

Motivation and Emotion

1. A professional tennis player is likely to play at his best when his level of arousal is
 - A. low
 - B. moderately low
 - C. moderately high
 - D. high
2. A study found that patients who had lesions to the ventromedial prefrontal cortex had impaired emotional experiences, but unaffected autonomic responses while patients with lesions to the right somatosensory cortex had impaired autonomic responses without affected emotional experiences. To which theory of emotion do these results pose the most direct challenge?
 - A. James-Lange theory
 - B. Cannon-Bard theory
 - C. Opponent-Process theory
 - D. Cognitive-Appraisal theory
3. When she was eight years old, Madelaine loved to play around on the family piano. Her parents were excited and supportive so they lavished praise on Madelaine. They arranged for a teacher and set up a treat jar to reward practice hours. After one year, however, they stopped giving so much praise and neglected rewarding with treats. Madelaine found herself no longer interested in playing piano. This pattern of behavior best illustrates
 - A. internal locus of control
 - B. drive reduction
 - C. the overjustification effect
 - D. approach-avoidance
4. According to drive reduction theory, which of the following is an example of a secondary drive?
 - A. social approval
 - B. need for warmth
 - C. hunger
 - D. thirst
5. The circumventricular organs, median preoptic nucleus, and tissue surrounding the anteroventral third ventricle in the lamina terminalis (AV3V region) provide the neuroanatomic focus for thirst, sodium appetite, and cardiovascular control, making extensive connections with the hypothalamus, limbic system, and brain stem. The AV3V region is well provided with receptors that respond to
 - A. cholecystokinin
 - B. insulin
 - C. angiotension II
 - D. acetylcholine
6. When a person undergoes great emotional stress over a long period of time, the general adaptation syndrome describes three successive physical stages: alarm, resistance, and _____.
 - A. adaptation
 - B. avoidance
 - C. exhaustion
 - D. reinforcement

7. Study participants, told they were being injected with a new drug to test eyesight, were actually injected with epinephrine or a placebo. The participants who received epinephrine were subdivided into 3 groups. Group 1 was told nothing about side effects. Group 2 was told that they they would probably feel numbness in their feet and an itching sensation over parts of their body. Group 3 was told that their hands would shake, their heart would pound, and their face may get warm and flushed. After the injections the participants were told to wait in pairs. They did not know that they had been paired with a confederate of the researchers. Interacting with the subjects, the confederate acted either euphoric or angry. Researchers observed the interactions through a two-way mirror.

The researchers observed that the participants in groups 1 and 2 tended to imitate the behaviors of the confederates while the participants in group 3 were uninfluenced by the behavior of the confederates. Participants in the placebo group were not strongly influenced by the behavior of the confederates. Which of the following may be concluded from the results of this experiment?

- I. A state of arousal with no immediate explanation will be labeled in terms of available cognitions.
 - II. A state of arousal with an appropriate explanation is not likely to be labeled in terms of the alternative available cognitions.
 - III. Emotional reactions and experiences are more likely to occur if a person is in a state of physiological arousal.
 - IV. Physiological changes and emotional response to a stimulus are separate and independent
- A. IV only
B. I and II
C. I, II and III
D. I, II, III and IV

8. In which theory of emotion do physiological states and emotional states occur simultaneously?
- A. Cannon-Bard
 - B. Schachter-Singer
 - C. James-Lange
 - D. Miller
9. Researchers have confirmed correlation between level of adiposity in rats and lesion of the ventromedial hypothalamus. Lesions in this area cause the rats feeding behavior to be unresponsive to increased levels of which hormone?
- A. leptin
 - B. ghrelin
 - C. insulin
 - D. gastrin
10. Lesions to the lateral hypothalamus are most likely to result in
- A. aphagia
 - B. excessive feeding behavior
 - C. hypertension
 - D. increased sexual behavior
11. Among the following behaviors, a drive reduction theorist would have the greatest difficulty explaining
- A. overeating
 - B. thrill-seeking
 - C. financial investing
 - D. pursuit of social acceptance

