, a variable-ratio schedule is a schedule of reinforcement where a response is reinforced after an unpredictable number of responses. This schedule creates a steady, high rate of responding. Comparing different reinforcement schedules, behaviors that have been conditioned with a variable ratio reinforcement schedule are the most difficult to extinguish.
44. **D**—In a reinforcement schedule, variable versus fixed refers to the predictability of the reinforcer. Variable reinforcers reward on an unpredictable schedule. Whether it is a variable ratio or variable interval schedule refers to whether the number of behaviors or the amount of time is varied, respectively. The sales agent can't predict the number of behaviors between rewards. Thus it is a variable ratio schedule.
45. **A**—Although Bandura's Bobo doll experiment is mainly known for demonstrating how effectively aggressive behavior can be transmitted through observational learning and imitation, as a theoretical breakthrough its importance was to show that imitation occurred without re-

inforcement.

46. **C**—One observes stimulus discrimination when one stimulus ("CS1") elicits one CR and another stimulus ("CS2") elicits either another CR or no CR at all. This can be brought about by, for example, pairing CS1 with an effective US and presenting CS2 with no US.
47. **B**—Latent inhibition refers to the observation that a familiar stimulus takes longer to acquire meaning (as a signal or conditioned stimulus) than a new stimulus.
48. **B**—While extinction, when implemented consistently over time, results in the eventual decrease of the undesired behavior, in the short-term the subject might exhibit what is called an extinction burst. An extinction burst will often occur when the extinction procedure has just begun. This usually consists of a sudden and temporary increase in the response's frequency.
49. **A**—Habituation usually refers to a reduction in innate behaviours, rather than behaviours developed during conditioning. Extinction refers to reduction of behaviors developed during conditioning.
50. **D**—It's good to have a clear, scientific definition of learning to encompass everything from classical conditioning to cognitive models of learning.