Chapter 2 - Cognitive and Language Development

Student: ____________________________________________________________________________

1. The implication of the principle that all children do not develop at the same rate is
   A. curriculum must be specific to the culture.
   B. be sure to include group projects in the classroom.
   C. you can’t judge an individual’s performance solely on their age
   D. give opportunities for both assimilation and accommodation.

2. A student’s performance in class is determined by a multitude of factors. This is best described in the principle that
   A. development is the result of both heredity and environment.
   B. knowledge exists only in social interactions.
   C. development is orderly.
   D. development is continuous.

3. A stimulating environment may help the process of _____ which involves removing poorly connected neurons.
   A. assimilation
   B. pruning
   C. accommodation
   D. lateralization

4. The _____ governs your ability to use language; the _____ governs spatial relations.
   A. synapse; dendrites
   B. right hemisphere; cerebral cortex
   C. left hemisphere; right hemisphere
   D. axons; cerebral cortex

5. Mrs. Norman, a 7th grade science teacher, wants to use the current research on brain and learning to help her students. Which of the following is not a principle of brain-based learning?
   A. Attention and perception are both involved in learning.
   B. The brain perceives wholes first and then parts last.
   C. Every brain is uniquely organized.
   D. The brain is a social brain.

6. According to Piaget, the basic unit necessary for mental organization and mental functioning is called the
   A. neuron.
   B. zone of proximal development.
   C. dendrite.
   D. schema.
7. A five year old was describing how he was “getting smarter and smarter” by attending school. From a Piagetian perspective, this five year old is experiencing

A. advancement in his zone of proximal development.
B. an increase in the size of his zone of proximal development.
C. an increase in the number and complexity of schemas.
D. an increase in his zone of proximal development.

8. As a student is interacting with her environment, she is learning and developing schemata. Piaget termed this

A. adaptation.
B. operations.
C. metalinguistic awareness.
D. accommodation.

9. When a child encounters something new and reacts to it by relying on an existing schema, _____ occurs.

A. accommodation
B. assimilation
C. syntax
D. taxonomic constraint

10. “I just can’t deal with this new concept. I’m going to have to change how I think about it.” This best illustrates

A. accommodation.
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11. What is the advantage of assimilation and accommodation?

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12. Play is to assimilation as imitation is to _____.

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13. A fourth grader is fascinated with how plants perform photosynthesis and wishes to learn more. What is the motivation underlying this student’s wishes according to Piaget?

A. the innate need to advance his zone of proximal development
B. the need to conserve
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14. To Piaget, which person has the most intelligence?
   A. Stephanie has an IQ of 120.
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15. Michelle is holding her newborn and wonders what Piaget would predict for the child in terms of cognitive development in the first two years?
   A. The child’s understanding of object and causality will developed.
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16. You used to be able to take a toy away from 2-year-old Alyssa without her reacting. But now, she reacts quite strongly and cries. She has developed
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   B. being able to coordinate sensory and physical experiences
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20. Mr. Clausen is reviewing the past year he had with his sixth grade class. He thinks that Piaget was right since he saw growth in the area that Piaget would predict for children in concrete operational stage. What was this area?
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22. Elle brought her Family Tree to school for her sixth grade project. She described how one person could be a son, brother, uncle, and father. To understand how one person could have several different relationships to different people, Elle’s classmates must understand the principle of
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25. You are observing a classroom where the teacher claims her instruction was heavily influenced by Piaget. Which of the following would not expect to see?
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27. Mrs. Smithson wants to teach her third grade students about measurement. Based on Piaget, what would be the best strategy?
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28. The abilities of _____ and _____ appear earlier than Piaget proposed.
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29. In his theory of cognitive development, Piaget has been criticized for ignoring the contribution of
   A. peers.
   B. media.
   C. culture.
   D. heredity.

30. Vygotsky emphasized the importance of _____ in creating meaning and knowledge.
   A. conservation
   B. active learning
   C. maturation
   D. social interaction

31. As Mrs. Moen contemplates tomorrow’s meeting of her 11th graders, she remembers the importance of
   social interaction in learning and creates an activity that involves group work. Which theorist places the
   most emphasis on social interaction in learning?
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   ultimately into _____.
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   them.” The help that this student receives is what Vygotsky would term
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35. Language, maps, clocks, and calendars are what Vygotsky considered to be
   A. cultural tools.
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36. Consider this student: She can do basic arithmetic by herself but only when she is helped can she do fractions. Vygotsky would say that her ability to solve fractions with assistance represents

A. her zone of proximal development.
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37. Which of the following best illustrates how learning is accomplished according to Vygotsky?

