

Chapter 2

COGNITIVE AND LINGUISTIC DEVELOPMENT

CHAPTER OUTLINE	RELEVANT TEST BANK ITEMS
BASIC PRINCIPLES OF HUMAN DEVELOPMENT	Multiple-Choice 1–5
PIAGET’S THEORY OF COGNITIVE DEVELOPMENT Piaget’s Basic Assumptions Piaget’s Stages of Cognitive Development Current Perspectives on Piaget’s Theory	Multiple-Choice 6–44 Essay 92–96
VYGOTSKY’S THEORY OF COGNITIVE DEVELOPMENT Vygotsky’s Basic Assumptions Current Perspectives on Vygotsky’s Theory	Multiple-Choice 45–58 Essay 97
AN INFORMATION PROCESSING VIEW OF COGNITIVE DEVELOPMENT Attention Learning Strategies Knowledge Metacognition	Multiple-Choice 59–68 Essay 98
LINGUISTIC DEVELOPMENT Theoretical Perspectives on Language Development Trends in Language Development Learning a Second Language	Multiple-Choice 69–85 Essay 99
CONSIDERING DIVERSITY IN COGNITIVE AND LINGUISTIC DEVELOPMENT Accommodating Students with Exceptionalities	Multiple-Choice 86–89
SUMMARY OF COGNITIVE AND LINGUISTIC DEVELOPMENT	Multiple-Choice 90–91 Essay 100
The items in the “Integrative Questions” chapter of this Test Bank integrate the content of two or more textbook chapters. Within that chapter, the items listed to the right are relevant to Chapter 2.	Multiple-Choice 1–7, 9 Essay 18–19, 38

Multiple-Choice Questions

- 1. Most developmental theorists agree that:
 - a. development occurs in stages, with each stage occurring at the same age for all children.
 - b. developmental milestones appear in a consistent sequence for most children.
 - c. physical development occurs in a predictable sequence, but cognitive development does not.
 - d. cognitive development occurs in a predictable sequence, but physical development does not.

- 2. According to developmentalists, maturation refers to the:
 - a. developmental changes that are controlled in large part by heredity.
 - b. changes related specifically to children’s physical development.
 - c. changes related specifically to children’s emotional development.
 - d. changes that reflect increasingly appropriate social behaviour.

- 3. Which one of the following statements best illustrates a universal in development?
 - a. Piaget proposed that formal operational thought is characterized by an ability to think abstractly about a wide variety of topics.
 - b. Contemporary theorists have derived the concept “cognitive apprenticeship” from Vygotsky’s theory of development.
 - c. Young children show similar patterns in their language development regardless of the specific language that they learn.
 - d. Piaget neglected to consider the influence of prior knowledge and experience on children’s ability to think logically.

- 4. Which one of the following pairs of children best illustrates a difference in temperament?
 - a. Monique enjoys dancing; Jillian prefers singing.
 - b. Henri likes to spend his time reading; Matt would rather watch a good movie.
 - c. Saidi is very sociable and outgoing; Krista is more quiet and reserved around peers.
 - d. Dan likes to think about abstract ideas; Michael learns more effectively when he can manipulate concrete objects.

- 5. Which of the following is the best description of a sensitive period in development?
 - a. a stage of development where children display little emotional regulation.
 - b. a particular age for the attainment of developmental tasks.
 - c. an age range where environmental influences are likely to have the most effect.
 - d. an age range where children are likely to have neurological development.

- 6. What branch of philosophy inspired Piaget’s work with children?
 - a. phenomenology
 - b. epistemology
 - c. etiology
 - d. cognitive psychology

- 7. From Piaget’s perspective, children are:
 - a. most likely to learn when parents and teachers entice them to do so.
 - b. most likely to learn things that bring about desirable consequences.
 - c. more likely to develop cognitively in a formal school setting than at home.
 - d. eager to interact with and make sense of their world.

- 8. Five-year-old Sophie is playing with blocks. She stacks them one on top of another until her towers eventually tumble, and then she begins stacking them again. Which one of the following best reflects Piaget’s view of how Sophie is probably learning in this situation?
 - a. She is probably still in the sensorimotor stage, so she will remember what she learns about the blocks only while the blocks are still in front of her.
 - b. She is absorbing information about how the environment behaves (e.g., “objects fall”) without consciously thinking about it.
 - c. She is actively thinking about and interpreting the results of her actions.
 - d. Since she builds one tower after another, she is obviously reinforced by watching her towers tumble down.

- 9. Which one of the following statements is not part of Piaget’s basic assumptions?
 - a. Children can reason in the same way as adults if they are provided with stimulating physical and social environments.
 - b. Children construct knowledge from their experience.
 - c. Cognitive development depends on interactions with physical and social environments.
 - d. Neurological development is a prerequisite for cognitive development.

- 10. In Piaget’s theory, a scheme can best be described as a(n):
 - a. organized group of similar thoughts or actions.
 - b. set of motor skills that preschoolers develop.
 - c. lifestyle or family pattern.
 - d. mental picture of oneself.

- 11. Which one of the following clearly illustrates Piaget’s concept of assimilation?
 - a. A kindergarten child draws on the chalkboard with a large white crayon instead of with chalk.
 - b. A third grader develops the necessary eye-hand coordination for writing letters.
 - c. A sixth grader moves to a different school and changes styles to fit the fashions.
 - d. An eighth grader is discouraged from using the word “awesome” to describe everything he sees.