12. You stumble upon a bear in the woods. Your heart is beating like crazy. You are taking quick, shallow breaths and sweating. To William James, the physiological response is interpreted as the emotion of fear. A two-factor theorist such as Schachter would reply
- A. The fear emotion is inseparable from the repressed relief emotion when the bear moves on.
 - B. The combination of the physiological response and the cognitive appraisal of the bear produces the fear emotion.
 - C. Fear of the bear could be experienced even if the body did not have a physiological reaction.
 - D. Cognitive appraisal of the bear precedes the physiological response. It's the thought that leads to the simultaneous experience of the physiological response and the fear emotion.
13. For the past year Morris has been commuting back and forth to work through crazy traffic. His job is very demanding, and his relationship with his supervisor is toxic. His company is in crisis. The market they serve is declining, and Morris is concerned that his skills are becoming obsolete. Morris is starting to experience gastrointestinal and cardiovascular symptoms. In terms of general adaptation syndrome, which of the answer choices below best characterizes Morris' state?
- A. alarm
 - B. resistance
 - C. exhaustion
 - D. decompensation
14. Phyllis was tested and scored high on the Holmes and Rahe social readjustment rating scale? Phyllis is likely to have a high level of
- A. stress
 - B. self-actualization
 - C. emotional intelligence
 - D. social anxiety
15. Motivation as a desire to perform an action is usually defined as having two parts, directional such as directed towards a positive stimulus or away from a negative one, as well as the activated "seeking phase" and consummatory "liking phase". This type of motivation has neurobiological roots in the _____ and mesolimbic dopaminergic pathways.
- A. hypothalamus
 - B. pontine brainstem
 - C. amygdala
 - D. basal ganglia
16. Students are likely to be extrinsically motivated if they
- A. perform an activity in order to attain a desired outcome
 - B. are interested in mastering a topic, not just in achieving good grades
 - C. attribute their educational results to factors under their own control
 - D. are driven by an interest or enjoyment in the task itself

17. Which of the following scenarios describe a dynamic consistent with the overjustification effect?

- I. Children who were rewarded with a gold star for drawing pictures spent less time playing with the drawing materials in subsequent observations.
- II. Third graders who were rewarded with a book showed more reading behavior in the future.
- III. Mild threats against playing with an attractive toy actually served to increase the child's interest in the toy
- IV. A monetary reward did not increase motivation to engage in a task.

- A. I only
- B. I and III
- C. I, II and III
- D. I, II, III and IV

18. Reading *Écrits* by Jacques Lacan induced in Cornelius an intense form of mental concentration where throughout the day all of his conscious thoughts were directed to interpreting and understanding the work. Finals week was approaching, and Cornelius was beginning to sense himself side-tracking away from important tasks. Which of the following best describes Cornelius' state of mind?

- A. flow
- B. hyperfocus
- C. perseveration
- D. stereotypy

19. Within the context of behaviorism, the drive theory of motivation is based on the mechanism of

- A. negative reinforcement
- B. positive reinforcement
- C. negative punishment
- D. positive punishment

20. A recent hybrid of the somatic and cognitive theories of emotion is the perceptual theory. It emphasizes the meaningfulness of emotions as is recognized by cognitive theories. The novel claim of this theory is that conceptually-based cognition is unnecessary for such meaning. Rather the bodily changes themselves perceive the meaningful content of the emotion in being causally triggered by certain situations. In this respect, emotions are held to be analogous to faculties such as vision or touch, which provide information about the relation between the subject and the world in various ways. In arguing that bodily responses are central to emotions, this theory is

- A. psychoanalytic
- B. neo-Jamesian
- C. communication based
- D. internally valid

21. When people see a snake, they are likely to activate both affective information and non-affective information about its ontological category. According to the Affective Primacy Hypothesis, the affective information has priority, and its activation precedes identification of the ontological category. According to the Cognitive Primacy Hypothesis, perceivers must know what they are looking at before they can make an affective judgment about it. However, it has been hypothesized that the relative speed with which affective and non-affective information gets activated depends upon the contexts in which stimuli are processed. In other words,

- A. Emotional arousal and cognitive labeling occur simultaneously.
- B. Physiological arousal occurs but then must be cognitively labeled before the emotion is processed.
- C. Physiological arousal may occur first or cognitive labeling may occur first.
- D. Physiological arousal instigates the experience of emotion.

