

1. What is a *developmental theory*? Identify three things discussed in the text that a theory can do.
2. Describe similarities between Freud's theory of psychosexual development and Erikson's theory of psychosocial development. Next, describe ways in which these theories differ.
3. Describe *classical* and *operant conditioning*. Next, identify the researcher who proposed the concept of classical conditioning and the researcher who introduced the idea of operant conditioning.
4. Explain *social learning theory*. From where did this theory originate, and what does it emphasize? Next, describe the concept of *modeling*, and indicate at least three reasons that a model is likely to be copied.
5. List Piaget's four stages of cognitive development in order, and explain what Piaget believed facilitates intellectual advancement.
6. Define *information-processing theory*. How does this theory differ from Piaget's theory of cognitive development?
7. Your textbook describes seven techniques used by neuroscientists to understand brain function. List and describe two of these techniques. Despite advancements in brain imaging, why are theories still needed to understand human development?
8. Describe what Vygotsky meant by “apprenticeship in thinking” and “guided participation.” Give an example of each.
9. Define Vygotsky's “zone of proximal development,” including how it relates to learning. Provide two examples.
10. Maggie works is a child-care teacher who works primarily with toddlers. Most of the children that Maggie works with are not yet toilet-trained. Explain the advice a psychoanalyst, behaviorist, cognitive theorist, and a sociocultural theorist would give Maggie regarding her approach to toilet training.

11. Describe the two biologically-based drives associated with evolutionary theory, and explain how selective adaptation relates to this theory. Be sure to explain the process of selective adaptation in your answer.
12. Define *eclectic perspective*, and provide an example of how a clinician might use this approach to explain a case of childhood aggression.
13. List and describe the five theories that have contributed to our understanding of human development.

Answer Key

1. A developmental theory is a systematic statement of general principles that provides a framework for understanding how and why people change as they grow older. Theories can produce hypotheses, generate discoveries, and offer practical guidance.

	Good (5 pts.)	Fair (3 pts.)	Weak (1–0 pts.)
Defines developmental theory	Defines developmental theory	Gives a vague definition of developmental theory	Does not define a developmental theory
Identifies the three things a theory can do	Tells the three things a theory can do	Tells two things a theory can do	Tells one thing or nothing that a theory can do

2. Both Freud and Erikson proposed stage theories based on the belief that adult problems echoed childhood conflicts. However, Erikson's psychosocial theory had eight stages, while Freud's psychosexual theory had just four. Erikson named two polarities at each stage, and his stages encompassed the entire life span, while Freud's ended at adolescence. Erikson's theory also emphasized the influence of family and culture, while Freud's theory emphasized unconscious sexual urges.

	Good (5 pts.)	Fair (3 pts.)	Weak (1–0 pts.)
Describes similarities	States that both men had stage theories based on the idea that adult problems echoed childhood conflicts	States that both theories had stages	Does not describe accurately how the theories were similar
Describes differences	States all four ways in which the theories differed	States three of the four ways in which the theories differed	States two or fewer ways in which the theories differed or does not accurately describe how the theories differed

3. Classical conditioning is the learning process in which a meaningful stimulus is connected with a neutral stimulus that had no special meaning before conditioning. The person gradually reacts to the neutral stimulus with the same behavior as the meaningful one. Pavlov introduced the concept of classical conditioning. In operant conditioning, a person performs some action, and then a response occurs. If the response is pleasurable, the person is likely to repeat the action. If the response is unpleasant, the person is unlikely to repeat the action. Skinner is associated with operant conditioning.

	Good (5 pts.)	Fair (3 pts.)	Weak (1–0 pts.)
Describes classical and operant conditioning	Correctly describes both types of conditioning	Correctly describes one type of conditioning	Does not describe either type of conditioning or confuses the two types

Names the researchers associated with each	Correctly names Pavlov and Skinner	Correctly names Pavlov <i>or</i> Skinner	Does not name either Pavlov or Skinner or confuses who belongs with each type of conditioning
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4. Social learning theory is an extension of behaviorism that emphasizes the influence that other people have over a person's behavior. Even without specific reinforcement, every individual learns many things through observation and imitation of other people. Modeling is the central process of social learning, by which a person observes the actions of others and then copies them. Models are people; they are most likely to be copied if they are admired, powerful, nurturing, or similar to the observer.