- 12. Louis receives a new soccer ball and begins to dribble it in the same way he dribbles his basketball. His dribbling of the new ball reflects Piaget’s concept of:
 - a. concrete operations.
 - b. accommodation.
 - c. cognitive structure.
 - d. assimilation.

- 13. Which one of the following best illustrates Piaget’s concept of accommodation?
 - a. Anne is given 10 more addition problems when she does the first 10 carelessly.
 - b. Gabrielle writes down her definition of a mollusk—something she learned word for word from a textbook.
 - c. Aaron copies down what his teacher writes on the blackboard.
 - d. Karl revises his understanding of what clouds are like when he studies them in science.

- 14. The processes of assimilation and accommodation both involve:
 - a. concrete operational thought.
 - b. relating new information to prior knowledge.
 - c. abstract thought processes such as inductive reasoning.
 - d. oral communication skills.

- 15. Which one of the following teachers is definitely keeping in mind Piaget's idea that assimilation and accommodation are both necessary for learning and cognitive development to occur?
 - a. Mr. Rodriguez presents brand new topics every day, expecting the continual novelty to keep students interested and motivated.
 - b. Ms. Baretta makes sure that students have learned one topic very, very well before moving on to another.
 - c. Mr. Chang shows students how a new topic is similar to the things they already know, but also different in certain ways.
 - d. Ms. Doherty uses a lot of drill and practice exercises, encouraging students to work faster every time.

- 16. Which one of the following best exemplifies Piaget's notion of disequilibrium?
 - a. Julie and Robin disagree about the existence of God.
 - b. Frank displays advanced math skills but struggles in reading.
 - c. Shannah includes a folding table on the train in her conception of tables.
 - d. Lilly, a toddler raised in an urban apartment building, is unable to figure out the purpose of a garden hose that she sees on a suburban house.

- 17. Piaget's view of cognitive development can best be described as:
 - a. a gradual and steady progression of intellectual capabilities.
 - b. discrete stages in which distinctly different forms of logical thought emerge.
 - c. changes in the brain that result in increasingly rapid learning.
 - d. an increasing number of stimulus-response connections over time.

- 18. Mr. Humphrey teaches a class of twenty 8-year-old third graders. His goal for the upcoming school year is to help at least 50% of his students reach formal operations. Judging from Piaget's theory, we would expect that Mr. Johnson's goal is:
 - a. an easy one to attain.
 - b. almost impossible to attain.
 - c. attainable only if he emphasizes abstract reasoning throughout the school year.
 - d. attainable only if his students have had enriched educational experiences most of their lives.

- 19. Miranda interacts with her toys when they are in view, but seems to completely forget about them when they are not near. Which of Piaget's stages of cognitive development is Miranda demonstrating?
 - a. preoperational.
 - b. concrete operations.
 - c. pragmatics.
 - d. sensorimotor.

- 20. Piaget proposed that true thought emerges when children begin to develop:
 - a. symbolic thinking.
 - b. conservation.
 - c. egocentric language.
 - d. abstract thinking abilities.

- 21. From the perspective of Piaget's theory, why is language critical for children's cognitive development?
 - a. It allows them to get what they want.
 - b. It gives them a means for thinking about things symbolically.
 - c. It takes up most of their mental energy, thereby keeping them from being easily distracted.
 - d. It gives them a better self-image, because they are now aware that they can communicate effectively with other human beings.

- 22. Piaget spoke of egocentrism in both the thought and speech of the preoperational child. Three of the following are examples of egocentrism as Piaget defined it. Which one is not?
 - a. Justin is constantly grabbing objects and pulling them toward himself.
 - b. Lois tells a story as if her listeners already know many of the details.
 - c. Kate cannot relate to the question, "How do you think Molly feels?"
 - d. Isabel cannot understand why she must share classroom equipment with others.

- 23. Which one of the following children shows signs that he or she is in Piaget's preoperational stage of cognitive development?
 - a. Karim is able to reason logically about what it would be like to grow old, yet he cannot envision what it would be like to turn into a fish.
 - b. Jenny learns hundreds of new words and phrases in only a few months.
 - c. Joslyn thinks that when a stuffed dog disappears under a box, it no longer exists.
 - d. Jie is able to understand how another boy feels when his bicycle is stolen.

- 24. Three of the following demonstrate the differences between concrete operational and formal operational thought. Which of the following does not?
 - a. dependence on concrete reality vs. ability to form abstractions
 - b. lack of sequential reasoning vs. sequential reasoning
 - c. inability to test many hypotheses vs. ability to test many hypotheses
 - d. lack of proportional reasoning vs. proportional reasoning

- 25. Mary Jane is given her choice of two Hershey bars, one of which has been broken into four pieces. She chooses the broken candy bar, believing that it has more candy. Mary Jane is showing a lack of _____, indicating that she has not yet completed the transition to the _____ stage of development.
 - a. combinatorial thought; concrete operations
 - b. combinatorial thought; formal operations
 - c. conservation; concrete operations
 - d. conservation; formal operations

- 26. Which one of the following statements shows transductive reasoning?
 - a. “The two glasses of water must still have the same amount because you haven’t added any water or taken any away.”
 - b. “It snows in the wintertime because it’s Christmas.”
 - c. “Six and one are seven because you just take six and count one more.”
 - d. “If you have four people, you can make six possible pairs.”

