Chapter 2: Major Theories of Cognitive Development

Multiple Choice

1. The way organisms evolve to better fit their biological niche is termed
a. apprenticeship
*b. adaptation
c. egocentrism
d. scaffolding
Cognitive domain: Knowledge
Answer location: Piagetian theory
Question type: MC

2. The term "qualitative" refers to cognitive development that is
a. continuous
b. homogeneous
c. smooth
*d. stage-like
Cognitive domain: Comprehension
Answer location: Piagetian theory
Question type: MC

3. Piaget believed cognitive development is a constructive process. He believed children play which role in their cognitive development?
*a. active
b. passive
c. indirect
d. conservative
Cognitive domain: Comprehension
Answer location: Piagetian theory
Question type: MC

4. Piaget theorized there is a set of integrated cognitive schemes that guide and constrain children's development at each stage. This is called
a. qualitative change
*b. unified structures
c. progression
d. universality
Cognitive domain: Knowledge
Answer location: Piagetian theory
Question type: MC

5. Cross-culturally, Piaget theorized there is a set of similar stages that occur. This idea is termed
a. qualitative change
b. unified structures
c. progression
*d. universality
Cognitive domain: Knowledge
Answer location: Piagetian theory
Question type: MC

6. Grasping or sucking can be referred to as
*a. mental structures
b. concrete operations
c. indirect cognition
d. stages

Cognitive domain: Comprehension
Answer location: The Sensorimotor Stage
Question type: MC

7. Baby Jenna liked to suck on her pacifier. When she was old enough, her sister gave her a popsicle to suck on. It was a different shape and she had to change the way she sucked to eat the popsicle. The changing in the way she sucked would be considered:
a. assimilation
*b. accommodation
c. centration
d. hierarchization
e. Cognitive domain: Application
f. Answer location: The Sensorimotor Stage
g. Question type: MC

8. Baby Jenna liked to suck on her pacifier. When she was old enough, her sister gave her a popsicle to suck on. It was a different shape and she had to change the way she sucked to eat the popsicle. The application of an existing scheme to a new object would be considered:
*a. assimilation
b. accommodation
c. centration
d. hierarchization
Cognitive domain: Application
Answer location: The Sensorimotor Stage
Question type: MC

9. During the sensorimotor period, infants have
a. mental representation
b. conscious memories of the past
c. a grammar system
*d. limitations to experience only the present
Cognitive domain: Comprehension
Answer location: The Sensorimotor Stage
Question type: MC

10. A 3-month-old infant is sitting in a stroller with a soft rattle. It accidentally falls where she cannot see it. Piaget would argue she would
a. look for the toy
*b. easily move on to the next thing that catches her eye
c. show great distress until the toy is returned
d. show abnormally advanced motor ability and jump out of the stroller
Cognitive domain: Comprehension
Answer location: The Sensorimotor Stage
Question type: MC

11. When a 1-year-old shows distress because Mom has left, he is demonstrating
a. reflective abstraction
b. circular reaction
*c. object permanence
d. seriation
Cognitive domain: Comprehension
Answer location: The Sensorimotor Stage
Question type: MC

12. Automatic responses to input from the environment are called
a. assimilators

b. equilibration
*c. reflexes
d. mental representation
Cognitive domain: Knowledge
Answer location: The Sensorimotor Stage
Question type: MC

13. Infants are limited to reflexive responses that are relatively hardwired during this stage of development:
a. concrete operations
b. primary circular reaction
*c. newborn reflexes
d. secondary circular reactions
Cognitive domain: Comprehension
Answer location: The Sensorimotor Stage
Question type: MC

14. If an infant accidentally creates an interesting outcome related to her own body (e.g., thumb sucking) and then repeats it, this is called
a. concrete operations
*b. primary circular reaction
c. newborn reflexes
d. secondary circular reactions
Cognitive domain: Comprehension
Answer location: The Sensorimotor Stage
Question type: MC

15. If an infant accidentally creates an interesting outcome related to the external environment (e.g., hitting a drum) and then repeats it, this is called
a. concrete operations
b. primary circular reaction
c. newborn reflexes
*d. secondary circular reactions
Cognitive domain: Comprehension
Answer location: The Sensorimotor Stage
Question type: MC

16. Infants seem to show the first signs of goal-directed behavior by age
a. 1 month
b. 3 months
c. 6 months
*d. 8 months
Cognitive domain: Comprehension
Answer location: The Sensorimotor Stage
Question type: MC