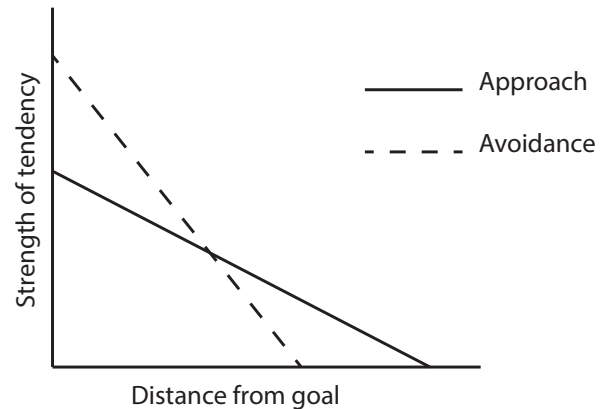
22. When describing an emotion, the valence of the emotion refers to

- A. whether the emotion is classified as a positive affect or a negative affect
- B. the intensity of the corresponding state of physiological arousal
- C. the intrinsic attractiveness or averseness of an event, object, or situation
- D. the degree of conflict between approach and avoidance

23. Ghrelin induced hyperphagia is thought to be mediated by the

- A. ventromedial hypothalamus
- B. hippocampus
- C. substantia nigra
- D. lateral hypothalamus

24. The strength of a rat's pull toward a food goal as well as the strength of pull away from the location where the rat had received a shock were measured by placing rats in a harness attached to a leash and measuring the force of pull against a spring. In the figure below depicts typical approach and avoidance gradients.



The point at which the two lines cross represents

- I. the point at which the rat would stop
- II. equal relative strengths of approach and avoidance
- III. equilibrium
- IV. double approach-avoidance

- A. I only
- B. I and III
- C. I, II and III
- D. I, II, III and IV

25. Which of the following describes a stable equilibrium in which a movement away from one activity is countered by an increase in the repellence of the other activity so that the individual returns to the point where she was at the beginning of the conflict?
- A. approach-approach
 - B. approach-avoidance
 - C. avoidance-avoidance
 - D. double approach-avoidance
26. Which of the following types of conflict between incompatible motives may produce an unstable equilibrium?
- A. approach-approach
 - B. approach-avoidance
 - C. avoidance-avoidance
 - D. double approach-avoidance
27. A study showed that Japanese individuals tended to express strong positive or negative emotions far less than either American or Canadian individuals. This is an example of
- A. conditioned inhibition of affective arousal
 - B. a culture-bound syndrome
 - C. facial feedback
 - D. different display rules
28. The limbic system supports a variety of functions including
- I. emotion
 - II. long-term memory
 - III. olfaction
 - IV. motivation
- A. I only
 - B. I and III
 - C. I, II and III
 - D. I, II, III and IV
29. fMRI tasks were included in a study involving first impressions of CEOs. It was demonstrated that while the amygdala did play a role in the evaluation of trustworthiness, the amygdala also played a generalized role in the overall evaluation of the first impression of faces, solidifying evidence that the amygdala plays a role in
- A. social processing
 - B. episodic memory
 - C. attentional processing
 - D. emotional processing
30. A survey asked participants of varying ages to rate a set number of statements from most important to least important. The researchers found that children had higher physical need scores than the other groups, the love need emerged as most important from childhood to young adulthood, the esteem need was highest ranked among the adolescent group, young adults had the highest self-actualization level, and elderly people gave the highest rank to security. These results suggest Maslow's hierarchy may be limited
- A. in failing to differentiate the social and intellectual needs of those raised in different cultural circumstances
 - B. in that the needs of acceptance and community might outweigh the needs for freedom and individuality
 - C. as a theory for developmental sequence
 - D. in neglecting the emotional, familial, and evolutionary implications of physiological needs within the community

31. Electrical stimulation of the ventromedial hypothalamus of a rat will cause it to
- A. stop eating
 - B. start eating
 - C. stop drinking
 - D. start drinking
32. Lack of sleep increases ghrelin and decreases leptin. This may underlie the correlation of chronic sleep-restriction and
- A. poor memory
 - B. obesity
 - C. nutritional stunting
 - D. poor impulse control
33. Because memory constructs are often linked to affective states, affect can influence social behaviors by selectively causing certain memory constructs to become more accessible and easily retrieved from memory. This represents a form of
- A. priming
 - B. reinforcement
 - C. cognitive labeling
 - D. bottom-up processing
34. A brain injury patient experiences difficulty distinguishing emotions in facial expressions. Specifically, the facial expressions associated with fear, anger, and disgust seem indistinguishable to her. Of the following which is the most likely site of the lesion(s)?
- A. amygdala
 - B. hippocampus
 - C. hypothalamus
 - D. cingulate gyrus
35. Misattribution of arousal is a term in psychology which describes the process whereby people make a mistake in assuming what is causing them to feel aroused. For example, when actually experiencing physiological responses related to fear, a person might encounter another and mislabel those responses as romantic arousal. The phenomenon of misattribution of arousal is most consistent with which of the following theories of emotion?
- A. Cannon-Bard theory
 - B. Schachter-Singer theory
 - C. James-Lange theory
 - D. Appraisal theory
36. In which phase of the menstrual cycle is a woman's libido likely to be highest?
- A. follicular phase
 - B. ovulatory phase
 - C. luteal phase
 - D. proliferative phase
37. The first step in a cognitive mood repair strategy is
- A. evaluation of the feelings of dysphoria to better understand the source of the negative mood
 - B. re-evaluation of negative affect to find a positive perspective
 - C. regulation of moods by the utilization of activities or tasks
 - D. recall of mood-incongruent memories or positive thoughts