- 27. Linda’s teacher shows her a small ball of clay. He then squashes the ball so it looks like a pancake and asks Linda which has more clay, the ball or the pancake. Linda replies that they both have the same amount. “How do you know?” asks her teacher. “Look,” says Linda, “I can roll the pancake back into the same ball it was before.” Linda’s response shows:
 - a. formal operational logic.
 - b. a distinction between physical and psychological events.
 - c. reversibility.
 - d. transductive reasoning.

- 28. According to your textbook, formal operational egocentrism is:
 - a. the notion that all individuals should achieve formal operations in adulthood
 - b. the ability to think about oneself in concrete ways
 - c. the inability to separate one’s abstract thoughts from those of others
 - d. the ability to solve personal problems in abstract ways

- 29. An example of Piaget's multiple classification is:
 - a. identifying a shape as a square one day but as a triangle the next.
 - b. realizing that things that are cars can also be vehicles.
 - c. getting cows and horses confused.
 - d. understanding that some behaviours that are perfectly acceptable at home are unacceptable at school.

- 30. Which one of the following is associated with Piaget's concrete operations stage?
 - a. an inability to classify objects as belonging to more than one category
 - b. separation and control of variables
 - c. reasoning about hypothetical ideas
 - d. deductive reasoning

- 31. Ms. Raman, a fourth-grade teacher, asks her students to write a list of the ways that they could use a pencil that don't involve writing or drawing. What kind of response is Ms. Raman likely trying to get from her students?
 - a. concrete operations.
 - b. formal operations.
 - c. multiple classifications.
 - d. deductive reasoning.

- 32. One thing that children in Piaget's formal operations stage can do that children in the concrete operations stage cannot is:
 - a. distinguish between their own feelings and those of others.
 - b. consider someone else's perspective on an issue.
 - c. understand that some actions, when done, can also be undone, or reversed.
 - d. reason logically about strictly hypothetical situations.

- 33. Considering Piaget's theory of cognitive development, we would expect a student in the concrete operational stage to have the greatest difficulty with which one of the following questions?
 - a. An apple pie is cut into 4 pieces. A blueberry pie of the same size is cut into 12 pieces. How many pieces of blueberry pie do you need to have the same amount as 3 pieces of the apple pie?
 - b. How are an apple and a blueberry alike?
 - c. If we have one row of blueberries arranged like so: o o o o o o
and another row of blueberries arranged like so: o o o o o o
then does one row have more blueberries than the other?
 - d. If you have 8 Macintosh apples and 2 Jonathan apples, then do you have more Macintoshes or more apples?

- 34. Vranda agrees with this logic:
If all violins are musical instruments,
And if all musical instruments make noise,
Then all violins must make noise.
However, we then present this situation:
If all Cheetos are rutabagas,
And if all rutabagas are oysters,
Then all Cheetos are oysters.
Vranda vehemently denies that Cheetos can possibly be oysters. Based on this information, we would conclude that Vranda is in the _____ stage of development.
 - a. sensorimotor
 - b. preoperational
 - c. concrete operational
 - d. formal operational

- 35. According to newer research on cognitive development, which of the following statements is true regarding Piaget's interpretations?
 - a. Piaget likely underestimated the abilities of infants and preschoolers
 - b. Piaget likely overestimated the abilities of infants and preschoolers
 - c. Piaget likely underestimated the abilities of adolescents
 - d. Piaget likely overestimated the abilities of elementary school students

- 36. Piaget claimed that an adolescent's overly optimistic idealism about the world is due to _____ during the formal operations stage.
 - a. egocentrism
 - b. irreversibility
 - c. an incompletely developed ability to think abstractly
 - d. centration

- 37. James is talking about how much better the world would be if everyone got along with everyone else. James is probably in the _____ stage of development.
 - a. concrete operations
 - b. sensorimotor
 - c. formal operations
 - d. preoperational

- 38. Three of the following statements are in line with Piaget’s explanation of why mathematical abilities improve with the development of formal operations. Which one is not?
 - a. abstract word problems become easier to solve
 - b. concepts like negative number become understandable
 - c. proportional reasoning is possible
 - d. sequential reasoning is possible

- 39. At which one of Piaget’s stages will you first see the following behaviour: Lorne can correctly answer the question, “If all flegs are blats, and if all blats are dulms, are all flegs also dulms?”
 - a. preoperational
 - b. formal operational
 - c. sensorimotor
 - d. concrete operational

- 40. Olivia understands why $\frac{3}{5}$ and $\frac{9}{15}$ are equivalent fractions. Based on this information, Olivia is probably in Piaget’s _____ stage of development.
 - a. concrete operations
 - b. preoperations
 - c. formal operations
 - d. sensorimotor

- 41. Which one of the following statements reflects a concern about the separation and control of variables?
 - a. “How do you think I should make amends with Martha? If I tell her I’m sorry, she might think I’m lying.”
 - b. “I’m catching more tadpoles today, but I don’t know if it’s because I’m using a larger container to catch them or because I’m working in a different part of the frog pond.”
 - c. “I have two tests to study for tonight—Science and Spanish. I’ll study one subject before dinner and the other one after dinner so I don’t get them confused.”
 - d. “I’m trying to learn how to do a lay-up shot. Can you show me all the things I should do, going one step at a time?”

- 42. Three of the following teaching practices are consistent with Piaget’s theory of cognitive development. Which one is not?
 - a. When Sue leaves out important details as she tries to explain something, her teacher says, “I don’t understand what you mean when you say. . . .”
 - b. A second-grade teacher encourages students to speculate about possible explanations as to why kites can fly, and then to test each explanation systematically.
 - c. When a high school student claims that people should “Make love, not war,” his teacher urges him to consider whether such an approach would have been advisable when the Fascist movement was gaining ground in Europe in the late 1930s and early 1940s.
 - d. When Martin says that two nickels are worth more than one dime because there are two of them and they’re bigger, his teacher asks, “How can that be? Two nickels are worth ten cents; one dime is also worth ten cents.”