	Good (5 pts.)	Fair (3 pts.)	Weak (1–0 pts.)
Explains social learning theory	States that the theory is an offshoot of behaviorism and how everyone learns by observation and imitation	States that everyone learns through observation and imitation	Is vague about the definition of social learning theory
Describes modeling	Clearly describes how modeling is implicit in social learning	Describes imitation but not modeling	Fails to describe modeling
Gives reasons why a model is likely to be copied	Lists at least three of the four reasons	Lists two of the four reasons	Lists one or none of the reasons

5. The four stages are sensorimotor, preoperational, concrete operational, and formal operational. According to Piaget, cognitive equilibrium facilitates intellectual advancement because humans seek mental balance. Disequilibrium can cause cognitive growth if people change their thinking through assimilation or accommodation.

	Good (5 pts.)	Fair (3 pts.)	Weak (1–0 pts.)
Lists the stages of cognitive development	Lists the four stages in order	Lists three of the stages in order <i>or</i> confuses the order of two of the stages	Lists two or fewer stages or has the stages out of order
Explains causes of intellectual advancement	Understands how people seek cognitive equilibrium and that disequilibrium can cause assimilation or accommodation	Understands that people seek cognitive equilibrium	Does not adequately explain Piaget's beliefs about intellectual advancement

6. Information-processing theory is a perspective that compares humans' thinking processes to a computer's analysis of data, including sensory input, connections, stored memories, and output. Instead of interpreting responses by infants and children, as Piaget did, information-processing theory focuses on the processes of thought—that is, when, why, and how neurons fire before a response.

	Good (5 pts.)	Fair (3 pts.)	Weak (1–0 pts.)
Defines information-processing theory	Gives the definition of information-processing theory	Knows that information-processing theory compares cognition to computer processes	Gives an incorrect or vague definition of information-processing theory
Explains how the theory differs from Piaget's	Differentiates Piaget's theory from information-processing theory	Partially differentiates Piaget's theory from information-processing theory	Does not differentiate between the two theories

7. Students can list and describe any two of the following techniques:

EEG (electroencephalogram): This measures electrical activity in the cortex. It can differentiate active brains from sleeping brains and brain states that are half-awake, or dreaming.

ERP (event-related potential): The amplitude and frequency of brain electrical activity change when a particular stimulus occurs. First the ERP establishes the usual patterns, and then researchers present a stimulus that causes a blip in electrical activity. ERP indicates how quickly and extensively people react.

MRI (magnetic resonance imaging): The water molecules in various parts of the brain each have a magnetic current, and measuring that current reveals the amount of myelin, neurons, and fluid in the brain.

fMRI (functional magnetic resonance imaging): In advanced MRI, function is measured as more oxygen is added to the blood flow when specific neurons are activated. The presumption is that increased blood flow means that the person is using that part of the brain. fMRI has revealed that several parts of the brain are active at once.

PET (position emission tomography): This can reveal the volume of neurotransmitters; the rise or fall of brain oxygen, glucose, amino acids; and more.

fNIRS (functional near infrared spectroscopy): This measures changes in blood flow. It depends on light rather than magnetic charge. By measuring how each area of the brain absorbs light, neuroscientists can infer activity of the brain.

DTI (diffusion tensor imaging): This is another technique that builds on the MRI. It measures the flow (diffusion) of water molecules within the brain, which shows connections between one area and another.

Variations within and between people make it difficult to know what someone is thinking via brain scans. This confirms the need for theory. Without an idea of what to look for, or what it might mean, the millions of data points from all brain images might lead to the same trap as earlier measurements of the skull—human bias.

8. Vygotsky stated that all adults teach children the skills expected by their society and culture. Apprenticeship in thinking is how Vygotsky described the more skilled members of the society acting as tutors or mentors to help a person develop skills. Guided participation is the method used by parents, teachers, and entire societies to teach novices (apprentices) the skills and habits expected within their culture.

	Good (5 pts.)	Fair (3 pts.)	Weak (1–0 pts.)
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Defines apprenticeship in thinking and guided participation	Gives a definition for each term	Gives a definition for either term	Confuses the two terms
Gives an example of each	Offers an example for each term	Offers an example for either term	Confuses the two examples

9. The zone of proximal development is the set of skills, knowledge, and concepts that a learner is close to acquiring but cannot master without help. A mentor breaks a large task down into its parts and then motivates and assists the learner to achieve it, one step at a time. Some frustration is permitted, but the learner must be actively engaged and never passive or overwhelmed. Mentors continually push for more competence by urging the learner to try something just a little harder rather than make a large leap. Examples include a person helping another learn how to tie his or her shoes, swim, ride a bike, or ice skate.