- 38.** A study recruiting a test population of Japanese males found higher scores on the Toronto Alexithymia Scale among those with the 5-HTTLPR homozygous long (L) allele. The 5-HTTLPR region on the serotonin transporter gene influences the transcription of the serotonin transporter that removes serotonin from the synaptic cleft, and is well studied for its association with numerous psychiatric disorders. The particular apparent association of the 5-HTTLPR allele with alexithymia underscores the importance of serotonin in modulating processes involved in
- A. reward-motivated behavior
 - B. alertness
 - C. emotional awareness
 - D. satiety
- 39.** Tonya loves to watch videos of kittens playing on the internet. It's her favorite thing. The cute little kittens always make her feel happy! Where would we expect to see an increase in activation under fMRI while Tonya watches kitten videos?
- A. left amygdala
 - B. hypothalamus
 - C. right cerebral hemisphere
 - D. left cerebral hemisphere
- 40.** In 2000 Bailey, Dunne and Martin studied a sample of 4,901 Australian twins and reported a 20% concordance rate for homosexuality in male identical twins. In other words,
- A. 20% of male identical twins in the study were homosexual.
 - B. For a male identical twin in the study, there was a 20% chance his twin reported the same sexual orientation.
 - C. According to this study, homosexuality is 20% determined by genetics and 80% determined by environment.
 - D. If one of the identical twins in the study reported as homosexual, the probability that the pair reported as homosexual was 20%.
- 41.** Decreasing level in the blood signals the "fed" state with the hormone . . .
- A. ghrelin
 - B. leptin
 - C. cholecystikinin
 - D. insulin
- 42.** In 1978, Paul Ekman and Wallace Friesen finalized the Facial Action Coding System (FACS) to taxonomize every human facial expression. FACS is an anatomically based system for describing all observable facial movement for every emotion. Each observable component of facial movement is called an action unit or AU and all facial expressions can be decomposed into their constituent core AUs. What is the primary usefulness of this work within psychological research?
- A. operationalization of nonverbal behavior
 - B. confirmation of the facial-feedback hypothesis
 - C. demonstration of cross-cultural display rules
 - D. evaluating truthfulness

43. Functional MRI experiments have revealed that the anterior insula in the brain is particularly active when experiencing disgust, when being exposed to offensive tastes, and when viewing facial expressions of disgust. This evidence supports the contention that

- A.** Fear is a primary emotion and disgust is a secondary emotion.
- B.** Disgust is a primary emotion and fear is a secondary emotion.
- C.** Disgust and fear are separate basic emotions.
- D.** The differences between the emotions of fear and disgust are not qualitative but rather involve a difference in valence and arousal level.

44. A state of psychological arousal that activates behavior and propels one towards a goal is a(n)

- A.** drive
- B.** emotion
- C.** motive
- D.** incentive

45. The fusiform face area (FFA) is a part of the human visual system that, it is speculated, is specialized for facial recognition. It is located in the fusiform gyrus (Brodmann area 37). There are countless facial expressions humans use that disturb the structure of the face. These disruptions and emotions are first processed in the amygdala and later transmitted to the FFA for facial recognition. This data is then used by the FFA to determine more static information about the face. Despite its downstream position in emotional processing, recent evidence demonstrates that the FFA has functions regarding emotion. The FFA is differentially activated by faces exhibiting different emotions. A study has determined that the FFA is activated more strongly by fearful faces than neutral faces.

According to the above passage, the position of the FFA downstream from the amygdala in the processing of facial expressions was taken as evidence that

- A.** The FFA has little to do with emotion perception.
- B.** The FFA plays a role in both emotion perception and other aspects in face perception.
- C.** Face perception is an ability that involves many areas of the brain.
- D.** The fusiform face area is necessary for successful face detection and identification.

46. In Robert Plutchik's psychoevolutionary theory of emotion . . .

- A.** The concept of emotion does not apply to all animals.
- B.** Different emotions do not have distinct physiological signatures.
- C.** Primary emotions can be conceptualized in terms of pairs of polar opposites.
- D.** There is a direct relation between dopamine, noradrenaline and serotonin levels and eight basic emotions.