- 43. The term to describe a student who uses concrete operations in Mathematics but formal operations in Language Arts is:
 - a. vertical decalage
 - b. multiple classification
 - c. horizontal decalage
 - d. decentration

- 44. Which one of the following conclusions can be derived from recent research regarding Piaget’s theory of cognitive development?
 - a. Middle school and secondary school students typically have an easier time thinking logically in the social sciences than they do in the physical and life sciences.
 - b. Students will think more logically about a topic when they have acquired relevant knowledge and experiences related to the topic.
 - c. Many students continue to show signs of preoperational thinking until well into the high school years.
 - d. Students have an easier time understanding fractions and proportions later on if such concepts are first introduced at the same time that division is introduced (e.g., in third grade).

- 45. Which one of the following statements best describes Vygotsky’s concept of internalization?
 - a. As children grow older, they develop an increasing ability to think about events in abstract rather than concrete terms.
 - b. With age, children become more sophisticated at solving problems, largely because their parents and teachers give them increasingly challenging problems to solve.
 - c. Over time, children acquire more self-confidence about their ability to deal with the world.
 - d. Through their social interactions with other people, children develop new ways of mentally approaching and thinking about a task.

- 46. Students in a fourth-grade reading group are reading a passage about snakes. Their teacher asks, “Who can think of a good title that summarizes what this passage is about?” After hearing several good suggestions, the teacher says, “The author says that snakes are helpful to farmers. What evidence does she give to support her statement?” If we consider Vygotsky’s concept of internalization, we might predict that such a discussion will:
 - a. be more beneficial for students who are working outside their zones of proximal development than for students working inside their ZPDs.
 - b. help students develop a greater interest in learning for its own sake.
 - c. help students develop effective reading comprehension strategies (e.g., summarizing, looking for supporting statements).
 - d. be confusing and counterproductive for students who are not yet capable of abstract thought.

- 47. From Vygotsky’s perspective, what important role does inner speech play?
 - a. By giving ourselves directions about what to do next, we guide ourselves through complex tasks.
 - b. By practicing linguistic structures mentally, we develop more complex language capabilities.
 - c. By using words mentally as well as orally, we develop a more abstract representation of the world.
 - d. By talking to ourselves about what we should have done or said in a particular situation, we remember that situation more vividly.

- 48. Kiley is having trouble learning the steps involved in using a microscope correctly. If we consider Vygotsky’s description of how children help themselves through difficult tasks, we should suggest that Kiley:
 - a. practice each step separately many times over.
 - b. go through the procedure in slow motion a few times.
 - c. talk herself through the steps.
 - d. learn the reasons why each step is important.

- 49. Which of the following best describes how the oral traditions in First Nations' communities are related to cognitive development?
 - a. Vygotsky's theory of cognitive development
 - b. metacognitive approaches
 - c. the information processing theory
 - d. Piaget's theory of cognitive development

- 50. Mr. Lupart is assessing his students' needs in relation to the curriculum to ensure that each is challenged at their level. What is Mr. Lupart trying to establish?
 - a. social constructivism.
 - b. zones of proximal development.
 - c. concrete operations.
 - d. a socially responsive curriculum

- 51. Which one of the following students is definitely working in his or her zone of proximal development?
 - a. Ulrich uses correct grammar and punctuation when he writes short stories.
 - b. Berta is beginning to learn basic woodworking techniques. She has trouble hammering a nail straight into a piece of wood unless her teacher stands beside her, helping her and reminding her of what to do.
 - c. Sasha is playing the clarinet in the band. He finds that it helps to keep the tempo if he taps the beat with his foot.
 - d. Carina finds it virtually impossible to solve mathematical word problems, even when her teacher gives her helpful hints.

- 52. Which one of the following statements most accurately describes Lev Vygotsky's theory of cognitive development?
 - a. Children's cognitive growth should be judged on the basis of their actual developmental level, not on the basis of their level of potential development.
 - b. Cognitive development progresses through four distinct stages; each stage is characterized by increasingly more complex thought and language.
 - c. Children develop by working on challenging tasks with the assistance of more competent individuals.
 - d. Language and thought, although closely intertwined in the first few years of life, become increasingly distinct entities over time.

- 53. Several parents who are making costumes for an elementary school play ask the young cast members to assist them with such tasks as cutting fabric, pinning pieces together, and sewing simple hems. Using the language of Vygotskian theorists, we can say that the parents are:
 - a. engaging the students in guided participation.
 - b. presenting tasks that exceed the students' zone of proximal development.
 - c. encouraging the separation of thought and language.
 - d. creating a cognitive apprenticeship.

- 54. Which of the following is not a good example of Vygotsky's notion of scaffolding?
 - a. Provide feedback to students throughout a task.
 - b. Ask students guiding questions during a task.
 - c. Allow students to use supports such as reference materials.
 - d. Have students engage in discovery learning

- 55. Three of the following teachers are using scaffolding to help their students learn. Which one is not necessarily providing scaffolding?
 - a. Ms. Applegate gives her students a structure to follow when they write their first essay.
 - b. Mr. Prakash teaches a backhand tennis swing by gently guiding each student through the correct movement a few times.
 - c. Ms. Chen gives her class some hints about how to solve an especially difficult word problem.
 - d. Mr. Donaldson takes his students on a field trip to the art museum.