	Good (5 pts.)	Fair (3 pts.)	Weak (1–0 pts.)
Defines zone of proximal development and how it relates to learning	Defines the term and explains clearly how it relates to learning (describes mentor and learner)	Defines the term and somewhat explains how it relates to learning (describes mentor or learner)	Does not define the term or cannot explain how it relates to learning (fails to describe mentor or learner)
Provides examples	Provides two examples	Provides one example	Does not provide an example

10. Psychoanalytic theory identifies the first year of life as the oral stage, which occurs before the anal stage (years 1–3). Thus, psychoanalytic theorists believe that toilet training should be postponed until the child is cognitive, emotionally, and biologically ready—around age 2 for daytime training and age 3 for nighttime dryness. A behaviorist would argue that toilet training should occur whenever the parent (or adult) wishes to start, not at a particular age. Praise and reward should be used each time the child uses the toilet, as they will increase the likelihood that the child will successfully use the toilet in the future. A cognitive theorist would suggest that a parent (or adult) wait until the child can understand reasons to urinate and defecate in the toilet. A sociocultural theorist would emphasize the vast differences between one community and another. That is, different communities set their own guidelines for when and how to begin toilet training. Therefore, toilet training should reflect the values and expectations of the child's cultural environment.

	Good (5 pts.)	Fair (3 pts.)	Weak (1–0 pts.)
Explains the advice that each therapist would offer	Accurately explains how each therapist would advise Maggie on toilet training	Accurately explains how two therapists would advise Maggie on toilet training	Does not explain how any therapist would advise on toilet training or provides incorrect information

11. According to evolutionary theory, every species has two long-standing, biologically

based drives: survival and reproduction. A basic idea from evolutionary theory is selective adaptation, which proposes that humans today react in ways that helped their ancestors' survival and reproduction long ago. Thus, some of the best qualities of people—cooperation, spirituality, and self-sacrifice—may have originated thousands of years ago, when groups of people survived because they took care of one another. The process of selective adaptation works as follows: If one person happens to have a trait that makes survival more likely, the gene (or combination of genes) responsible for that trait is passed on to the next generation if that person lives long enough to reproduce. Anyone with such a fortunate genetic inheritance has a better chance than those without that gene to survive, mate, and bear many children—half of whom would inherit genes for the desirable trait.

	Good (5 pts.)	Fair (3 pts.)	Weak (1–0 pts.)
Identifies the drives associated with evolutionary theory	States the two biologically based drives	States either survival <i>or</i> reproduction	Cannot identify either survival or reproduction
Explains selective adaptation, including the process	Explains both aspects of selective adaptation, including the process	Explains either aspect of selective adaptation and process	Does not adequately explain either aspect of selective adaptation or the process

12. The approach taken by most developmentalists is to apply aspects of each of the various theories of development rather than adhering exclusively to one theory. Childhood aggression should be explained from at least two competing theories: psychoanalytic (e.g., inner drives), behaviorism (e.g., learned from observation), cognitive (e.g., beliefs that aggression is good or helpful), sociocultural (e.g., may need to be aggressive to be successful in one's culture), and evolutionary (e.g., aggression was an adaptive response among our ancestors or promoted survival).

	Good (5 pts.)	Fair (3 pts.)	Weak (1–0 pts.)
Defines eclectic perspective	Understands that most developmentalists apply aspects of multiple theories	States that most developmentalists apply aspects of two theories	Cannot define the eclectic perspective
Describes its use to explain childhood aggression	Explains childhood aggression based on three or more theories	Explains childhood aggression based on two theories	Explains childhood aggression based on one theory

13. Psychoanalytic theory has made scientists aware of the importance of social and emotional experiences during early childhood. Behavioral theory (or behaviorism) has shown the effect that immediate responses and associations have on human learning. Cognitive theory helps scientists understand how intellectual processes and thinking affect people's actions. Sociocultural theories show how one's culture, social interaction, and environment influence one's behaviors. Evolutionary theory suggests that human impulses need to be recognized before they can be guided.

	Good (5 pts.)	Fair (3 pts.)	Weak (1–0 pts.)
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Lists theories	Lists the five theories: psychoanalytic, behaviorism, cognitive, sociocultural, and evolutionary	Lists three of the theories	Lists one or two of the theories
Describes how theories have contributed to understanding	Describes how each of the five theories has added to our knowledge of development	Describes how two of the theories have added to our knowledge of development	Describes how one of the theories has added to our knowledge of development