A. Learning is accomplished through the process of adaptation, assimilation, and accommodation.
B. Learning happens because the brain undergoes extensive pruning of neurons that are poorly connected.
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A. remain the same, but become more effective at processing information.
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39. What happens to scaffolding once the zone of proximal development advances to the next level?

A. The scaffolding is removed.
B. The scaffolding remains present.
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40. Throughout the school year, Ms. Derusha has applied several ideas from Vygotsky. Which of the following would you expect not to see in Ms. Derusha’s classroom?

A. Students are given challenging tasks.
B. She uses real-life tasks and projects.
C. Mrs. Derusha will use competitive-based assignments.
D. Her style is related to her students’ cultural background.

41. How are words pronounced? The answer is in

A. pragmatics.
B. equilibration.
C. egocentrism.
D. phonology.

42. Age appropriate development of pronunciation is important since it predicts

A. literacy.
B. intelligence.
C. peer relationships.
D. grades in elementary school.
43. Little three-year-old Miranda is learning about the nature of language and expressions. She is developing
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44. If you track the development of a child’s vocabulary over time, you would see spikes
   A. between the ages of 18 and 24 months.
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45. A child is starting to use the ed rule incorrectly when she says “eated” or “goed.” Should the parents be concerned?
   A. Yes – it clearly shows a regression in understanding.
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   C. Yes – it clearly shows a problem with syntax.
   D. No – it represents the understanding of grammar.

46. A little girl has not yet developed an adequate understanding of pragmatics and as a result
   A. has problems pronouncing sh and th.
   B. has not progressed beyond holophrases.
   C. keeps interrupting her teacher.
   D. gets confused with the meaning of idioms.

47. Research on the relationship between language and thinking has shown that
   A. language and thought influence each other.
   B. language shapes thought.
   C. thought shapes language.
   D. there is no relationship between the two.

48. Chomsky explained language development by arguing for the role of _____ that enables children to learn language.
   A. active experience
   B. a language organ
   C. reinforcement
   D. motivation

49. When Mr. Moss is solving a math problem on the board he makes sure that he talks out loud sharing the perception, ideas, and decisions necessary to solve the problem. What technique is he using?
   A. parallel talk
   B. expansion
   C. self-talk
   D. pragmatics
50. As a teacher you want to help your students develop language abilities. An example of your approach is to talk out loud about what a child is doing as she solves a math problem on the board. What technique are you using?

A. expansion  
B. parallel talk  
C. conservation  
D. pragmatics

51. The new principal at the middle school is a strong advocate of instruction based on the ideas of Piaget. When the teachers ask him for ideas on testing, he says

A. teachers should teach to the test.  
B. to use the state-mandated assessment.  
C. it’s best to use the nationally normed test.  
D. testing should be based on observation.

52. Match each statement to the item listed below.

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<tr>
<td>process is continuous and relatively orderly</td>
<td>basic unit for mental organization and functioning</td>
<td>mentally arranging objects along some principle</td>
<td>understanding of relationship between doing something and the results of that action</td>
<td>sum of all an individual’s schemata</td>
<td>emphasis of Vygotsky’s theory</td>
<td>production of syllables</td>
<td>part of the neuron that transmits signals to other neurons</td>
<td>systems or coordinated sets of action</td>
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<td>incorporate new information into existing schema</td>
<td>activity in which infant tries to reproduce interesting events</td>
<td>focus on only one aspect of a stimulus at a time</td>
<td>assistance that helps child to proceed through zone of proximal development</td>
<td>thinking about nature of language</td>
<td>a form of reversibility</td>
<td>stage of cognitive development according to Piaget</td>
<td>specialization of the two hemispheres</td>
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<td>modifying an existing schema</td>
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54. Pruning of neurons will lead to mental retardation.

True  False
55. There is strong evidence that brain-based approaches to instruction are effective in helping students learn.
   True   False

56. As we grow, our operations become more organized and well-defined.
   True   False

57. Egocentrism refers to problems taking another’s point of view.
   True   False

58. Piaget underestimated the ability of children with regard to object permanence.
   True   False

59. The zone of proximal development refers to tasks that the student can do independent of assistance.
   True   False

60. Semantic bootstrapping refers to understanding the rules of etiquette in conversations.
   True   False

61. Thought and language influence each other.
   True   False

62. Language is special because of our innate ability to learn grammar.
   True   False

63. When using expansion, a teacher will comment about what she is doing the same time she is doing it.
   True   False

64. Select one of the general principles of cognitive development. Describe how that principle influences a teacher’s interactions with her students.
65. What is brain-based learning and how could it change the way teachers teach?