- 56. What is the key distinction between an apprenticeship and a cognitive apprenticeship?
 - a. in a cognitive apprenticeship students think about doing complex tasks
 - b. in an apprenticeship an expert imparts knowledge to a novice in a passive way
 - c. in a cognitive apprenticeship a student gets to learn how to think about the complex task as well as how to perform it
 - d. in an apprenticeship students don't think about the process

- 57. Which one of the following examples most clearly illustrates a cognitive apprenticeship?
 - a. A junior high school English class is reading Robert Frost's "Stopping by Woods on a Snowy Evening." At the end of each verse, the teacher describes the visual images and feelings that the poem elicits for him, and he encourages his students to do likewise.
 - b. An elementary school teacher gives his students lots of practice doing addition, subtraction, multiplication, and division problems so that they will be able to solve word problems more effectively later in the school year.
 - c. In a high school chemistry lab, a teacher clearly describes the steps that she expects her students to take as they conduct their laboratory experiment. She also lists the things that students should do after the experiment.
 - d. A middle school physical education teacher puts her students in pairs as they practice their forward and backward rolls. She asks the students in each pair to observe each other and give each other feedback about how to improve.

- 58. Ms. Stevens and her fourth graders have been growing sunflowers under various conditions—they have grown sunflowers in different kinds of soil, with different amounts of water, and in varying degrees of sunlight. Below are four statements that Ms. Stevens makes related to the sunflowers. Which one is most consistent with the idea of a cognitive apprenticeship?
 - a. “Who can tell me what photosynthesis is?”
 - b. “How many of you have grown sunflowers at home? How many of you have moms or dads who are gardeners?”
 - c. “This sunflower is taller than that sunflower over there. Let’s consider what the growing conditions for the two flowers have been and try to figure out what might have led to the difference we see.”
 - d. “Rosa, please give each plant the same amount of water today that you gave it yesterday. Also, be sure that you keep each plant in the same location, so that the amount of sunlight it gets stays the same.”

- 59. According to your textbook, cognitive processes are:
 - a. operations on conceptual information
 - b. explanations of behaviour
 - c. performed in the cerebellum
 - d. reinforced in the environment

- 60. An information processing perspective of development portrays cognitive development as:
 - a. a series of five distinctly different stages of development.
 - b. a gradual improvement in cognitive abilities.
 - c. the result of direct instruction about how to think.
 - d. something that is influenced largely by hereditarily controlled neurological changes.

- 61. The following statements describe the development of information processing abilities as children progress through the elementary school years. Three of the statements are accurate. Which one is not?
 - a. Children become increasingly able to pay attention to many different things simultaneously.
 - b. Children show an increasing tendency to rehearse information.
 - c. Children become increasingly able to determine when they actually know something.
 - d. Children become increasingly capable of learning effectively because of their expanding knowledge base.

- 62. Which one of the following statements is most consistent with what we know about the development of attention and its role in learning?
 - a. Children become increasingly more distractible during the elementary school years.
 - b. Distractibility decreases during the elementary school years but increases briefly at puberty.
 - c. Children show an increasing tendency to learn only the things they actually intend to learn.
 - d. Young children can pay attention to only one thing at a time; high school students can attend to and learn many things simultaneously.

- 63. Why is the elaboration technique more effective in adolescence than in childhood?
 - a. because adolescents are able to abstract information.
 - b. because of increased amounts of prior knowledge.
 - c. because of emerging abilities in self reflection.
 - d. because of more opportunities for cognitive apprenticeship.

- 64. Dirk knows more as a tenth grader than he did as a first grader. One result of this increased knowledge base is that Dirk:
 - a. can use rehearsal more effectively.
 - b. is more easily distracted.
 - c. can more easily understand new information.
 - d. is more likely to get the different things he knows confused with one another.

- 65. In which one of the following examples is metacognition most clearly illustrated?
 - a. Erika knows all the letters of the alphabet before she begins kindergarten.
 - b. Tania knows how much of a book she is likely to remember a month later.
 - c. Ryan can read fourth grade books at the age of six.
 - d. Alex has a photographic memory that enables him to remember everything he sees.

- 66. How do young children's estimates of their memory capacity relate to reality?
 - a. They usually underestimate how much they can remember.
 - b. They usually overestimate how much they can remember.
 - c. They are usually fairly accurate in their estimates of how much they can recall.
 - d. They do not even try to guess how much they can recall.

- 67. Which of the following is the best example of applying the Information Processing Theory in the classroom?
 - a. Mr. Ramirez has so many posters up in the classroom that you can't see the walls
 - b. Ms. Yu starts each class with a recap of the previous one
 - c. Ms. Tanner provides her students with stickers when they answer correctly.
 - d. Mr. Bass makes sure to have his students do group work in every class

- 68. Considering trends in cognitive development from an information processing perspective, which one of the following statements is accurate?
 - a. Students generally know the things they know and the things they do not.
 - b. Elementary students have a better sense of what they do and do not know than high school students.
 - c. Students tend to know a great many things that they do not realize they know.
 - d. Students across the K-12 grade span often think they know things that they really do not know.

- 69. Many theorists believe that people have an innate predisposition to learn language. Three of the following provide sources of evidence that these theorists use to support their belief. Which one is not used to support an inherited predisposition to learning language?
 - a. Most languages have certain characteristics in common, such as similar ways of forming negatives.
 - b. Children develop increasingly larger and more sophisticated vocabularies as they grow older.
 - c. Children sometimes learn a language more easily when they are exposed to it at a young age.
 - d. People in the same community learn the same language despite very different experiences with that language.