47. Which theory of emotion holds that conscious experience of an event occurs prior to physiological arousal?
- A. cognitive appraisal theory
 - B. James-Lange theory
 - C. two-factor theory
 - D. Cannon-Bard theory
48. Which of the following represents the application of Premack's principle for self-motivation?
- A. To perform well in his first year at college, Joseph listed his main goals and broke them down into detailed, attainable sub-goals.
 - B. At the gym, Phillip started with the more difficult exercises and the ones he disliked, and saved those that were more relaxing or enjoyable for the end of his workout.
 - C. The day she started her new job Angela wrote down what she perceived as her strengths and weaknesses to be better equipped to deal with problems and achieve her goals.
 - D. During the month Monica was finishing her dissertation she would only socialize with the people in her life who were positive and self-motivated.
49. In the fight-or-flight response, the adrenal medulla releases _____.
- A. cortisol
 - B. catecholamines
 - C. neuropeptide Y
 - D. testosterone
50. A study was conducted in which 225 female students rated a series of common, domestic appliances, and then were allowed to choose one of two appliances as gifts to take home. A second round of ratings indicated that the participants increased their ratings of the domestic appliance they chose, and lowered their ratings of the appliances they rejected. Which theoretical paradigms below do these results best exemplify?
- A. approach-avoidance
 - B. cognitive dissonance
 - C. Premack's principle
 - D. overjustification

Answer Key

Motivation and Emotion

- 1. C**—The Yerkes–Dodson law is an empirical relationship between arousal and performance. The law dictates that performance increases with physiological or mental arousal, but only up to a point. When levels of arousal become too high, performance decreases. Research has found that different tasks require different levels of arousal for optimal performance. For example, difficult or intellectually demanding tasks may require a lower level of arousal (to facilitate concentration), whereas tasks demanding stamina or persistence may be performed better with higher levels of arousal (to increase motivation). Additionally, we tend to perform newly learned tasks better at a lower level of arousal, but we tend to perform well-learned tasks at a higher level of arousal.
- 2. A**—The experimental results suggest that autonomic responses were dissociated with emotional experiences. The basic premise of the James-Lange theory is that physiological arousal instigates the experience of emotion. Instead of feeling an emotion and subsequent physiological (bodily) response, the theory proposes that the physiological change is primary, and emotion is then experienced when the brain reacts to the information received via the body's nervous system.
- 3. C**—The overjustification effect occurs when an expected external incentive such as money or prizes decreases a person's intrinsic motivation to perform a task. The overall effect of offering a reward for a previously unrewarded activity is a shift to extrinsic motivation and the undermining of pre-existing intrinsic motivation. Once rewards are no longer offered, interest in the activity is lost; prior intrinsic motivation does not return, and extrinsic rewards must be continuously offered as motivation to sustain the activity.
- 4. A**—According to such theorists as Clark Hull and Kenneth Spence, drive reduction is a major cause of learning and behavior. Primary drives are innate drives (e.g. thirst, hunger, and sex), whereas secondary drives are learned by conditioning (e.g. money).
- 5. C**—Among its many effects, angiotensin II increases thirst sensation (dipsogen) through the subfornical organ of the brain (a circumventricular organ), decreases the response of the baroreceptor reflex, and increases the desire for salt. Circumventricular organs are structures in the brain that are characterized by their extensive vasculature and lack of a normal blood brain barrier.
- 6. C**—Physiologists define stress as how the body reacts to a stressor, real or imagined, a stimulus that causes stress. Acute stressors affect an organism in the short term; chronic stressors over the longer term. General Adaptation Syndrome (GAS), developed by Hans Selye, is a profile of how organisms respond to stress. GAS is characterized by three phases: a nonspecific mobilization phase, which promotes sympathetic nervous system activity; a resistance phase, during which the organism makes efforts to cope with the threat; and an exhaustion phase, which occurs if the organism fails to overcome the threat and depletes its physiological resources.
- 7. C**—The passage describes a famous study conducted by Stanley Schachter and Jerome E. Singer in 1962 testing how people use clues in their environment to explain physiological changes. Schachter-Singer theory is also called two-factor theory. Choices I, II, and III were the hypotheses upheld by the experiment. In two-factor theory, an emotional state is the result of the individual's cognitive interpretation of an aroused bodily state.
- 8. A**—In Cannon–Bard theory the physiological changes and subjective feeling of an emotion in response to a stimulus are separate and independent. Arousal does not have to occur before

the emotional changes. In two-factor theory (Schachter-Singer) an emotional state is the result of the individual's cognitive interpretation of an aroused bodily state. In James-Lange theory, emotions follow physical reactions. In Miller's theory, emotion is produced in approach-avoidance situations.