66. How do we learn according to Piaget? Be sure you include the terms schema, assimilation, accommodation, equilibration, and adaptation.

67. If Piaget was asked what would improve education in America in the 21st century, he might say to increase active experience and social interaction. Why?

68. Illustrate how curriculum in math is shaped by cognitive development in preoperational and concrete operational stages as described by Piaget.
69. Contrast how a student in concrete operations and another student in formal operations would attempt to solve a problem with a computer printer that does not print.

70. What did Piaget get right and what did he get wrong?

71. Explain why Vygotsky might have said that we don’t learn much when we do tasks by ourselves.

72. Describe what a teacher can do in her classroom to facilitate language development in students.
73. Describe why language is special.
Chapter 2 - Cognitive and Language Development Key

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   A. active experience
   B. a language organ
   C. reinforcement
   D. motivation

49. When Mr. Moss is solving a math problem on the board he makes sure that he talks out loud sharing the perception, ideas, and decisions necessary to solve the problem. What technique is he using?
   A. parallel talk
   B. expansion
   C. self-talk
   D. pragmatics
50. As a teacher you want to help your students develop language abilities. An example of your approach is to talk out loud about what a child is doing as she solves a math problem on the board. What technique are you using?

A. expansion  
B. parallel talk  
C. conservation  
D. pragmatics

51. The new principal at the middle school is a strong advocate of instruction based on the ideas of Piaget. When the teachers ask him for ideas on testing, he says

A. teachers should teach to the test.  
B. to use the state-mandated assessment.  
C. it’s best to use the nationally normed test.  
D. testing should be based on observation.

52. Match each statement to the item listed below.

1. axons process is continuous and relatively orderly  
2. social construction basic unit for mental organization and functioning  
3. development mentally arranging objects along some dimension  
4. self-talk understanding of relationship between doing something and the results of that action  
5. schema sum of all an individual’s schemata  
6. seriation emphasis of Vygotsky’s theory  
7. babbling production of syllables  
8. intelligence part of the neuron that transmits signals to other neurons  
9. operations private speech  
10. concrete correspondence

53. Match each statement to the item listed below.

1. assimilation incorporate new information into existing schema  
2. inversion activity in which infant tries to reproduce interesting events  
3. lateralization focus on only one aspect of a stimulus at a time  
4. scaffolding assistance that helps child to proceed through zone of proximal development  
5. centration thinking about nature of language  
6. concrete operations a form of reversibility  
7. pragmatics stage of cognitive development according to Piaget  
8. accommodation specialization of the two hemispheres  
9. metalinguistic awareness social conventions of language  
10. circular reaction modifying an existing schema

54. Pruning of neurons will lead to mental retardation.  

FALSE
55. There is strong evidence that brain-based approaches to instruction are effective in helping students learn.

**FALSE**

56. As we grow, our operations become more organized and well-defined.

**TRUE**

57. Egocentrism refers to problems taking another’s point of view.

**TRUE**

58. Piaget underestimated the ability of children with regard to object permanence.

**TRUE**

59. The zone of proximal development refers to tasks that the student can do independent of assistance.

**FALSE**

60. Semantic bootstrapping refers to understanding the rules of etiquette in conversations.

**FALSE**

61. Thought and language influence each other.

**TRUE**

62. Language is special because of our innate ability to learn grammar.

**FALSE**

63. When using expansion, a teacher will comment about what she is doing the same time she is doing it.

**FALSE**

64. Select one of the general principles of cognitive development. Describe how that principle influences a teacher’s interactions with her students.

Not provided

65. What is brain-based learning and how could it change that way teachers teach?

Not provided
66. How do we learn according to Piaget? Be sure you include the terms schema, assimilation, accommodation, equilibration, and adaptation.

Not provided

67. If Piaget was asked what would improve education in America in the 21st century, he might say to increase active experience and social interaction. Why?

Not provided

68. Illustrate how curriculum in math is shaped by cognitive development in preoperational and concrete operational stages as described by Piaget.

Not provided

69. Contrast how a student in concrete operations and another student in formal operations would attempt to solve a problem with a computer printer that does not print.

Not provided

70. What did Piaget get right and what did he get wrong?

Not provided

71. Explain why Vygotsky might have said that we don’t learn much when we do tasks by ourselves.

Not provided

72. Describe what a teacher can do in her classroom to facilitate language development in students.

Not provided

73. Describe why language is special.

Not provided