- 70. Which of the following statements is most accurate regarding our current understanding of linguistic development?
 - a. linguistic development is a simple process of imitation.
 - b. every human is born with a language acquisition device.
 - c. there appear to be sensitive periods for language acquisition.
 - d. a child will never speak if he/she doesn't have expressive language by the age of seven.

- 71. Which one of the following illustrates an overgeneralization error? The words in question are underlined.
 - a. Abe knows what the words tall and short mean, but he does not realize that one is the opposite of the other.
 - b. Charles thinks that all animals have to have fur and four legs; therefore snakes, bumblebees, and people cannot possibly be animals.
 - c. Bhanu says, "I forgetted my homework today."
 - d. Maria thinks that whales and dolphins are kinds of fish, when they are actually mammals instead.

- 72. Maureen vehemently denies that trees are plants. Her understanding of what a plant is reflects which of the following errors?
 - a. overregularization
 - b. overgeneralization
 - c. undergeneralization
 - d. a pragmatic error

- 73. Considering what we have learned from our studies of cognitive development and language development, we should expect elementary school children to have the greatest difficulty understanding the meaning of which one of the following words?
 - a. although
 - b. somersault
 - c. swim
 - d. vehicle

- 74. Which strategy is most likely to be effective in promoting semantic development?
 - a. Students are allowed to make up their own meanings for words to encourage invention and creativity.
 - b. Students are taught the meanings of words related to topics they are studying.
 - c. Overgeneralization is encouraged.
 - d. Students are allowed to use words incorrectly in the early elementary grades to promote linguistic self-efficacy.

- 75. According to your textbook, a phoneme is:
 - a. the practical aspects of language.
 - b. word meaning.
 - c. unit of sound that does not affect word meaning.
 - d. the smallest unit of sound that affects word meaning.

- 76. Which one of the following sentences reflects overregularization in a child's speech? The words in question are underlined.
 - a. I ain't going to school today.
 - b. Are you gonna go on the field trip?
 - c. The sheeps are in the meadow.
 - d. He don't know anything.

- 77. Given what we know about the language development of elementary school children, three of the following errors might be observed in a class of second graders. Which one is not likely to be observed?
 - a. Annie asserts quite adamantly that a penguin is not a bird.
 - b. When Deepak is shown a doll that has a blindfold and asked if the doll is easy to see, Deepak says no.
 - c. Elizabeth speaks mostly in “semi-sentences”—i.e., subjects without predicates, and predicates without subjects.
 - d. Daniel complains that his bicycle is “broked.”

- 78. The term holophrastic refers to:
 - a. one word meant to express a complete thought.
 - b. two words that sounds the same but have different meanings.
 - c. two words that sound and mean the same but are spelled differently.
 - d. two-word sentences.

- 79. Three of the following aspects of language development appear during the elementary school years or even earlier. Which one are we not likely to see until students are in junior high or high school?
 - a. following accepted social conventions in terms of beginning and ending conversations
 - b. adapting a spoken message to the age of the listener
 - c. using context clues to interpret a speaker’s message
 - d. understanding proverbs

- 80. Which one of the following is the best example of pragmatics in language?
 - a. Julia waits until her friend has finished talking before she begins to speak.
 - b. Morris understands the underlying meaning of “A stitch in time saves nine.”
 - c. Sheena knows that the plural of man is men, not mans.
 - d. Isaiah recognizes the double meanings in many of the puns he hears.

- 81. Amanda understands that a single sentence can sometimes be interpreted in two or more ways. For example, she realizes that the sentence “I know more beautiful women than Miss America” has two possible interpretations: “I know women who are more beautiful than Miss America is” or “I know more beautiful women than Miss America knows.” Amanda’s appreciation for the double meanings of some sentences reflects:
 - a. overgeneralization.
 - b. metalinguistic awareness.
 - c. pragmatics.
 - d. expressive language.

- 82. If we were to characterize the language of school-age children, how could we best describe it?
 - a. The receptive and expressive language skills of most children are fully developed by second grade.
 - b. The receptive and expressive language skills of most children are fully developed by seventh grade.
 - c. Receptive language skills are fully developed by second grade, but expressive skills continue to develop at least through seventh grade.
 - d. Receptive and expressive language skills continue to develop throughout the elementary and high school years.

- 83. Imagine that you are an elementary school teacher in Quebec where immigrant and refugee children are expected to enter the French school system regardless of their native language. Which of the following reflects the best scenario for an immigrant or refugee student in Quebec?
 - a. to be completely immersed in English.
 - b. to be in an English/French immersion program.
 - c. to be in an immersion program that incorporates the native language.
 - d. to be completely immersed in French.

- 84. Based on the textbook's discussion of bilingualism and bilingual children, three of the following statements are true. Which one of the statements is not necessarily true?
 - a. Bilingualism is sometimes the result of living in a household in which two languages are spoken regularly.
 - b. Learning a second language promotes greater metalinguistic awareness.
 - c. Children who learn two languages before the age of four are likely to master less of each language than they would if they learned only one.
 - d. Children who learn a second language in addition to their native tongue tend to have a more positive attitude toward people who speak that second language.