9. **A**—Leptin, the “satiety hormone,” is a hormone made by adipose cells that helps to regulate energy balance by inhibiting hunger. Leptin is opposed by the actions of the hormone ghrelin, the “hunger hormone”. Both hormones act on receptors in the the hypothalamus to regulate appetite to achieve energy homeostasis. Insulin and cholecystikinin also function as satiety signals. Among its many functions, insulin promotes the release of leptin from adipose cells.
10. **A**—Aphagia is the inability or refusal to swallow. The lateral hypothalamus is the brain's hunger center. In experimental studies, rats with lateral hypothalamic lesions refuse to eat or drink and waste away unless force fed. (Note that the ventromedial hypothalamus is the brain's satiety center. Lesions to the ventromedial hypothalamus are likely to result in over-eating.)
11. **B**—All of the choices represent behaviors to satisfy primary or secondary drives under drive reduction theory except thrill seeking. Arousal theory provides a basis to understand the motivations underlying thrill seeking and other similar behavior patterns while also able to encompass the claims of drive reduction theory. In arousal theory, humans are motivated to maintain an optimal level of arousal.
12. **B**—The Schachter-Singer two-factor theory of emotion, states that emotion is based on two factors: physiological arousal and cognitive label. Choice ‘A’ reflects opponent-process theory. Choice ‘C’ is somewhat along the lines of Cannon-Bard theory. Choice ‘D’ reflects Lazarus’ cognitive appraisal theory.
13. **C**—The third stage of the general adaptation syndrome could be either exhaustion or recovery. In exhaustion, all of the body's resources are eventually depleted and the body is unable to maintain normal function. The initial autonomic nervous system symptoms may reappear (sweating, raised heart rate, etc.). If stage three is extended, long-term damage may result (prolonged vasoconstriction results in ischemia which in turn leads to cell necrosis), as the body's immune system becomes exhausted, and bodily functions become impaired. What is occurring is decompensation, choice ‘D’, the symptomatic effects of exhaustion.
14. **A**—The Holmes and Rahe social readjustment rating scale is sometimes simply called the Holmes and Rahe stress scale. Subjects are asked to tally a list of 43 life events based on a relative score. A positive correlation of 0.118 was found between the score on the scale and incidence of stress related illnesses.
15. **D**—The basal ganglia have a limbic sector whose components are assigned distinct names: the nucleus accumbens, ventral pallidum, and ventral tegmental area (VTA). There is considerable evidence that this limbic portion plays a central role in reward learning, particularly a pathway from the VTA to the nucleus accumbens that uses the neurotransmitter dopamine.
16. **A**—Extrinsic motivation refers to the performance of an activity in order to attain a desired outcome. Extrinsic motivation comes from influences outside of the individual. Common extrinsic motivations are rewards (for example money or grades) for showing the desired behavior, and the threat of punishment following misbehavior. Competition is an extrinsic motivator because it encourages the performer to win and to beat others, not simply to enjoy the intrinsic rewards of the activity.
17. **A**—The overjustification effect occurs when an expected external incentive such as money or

prizes decreases a person's intrinsic motivation to perform a task. The overall effect of offering a reward for a previously unrewarded activity is a shift to extrinsic motivation and the undermining of pre-existing intrinsic motivation. Once rewards are no longer offered, interest in the activity is lost. Prior intrinsic motivation does not return, and extrinsic rewards must be continuously offered as motivation to sustain the activity.

18. **B**—Flow and hyperfocus are similar states. However, hyperfocus contains in its meaning an element of possible dysfunction. In some circumstances both flow and hyperfocus can be an aid to achievement, but in circumstance or situations, where the same focus and behavior could be a liability, distracting from the task at hand, hyperfocus is the better usage. Perseveration is a related term in which hyperfocus is symptomatic of a psychiatric condition where there is an inability or impairment in switching tasks or activities. A stereotypy is a repetitive or ritualistic movement, posture, or utterance.
19. **A**—Within the framework of behaviorism, drive theory involves negative reinforcement. Task reinforcement is associated with the removal of an aversive stimulus—the lack of homeostasis in the body.
20. **B**—William James argued that feelings and emotions were secondary to physiological phenomena. In his theory, James proposed that the perception of what he called an “exciting fact” directly led to a physiological response, known as “emotion.”
21. **C**—The hypothesis is that the speed with which affective and non-affective information gets activated varies with context. So neither Affective Primacy nor Cognitive Primacy should hold at all times. In other words, physiological arousal may occur first or cognitive labeling may occur first.
22. **A**—Choices ‘A’ and ‘C’ both represent correct

usage of the term, but the question refers to the specific usage of valence in classifying an emotion (not a stimulus).