17. Nine-month-old Sydney sees her dad grab his phone and wallet and put them in his pocket. She begins to fuss and crawl toward him. Piaget would argue this is a sign of
*a. intentional behavior
b. unintentional reflexive behavior
c. secondary circular reactions
d. assimilation
Cognitive domain: Comprehension
Answer location: The Sensorimotor Stage
Question type: MC

18. Ten-month-old Dylan likes to get into the cat food. Mother puts it out every morning near the sink, and he often goes to grab handfuls to spread around the kitchen. After doing this every day, Mother decided to try putting the cat food near the stairs instead, with Dylan watching. Where will Dylan go to look for the cat food that morning?
a. near the cat
b. near the stairs
*c. near the sink
d. nowhere
Cognitive domain: Analysis
Answer location: The Sensorimotor Stage
Question type: MC

19. Ten-month-old Dylan likes to get into the cat food. Mother puts it out every morning near the sink, and he often goes to grab handfuls to spread around the kitchen. After doing this every day, Mother decided to try putting the cat food near the stairs instead, with Dylan watching. This illustrates the concept of
*a. A-not-B
b. egocentrism
c. seriation
d. conservation
Cognitive domain: Analysis
Answer location: The Sensorimotor Stage
Question type: MC

20. Dylan likes to get into the cat food. Mother puts it out every morning near the sink, and he often goes to grab handfuls to spread around the kitchen. After doing this every day, Mother decided to try putting the cat food near the stairs instead, with Dylan watching. At what age will Dylan likely correctly look for the cat food near the stairs?
a. 6 months
b. 8 months
*c. 13 months
d. 19 months
Cognitive domain: Analysis
Answer location: The Sensorimotor Stage
Question type: MC

21. What serves as the basis for planning, remembering, and forming strategies?
a. reflective abstraction
b. egocentrism
c. conservation
*d. mental representation
Cognitive domain: Comprehension
Answer location: The Sensorimotor Stage
Question type: MC

22. Jackson and Tyler are making blobs of mud and calling them "pies." According to Piaget, they are using
a. object permanence
*b. semiotic function
c. egocentrism
d. conservation
Cognitive domain: Application
Answer location: The Preoperational Stage
Question type: MC

23. Preoperational thought is characterized by all of the following EXCEPT

a. lack of reversibility
b. egocentrism
c. focus on static/end state
*d. conservation
Cognitive domain: Comprehension
Answer location: The Preoperational Stage
Question type: MC

24. When given a number conservation task, preoperational children generally answer
a. correctly—they are the same
*b. incorrectly—they are different
c. inconsistently—they generally choose the top row regardless of whether it is correct or incorrect
e. not at all—their language is too limited
Cognitive domain: Comprehension
Answer location: The Preoperational Stage
Question type: MC

25. Four-year-old Nithmy sits to sort her Halloween candy. She begins by sorting what she likes in one pile, then she starts sorting by color. This makes her piles essentially meaningless because she did not follow a consistent rule. She is showing typical trouble with
*a. classification
b. assimilation
c. conservation
d. reflexive reaction
Cognitive domain: Application
Answer location: The Preoperational Stage
Question type: MC

26. Piaget's three mountains task was designed to measure
a. reversibility
*b. egocentrism
c. formal operations
d. conservation
Cognitive domain: Knowledge
Answer location: The Preoperational Stage
Question type: MC

27. Manuel (5 years old) sees his friend crying. He hands the friend his favorite toy, knowing this will help. It doesn't. Manuel is demonstrating
a. reversibility
b. formal operations
*c. egocentrism
d. conservation
Cognitive domain: Application
Answer location: The Preoperational Stage
Question type: MC

28. Preschoolers are more prone to fear of Santa Claus or the Easter Bunny than are older children. This is in part because they lack
*a. appearance-reality distinction
b. egocentrism
c. mental representations
d. semiotic function
Cognitive domain: Comprehension
Answer location: The Preoperational Stage
Question type: MC

29. In an experiment attempting to train preschoolers to correctly answer appearance-reality questions, Flavell et al. (1986) found
a. preschoolers generally improved after four trials
b. preschoolers generally improved immediately
*c. preschoolers generally did not improve
d. preschoolers did not have the attention span to participate in the study
Cognitive domain: Knowledge
Answer location: The Preoperational Stage
Question type: MC