- 85. Which approach appears to be most effective for teaching English speakers a second language?
 - a. Let them talk with native speakers of the language, who should alternate between using English and the other language.
 - b. Teach it to them before kindergarten if possible, because they quickly lose their ability to learn a second language fluently after that.
 - c. Immerse them in the second language, having them hear and speak it exclusively in all classroom activities.
 - d. Wait until they reach Piaget's formal operations stage so that they can better grasp the subtleties of the new language.

- 86. Three of the following statements accurately describe the diversity we are likely to see in students' cognitive development. Which statement is inaccurate?
 - a. Some children in a first-grade classroom may show concrete operational thought, whereas others may show signs of preoperational thought.
 - b. Students with physical and sensory challenges may have less general knowledge of the world, limiting their ability to relate new experiences to things they already know.
 - c. When eighth graders are asked to separate and control variables in a problem about fishing, those who have often fished with family or friends will be more successful than students who have never fished.
 - d. Rehearsal is more commonly observed in children who live in developing countries than in children who live in highly urbanized and industrialized ones.

- 87. Which of the following pairs of students best illustrates the idea of student diversity with respect to different dialects?
 - a. Telly was born in Greece, and Fritz was born in Germany. Fritz has an easier time learning English than Telly does because German uses the same alphabet that English does, whereas Greek does not.
 - b. Joe speaks English as it is spoken in an isolated Northern community; Kyle speaks the English of inner-city Toronto.
 - c. Margaret speaks English fluently; Anna knows fewer words and speaks in simpler sentences because she immigrated from Romania only six months ago.
 - d. Elena speaks Spanish and Maria speaks Portuguese—two languages with similar vocabulary and syntax because of their shared Latin roots.

- 88. Which one of the following statements most accurately describes students with limited English proficiency (LEP)?
 - a. They have greater difficulty than their classmates in understanding what they read and hear in class.
 - b. They have difficulty with enunciation, often as the result of birth defects or other physical deformities.
 - c. They have normal syntactical development but delayed vocabulary development.
 - d. They have normal vocabulary development but delayed syntactical development.

- 89. Some students with special needs have advanced cognitive and linguistic development in comparison to their classmates. Which one of the following characteristics are we least likely to observe with regard to these students?
 - a. a more advanced vocabulary
 - b. the earlier appearance of formal operational thinking capabilities
 - c. more general knowledge about the world
 - d. classroom assignments that are above their zone of proximal development

- 90. Which one of the following is not a general theme that characterizes cognitive and linguistic development?

- a. social interaction is necessary for development.
 - b. development depends on prior learning.
 - c. development occurs in finite stages.
 - d. challenging tasks promote development.
- 91. Which one of the following do Piaget, Vygotsky, and information processing theorists all agree is essential for children's cognitive development?
 - a. good feelings about oneself
 - b. an environment or situation that presents a challenge
 - c. an accepting environment in which children are not pressured to excel
 - d. a rich vocabulary

Essay Questions

- 92. Piaget presented his studies of conservation as evidence of the illogical thinking of young children.
 - a. What did he mean by the term conservation?
 - b. Describe one of his conservation tasks and the kinds of responses that children in the preoperational and concrete operational stages are likely to give.
 - c. Describe a specific way in which a child's ability to conserve is essential for learning in either mathematics or science.
- 93. Describe three characteristics of preoperational children (excluding age) that distinguish them from concrete operational children. Explain how each of these characteristics may interfere with students' ability to learn and perform effectively in the classroom, illustrating your discussion with concrete examples.
- 94. Describe three ways in which students in Piaget's formal operational stage are likely to think differently from those in the concrete operational stage. Illustrate each characteristic with a concrete example of how students in each of the two stages might think or act.
- 95. Mr. Davis asks his third graders to conduct experiments to examine the effects of water, sunlight, and type of soil on growing sunflowers. He tells them, "I want you to find out which of these three things—water, sunlight, and soil—affect how well sunflowers grow." Here are lots of sunflower seeds, lots of paper cups to grow them in, and two different types of soil. You can give your growing plants lots of sunlight by putting them on the shelf by the window, or you can grow them in a shadier place on the bookshelf behind my desk. And here's a measuring cup you can use to measure the amount of water you give them each day."
Mr. Davis is assuming his third graders can do at least two things that, from Piaget's perspective, they probably cannot do. What two crucial abilities necessary for conducting appropriate experiments do his students probably not yet have? Justify your answer in a short paragraph.

- 96. Choose a particular grade level and discuss three important implications of Piaget's theory for teaching students at this grade level. State your three points both in abstract terms and in terms of specific educational practices you would employ.
- 97. Contemporary classrooms are generally heterogeneous and represent a wide range of cultures and abilities. Describe how you would incorporate the notions of zone of proximal development and scaffolding in your inclusive classroom to ensure that all students receive an appropriate education.
 - a. Explain the two concepts underlined above, and give a concrete example of each one.
 - b. Choose a topic or skill you might be teaching your students, and explain how you would: (1) assess students' ZPD and (2) scaffold students' efforts in your inclusive class.
- 98. The textbook describes a number of trends in the development of information processing skills. Describe at least four ways in which sixth-grade children differ from kindergarten children in their information processing strategies and capabilities.
- 99. The work of Lesley Wade-Woolley and other colleagues at Queen's University highlights the importance of phonological awareness in the process of learning to read.
 - Define the term phonological awareness
 - Describe a classroom activity that you could implement that would allow you to ascertain the phonological awareness skills of young children
- 100. In three short paragraphs, explain the role that challenge plays in each of the theories of cognitive development listed below. In each case, give a concrete example to illustrate your discussion.
 - a. Piaget's theory
 - b. Vygotsky's theory
 - c. information processing theory