23. **D**—Hyperphagia is excessive hunger or increased appetite. Ghrelin, the “hunger hormone” is a peptide hormone produced by ghrelinergic cells in the gastrointestinal tract which functions as a neuropeptide in the central nervous system. Ghrelin signaling mediates appetite through lateral hypothalamic orexin pathways
24. **C**—This is the equilibrium point where, as the goal is approached, the relative strengths of approach and avoidance are about equal, and activity stops. Double approach-avoidance is not relevant to the experiment. Double approach-avoidance describes a situation, common in real life, where an individual is faced with having to choose between two or more goals, each of which has both attracting and aversive aspects.
25. **C**—In the avoidance-avoidance conflict, the individual is faced with two goals, both of which are aversive.
26. **A**—Approach-approach conflict may lead to a state of unstable equilibrium. When one of the two goals is approached, its desirability increases. In other words, the choice becomes easier as soon as one moves towards either goal.
27. **D**—Display rules are a social group's informal norms about when, where, and how one should express emotions. They can be described as culturally prescribed rules that people learn early on in their lives by interactions and socializations with other people. The results of one particular study showed that Japanese display rules allowed the expressions of strong emotions (either positive or negative) such as anger, contempt, disgust, happiness, or surprise far less than either American or Canadian display rules.

28. **D**—The limbic system is not separate system but a collection of structures from the telencephalon, diencephalon, and mesencephalon. It includes the olfactory bulbs, hippocampus, hypothalamus, amygdala, anterior thalamic nuclei, and cingulate gyrus (a partial list of limbic system structures). The limbic system supports a variety of functions including emotion, behavior, motivation, long-term memory, and olfaction. Emotional life is largely housed in the limbic system, and it has a great deal to do with the formation of memories.
29. **A**—First impressions and evaluations of trustworthiness are functions of social processing. However, the other choices do also represent functions involving participation of the amygdala.
30. **C**—The study suggests that Maslow's hierarchy may be limited as a theory for developmental sequence. For example, Maslow's hierarchy places the need for esteem at a higher position, but according to the age progression in the question-stem, the sequence of the need for love and the need for self-esteem are reversed. Furthermore, elderly people should be focused on self-actualization instead of security if Maslow's hierarchy truly represented a developmental sequence.
31. **A**—The ventromedial hypothalamus is involved with the recognition of the feeling of fullness. It is the primary satiety center in the hypothalamus. The VMH responds to leptin, made by adipose cells to assist in the regulation of energy balance by inhibiting hunger.
32. **B**—Ghrelin is the 'hunger hormone' and leptin is the 'satiety hormone'. Overproduction of ghrelin and underproduction of leptin lead to over-eating.
33. **D**—Priming is an implicit memory effect in which exposure to one stimulus (i.e., perceptual pattern) influences the response to another stimulus. The particular type of priming described here is known as affect priming.
34. **A**—The amygdala plays a central role in interpreting facial awareness and other social processing functions. Bilateral amygdala damage impairs recognition of emotions in facial expressions, especially fear. Impairment has been shown to occur regarding other negative emotions in addition to fear.
35. **B**—The two-factor theory of emotion, states that emotion is based on two factors: physiological arousal and cognitive label. The theory was created by researchers Stanley Schachter and Jerome E. Singer. According to the theory, when an emotion is felt, a physiological arousal occurs and the person uses the immediate environment to search for emotional cues to label the physiological arousal. This can sometimes cause misinterpretations of emotions based on the body's physiological state. When the brain does not know why it feels an emotion it relies on external stimulation for cues on how to label the emotion.
36. **B**—The periovulatory period of the female menstrual cycle is often associated with increased female receptivity and sexual motivation. During this stage in the cycle, estrogens are elevated in the female and progesterone levels are low. Ovulating heterosexual females also display preferences toward masculine faces and report greater sexual attraction to males other than their current partner.
37. **A**—The first step in cognitive mood repair is recognizing emotional upset. Gaining a better understand of the source of the negative mood can give the individual a sense of control of his or her mood. The other choices represent strategies which subsequently may be employed.
38. **C**—Answering this question correctly is easy if you know the meaning of the term 'alexithymia'. One purpose of the question is to teach you that term if you don't already know the meaning. Alexithymia is a personality con-

struct characterized by the subclinical inability to identify and describe emotions in the self. The core characteristics of alexithymia are marked dysfunction in emotional awareness, social attachment, and interpersonal relating. Alternatively, you could answer this question by ruling out the wrong answer choices based on neurotransmitter functions. For example, dopamine, not serotonin, is responsible for reward-seeking.