30. Eight-year-old Jana is given a conservation of number task. She would be expected to
a. fail
*b. succeed
c. perform at chance levels
d. need scaffolding prior to success
Cognitive domain: Comprehension
Answer location: The Concrete Operational Stage
Question type: MC

31. Concrete operational children are believed to have conservation in part because of which cognitive skill?
*a. reversibility
b. egocentrism
c. formal reasoning
d. seriation
Cognitive domain: Comprehension
Answer location: The Concrete Operational Stage
Question type: MC

32. When given a classification task, a concrete operational thinker would be expected to
a. classify inconsistently
b. classify according to one dimension only
*c. classify according to two or more dimensions
d. make several errors in classification
Cognitive domain: Comprehension
Answer location: The Concrete Operational Stage
Question type: MC

33. Children at a birthday party line up to hit the piñata. The parent asks them to line up from shortest to tallest. For the children to do this, they need which skill?
*a. seriation
b. reversibility
c. egocentrism
d. formal reasoning
Cognitive domain: Application
Answer location: The Concrete Operational Stage
Question type: MC

34. Children experience a marked increase in systematic thinking in the
a. sensorimotor stage
b. preoperational stage
c. concrete operational stage
*d. formal operational stage
Cognitive domain: Knowledge
Answer location: The Formal Operational Stage

Question type: MC

35. To best understand which ingredient makes the cake delicious, Alexander does an experiment. He makes the cake 10 times, each time eliminating just one ingredient but including the nine others. This variation of one independent variable at a time is a hallmark of which period?
a. sensorimotor stage
b. preoperational stage
c. concrete operational stage
*d. formal operational stage
Cognitive domain: Application
Answer location: The Formal Operational Stage
Question type: MC

36. Algebra is generally taught to children ages 12 years and older. This is probably related to their newfound ability to engage in
a. reflective abstraction
*b. abstract thought
c. concrete thought
d. egocentrism
Cognitive domain: Application
Answer location: The Formal Operational Stage
Question type: MC

37. As we go throughout our days, many adults think about their thoughts. When doing so, new thoughts can be generated. This is called
*a. reflective abstraction
b. egocentrism
c. conservation
d. systematic thinking
Cognitive domain: Comprehension
Answer location: The Formal Operational Stage
Question type: MC

38. Your textbook states Piaget's theory involves mental structures that allow and organize thought development due to children's
*a. active exploration of the world
b. passive intake of information
c. genes and hormones throughout life
d. co-construction by the child and the environment
Cognitive domain: Knowledge
Answer location: The Formal Operational Stage
Question type: MC

39. Vygotsky argues that children's thinking develops as part of
a. active exploration of the world
b. passive intake of information
c. genes and hormones throughout life
*d. co-construction by the child and the environment
Cognitive domain: Knowledge
Answer location: Vygotskian Theory
Question type: MC

40. Play is considered by Vygotsky as
a. a form of formal education
b. a circular reaction
*c. a social activity that shapes the mind

d. a way to practice reflective abstraction
Cognitive domain: Comprehension
Answer location: Vygotskian Theory
Question type: MC

41. Jane follows Vygotsky's theory in her teaching methods. She meets with students individually to identify their cognitive level and then provides guidance at a level just above where they can work alone. Doing this is working within the students' _____.
a. scaffolding
*b. zone of proximal development
c. phonological loop
d. equilibration
Cognitive domain: Application
Answer location: Vygotskian Theory
Question type: MC

42. Which of the following is the worst example of scaffolding (pay attention to age as well as the situation)?
a. Five-year-old Alex's mom asks him to do his homework. Alex is practicing writing his letters. He makes the "B" backward. His mom talks about it and writes a B correctly on another sheet of paper. Then she watches Alex try again. They continue to talk as she shows him different examples and helps him practice.
b. Jenn's mother sees 12-month-old Jenn using a harmonica as a drumstick. Jenn's mother uses a different drum and uses a drumstick to hit hers and directs Jenn's attention toward her.
*c. 12-year-old Alexander's grandfather is teaching him to fish. He asks Alex to watch while he baits the line, casts, and then reels in a fish. His grandfather continues this strategy throughout the day.
d. Four-year-old Sydney's babysitter helps Sydney to her bike. She sees Sydney is having trouble with the pedals, so she encourages her to move her feet on the pedals while she gently steadies the bike from behind. After Sydney has the idea, the babysitter lets go.
Cognitive domain: Application
Answer location: Vygotskian Theory
Question type: MC