ANSWER KEY

Multiple-Choice Questions

- | | | | | |
|-------|-------|-------|-------|-------|
| 1. b | 18. b | 37. c | 56. c | 75. d |
| 2. a | 19. d | 38. d | 57. a | 76. c |
| 3. c | 20. a | 39. b | 58. c | 77. c |
| 4. c | 21. b | 40. c | 59. a | 78. a |
| 5. c | 22. a | 41. b | 60. b | 79. d |
| 6. b | 23. b | 42. b | 61. a | 80. a |
| 7. d | 24. b | 43. c | 62. c | 81. b |
| 8. c | 25. c | 44. b | 63. b | 82. d |
| 9. a | 26. b | 45. d | 64. c | 83. c |
| 10. a | 27. c | 46. c | 65. b | 84. c |
| 11. a | 28. c | 47. a | 66. b | 85. c |
| 12. d | 29. b | 48. c | 67. b | 86. d |
| 13. d | 30. d | 49. a | 68. d | 87. b |
| 14. b | 31. b | 50. b | 69. b | 88. a |
| 15. c | 32. d | 51. b | 70. c | 89. d |
| 16. d | 33. a | 52. c | 71. d | 90. c |
| 17. b | 34. c | 53. a | 72. c | 91. b |
| | 35. a | 54. d | 73. a | |
| | 36. a | 55. d | 74. b | |

Essay Questions

92. Responses to various parts of the question are as follows:
- Conservation is the recognition that if nothing is added or taken away, an amount stays the same regardless of alterations in shape or arrangement.
 - The student's response might describe conservation of liquid (e.g., the water glasses task), conservation of weight (e.g., the balls of clay task), conservation of number (e.g., the pennies task), or any other conservation task with which they are familiar. Responses of preoperational children reflect a lack of conservation (e.g., "One has more"), whereas those of concrete operational children are aware that amounts are still the same.

- c. There are a number of possible responses to this question—here are two examples:
In mathematics, conservation of number is essential for an understanding of numbers; children must realize that “4 is 4 is 4,” no matter how the four items are arranged. In science, students studying the concept of weight must understand that weight stays the same regardless of physical transformations; for example, gas that is heated expands, but it still weighs the same as it did before.
93. Differences between preoperational children and concrete operational children are listed in Table 2.1 in the textbook; the response should describe three of them. For each characteristic of preoperational thought identified, the response should give a plausible explanation and illustration of how it interferes with effective learning or classroom performance—for example: “Due to egocentrism, a student who has been told not to interrupt classmates who are speaking may have trouble understanding why allowing other children to speak is important.”
94. Differences between concrete operational and formal operational children are listed in Table 2.2 in the textbook; the response should list three of them. The response should also illustrate each difference with a concrete example of how children in the two stages might think or behave differently; possibilities are listed in Table 2.2, but other plausible examples are acceptable as well.
95. Mr. Davis is assuming that his students can formulate and test multiple hypotheses and can separate and control variables. According to Piaget, these are abilities that emerge in formal operations. However, Mr. Davis’s students, being about eight or nine years old, are probably still in concrete operations.
96. Students’ responses to this item are likely to vary considerably. A response should list three implications derived either from Piaget’s general assumptions (see the section entitled “Piaget’s Basic Assumptions”) or from characteristics of the stage in which the age group is likely to be in (see the section entitled “Piaget’s Stages of Cognitive Development”). Each implication should be described in both general, abstract terms, and as one or more specific, concrete teaching practices.
97. Responses to the two parts of the question are as follows:
 - a. The zone of proximal development is the range of tasks that a child can do only with the assistance of a more competent individual. Scaffolding is the structure that the more competent individual provides to help a child perform a difficult task successfully; this structure is gradually removed over time as the child becomes more skilled. The response should include a concrete example of each concept.
 - b. Students’ responses will vary considerably depending on the topics. A response should include both the notions of actual developmental level, level of potential development (see p.25) and appropriate scaffolding (see p.27). Notions of individualization in assessment should be present to address the diversity found in typical classrooms.

98. From an information processing theory perspective, sixth graders differ from kindergartners in the following ways (the response should include at least four):
- They are less distractible; for example, they can work more effectively in a noisy classroom.
 - They are more likely to learn only the specific things they intend to learn.
 - They are more likely to rehearse the information that they want to learn.
 - They are more likely to organize the information that they want to learn.
 - They have more knowledge to which they can relate new information.
 - They have a better integrated knowledge base—one in which pieces of information are interrelated rather than isolated.
 - They have a more realistic idea of how much they can learn and remember; kindergartners tend to be overly optimistic.
 - They have more knowledge about effective learning strategies; for example, they are more likely to realize that if you do not learn something the first time, you need to study it again.
 - They are more likely to know when they have effectively learned something and when they have not.
99. The response should include the following:
- Phonological awareness is the ability to discern separable units in the stream of sounds in oral language (e.g., syllables in words).
 - The proposed activity should include some observable cues to phonological awareness such as rhyme and alliteration. The activity could also stress practice with rhythm and language patterns.
100. Piaget proposed that children modify schemes and develop new ones only when they cannot interpret new experiences in light of existing schemes. Vygotsky proposed that children are most likely to develop when they perform tasks within their zone of proximal development—tasks for which they need the assistance of someone more skilled. Information processing theorists propose that children develop more sophisticated learning strategies only when their current ones are not effective.