39. **D**—Emotions are complex and activate many brain regions. However, one aspect of emotion processing is the asymmetrical nature of emotional control and processing in the brain. A simplified, general rule is that the two hemispheres have a complementary specialization for control of different aspects of emotion. The left hemisphere primarily process “positive” emotions and right hemisphere primarily process “negative” emotions. There is also a reciprocal relationship between prefrontal cortex activity and amygdala activity. The left prefrontal cortex plays a role in approach behaviors (positively valenced emotions), while the left amygdala plays a role in withdrawal behaviors (negatively valenced emotions). When the left prefrontal cortex is activated the left amygdala shows a decrease in activation.
40. **D**—The strict definition of concordance is the probability that a pair of individuals will both have a certain characteristic, given that one of the pair has the characteristic.
41. **A**—Increasing levels of cholecystikinin, insulin, and leptin are all signals of satiety. Decreasing levels of ghrelin also act as a satiety signal. Ghrelin is the ‘hunger hormone’. Its target is the lateral hypothalamus. Ghrelin is produced by ghrelinergic cells in the gastrointestinal tract. When the stomach is empty, ghrelin is secreted. When the stomach is stretched, secretion stops.
42. **A**—Operationalization is a process of defining the measurement of a phenomenon that is not directly measurable, though its existence

is indicated by other phenomena. Operationalization is thus the process of defining a fuzzy concept so as to make it clearly distinguishable, measurable, and understandable in terms of empirical observations. Ekman and Friesen operationalized facial expressions and by extension, as well, emotional expression, although the latter is controversial.

43. **C**—The research is one of a number of studies supporting the hypothesis that there are independent neural systems in the brain, each handling a specific basic emotion. Fear and disgust are qualitatively different basic emotions. Evidence suggests that the insular cortex is the main neural structure involved in the emotion of disgust. (The insular cortex is a portion of the cerebral cortex folded deep within the lateral sulcus, the fissure separating the temporal lobe from the parietal and frontal lobes). On the other hand, the brain structure that is the center of most neurobiological events associated with fear is the amygdala.
44. **C**—Motive is the psychological state underlying the arousal of an organism to action toward a desired goal.
45. **A**—Although the passage cites additional evidence suggestive of a different conclusion, within the context of the discussion the downstream position of the FFA in emotional processing is given as evidence to support the position that the FFA plays little role in emotional processing. This position is posited using this evidence but then ultimately discredited in the passage.
46. **C**—In Plutchik’s model the basic emotions are conceptualized as pairs of polar opposites. He suggested 8 primary bipolar emotions: joy versus sadness; anger versus fear; trust versus disgust; and surprise versus anticipation
47. **A**—In Lazarus’ cognitive appraisal theory, emotion is a disturbance that occurs in the following order: 1) Cognitive appraisal—The in-

dividual assesses the event cognitively, which cues the emotion. 2) Physiological changes—The cognitive reaction starts biological changes such as increased heart rate or pituitary adrenal response. 3) Action—The individual feels the emotion and chooses how to react.

48. **B**—Premack’s principle, or the relativity theory of reinforcement, states that more probable behaviors will reinforce less probable behaviors. In other words, you can use easier, more enjoyable tasks to reinforce more difficult, arduous tasks.
49. **B**—The adrenal medulla releases the catecholamines epinephrine and norepinephrine. The adrenal cortex releases cortisol.
50. **B**—The results of the experiment can be explained in terms of cognitive dissonance, the mental stress (discomfort) experienced by a person who simultaneously holds two or more contradictory beliefs, ideas, or values. A person who experiences inconsistency tends to become psychologically uncomfortable, and so is motivated to try to reduce the cognitive dissonance that occurs. When making a difficult decision, there are always aspects of the rejected choice that one finds appealing and these features are dissonant with choosing something else. In other words, the cognition, “I chose X” is dissonant with the cognition, “There are some things I like about Y.”