43. Vygotsky proposed we use _____ to transform elementary mental functions into higher order functions.
*a. tools
b. assimilation
c. accommodation
d. genes
Cognitive domain: Comprehension
Answer location: Vygotskian Theory
Question type: MC

44. Many adults go through the day hearing their "voice" guiding their thoughts. Vygotsky called this silent voice
a. private speech
*b. inner speech
c. apprenticeship
d. equilibration
Cognitive domain: Comprehension
Answer location: Vygotskian Theory
Question type: MC

45. Children work together to solve problems then can do similar activities independently. This illustrates Vygotsky's idea of
*a. internalizing socially shared activities

b. the diminishing importance of culture in cognitive development
c. tending toward maintenance of elementary mental structures
d. the stage approach to cultural tool use
Cognitive domain: Application
Answer location: Vygotskian Theory
Question type: MC

Essay

1. Piaget was one of the first theorists to argue for cognitive development in infancy. What changes did he describe, and what mechanisms do infants employ to create these changes?
*a. Children explore their world actively through senses and motor and reflexive activities. They are hard-wired to adapt to their environments through assimilation and accommodation. As they build more complex and organized schemas about the world, their thinking becomes less reflexive and more intentional. As it becomes more intentional, it also supports development of mental representation, the hallmark of the end of the sensorimotor period of development. (Students may detail changes illustrated in the table concerning each substage, perhaps being asked to provide examples, depending on the level of detail required by the instructor.)
Cognitive domain: Knowledge
Answer location: Piagetian Theory
Question type: ESS

2. Choose two of Piaget's stages (other than sensorimotor). Describe a child in each stage and highlight the qualitative differences in the way they think. According to Piaget, in what ways do adaptation and organization work in similar ways during both stages?
*a. Students may choose any two of preoperational, concrete operational, or formal operational. Students should describe the main abilities (or lack of abilities, particularly for preoperational). Children acquire operations, then the ability to represent such operations abstractly; the qualitative differences in these ways of thinking should be described. Finally, students should explain that adaptation, or the process of assimilation and accommodation, promotes development of more complex ways of acting in the world. Reorganized mental structures pave the way for each more advanced level of thought.
Cognitive domain: Application and analysis
Answer location: Piagetian theory
Question type: ESS

3. Vygotsky stated children learn intermentally, but using tools in the social context, then internalize this learning intramentally. Describe the mechanisms Vygotsky proposed for social-cultural learning, then how language can be used to internalize this learning.
*a. Sociocultural learning occurs through scaffolding by more advanced members of the culture. Through this, children co-construct their knowledge by learning to use the tools of the culture, thus becoming able to transform elementary mental functions into higher-order functions. This can occur through direct instruction, scaffolding, or guided participation. Language is one tool of the culture. Children learn language and use it intermentally to communicate with others and even to communicate out loud to solve problems themselves using private speech. This eventually turns into inner speech as children internalize this self-talk as a tool to solve problems.
Cognitive domain: Knowledge and application
Answer location: Vygotskian theory
Question type: ESS

4. Consider Piaget's primary assumptions about cognitive development. How might Vygotsky criticize this theory because of inadequacies in his perspective? Do you agree? Why or why not?
*a. Piaget believed children are active in constructing their reality, and they go through qualitative shifts in cognition as schemes of thought reorganize. Each stage is characterized by the existence of an integrated cognitive structure or structures that guide and constrain an individual's acquisition and processing of information. He believed progression through stages was universal and occurred in a

stable order. Vygotsky would have criticized Piaget's lack of consideration of culture. Cognition is context specific, and thus Piaget's universals would need to be tempered by cultural differences in tools and values.
Cognitive domain: Analysis
Answer location: Piagetian theory; Vygotskian Theory
Question type: ESS

5. Consider Vygotsky's primary assumptions about cognitive development. How might Piaget criticize this theory because of inadequacies in his perspective? Do you agree? Why or why not?
*a. Vygotsky believed cognitive development occurs through co-construction of knowledge by learning to use the tools of the culture, thus becoming able to transform elementary mental functions into higher-order functions. This can occur through direct instruction, scaffolding, or guided participation. Language is one tool of the culture. Piaget would argue mental schemes constrain development regardless of the tools or assistance available at any level. Moreover, biological constraints afford opportunities to advance cognitive development because the individual actively seeks out knowledge rather than waiting to be led by a social group.
Cognitive domain: Analysis
Answer location: Piagetian theory; Vygotskian Theory
Question type: ESS