

Chapter 2

Piaget's Theory of Development

Multiple Choice

1. An epistemologist studies the ____.
- biological basis of behavior
 - origins of knowledge
 - ability to adapt to reality
 - mechanisms of developmental change

Answer: B

Question type: FACTUAL

Level of difficulty: MEDIUM

Page(s) in text: 28

2. Piaget thought philosophical controversies could be resolved by ____.
- introspection
 - measuring children's intelligence
 - studying Kant's writings
 - applying the scientific method

Answer: D

Question type: FACTUAL

Level of difficulty: EASY

Page(s) in text: 29

3. According to Piaget's theory, humans are **not** born with the ability to ____.
- suck on a pacifier
 - mentally represent their mother's face
 - grasp their father's finger when it comes in contact with their hands
 - turn their heads toward a shaking rattle

Answer: B

Question type: APPLICATION

Level of difficulty: MEDIUM

Page(s) in text: 29, 35

4. Joan, a two-year-old child, shouts "doggie!" after spotting a field of cows in the distance. Joan's behavior illustrates the developmental process known as ____.
- accommodation
 - equilibration
 - evolution
 - assimilation

Answer: D

Question type: APPLICATION

Level of difficulty: DIFFICULT

Page(s) in text: 30

5. An example of functional assimilation is a ____.
- a. baby continuously kicking his or her crib to make a mobile jiggle over and over again
 - b. three-year-old progressing from one- to two-word phrases
 - c. five-year-old pretending that a banana is a telephone
 - d. twelve-year-old using a calculator to solve a math problem

Answer: A

Question type: APPLICATION

Level of difficulty: DIFFICULT

Page(s) in text: 31

6. Piaget compared children to ____.
- a. scientists solving problems
 - b. encyclopedias filled with knowledge
 - c. adults trying to imitate a sentence from a foreign language
 - d. photographers capturing snapshots of reality

Answer: A

Question type: FACTUAL

Level of difficulty: EASY

Page(s) in text: 32-33

7. According to Piaget, children ____ reality over the course of development.
- a. internalize
 - b. discover
 - c. construct
 - d. ignore

Answer: C

Question type: FACTUAL

Level of difficulty: MEDIUM

Page(s) in text: 32

8. Enrico, a five-month-old infant, begins to cry, and shortly thereafter, his mother appears, picks him up, and soothes him. Later, when Enrico is alone in his crib, he cries again. Enrico's latter crying episode is an example of a ____.
- a. reflex
 - b. secondary circular reaction
 - c. tertiary circular reaction
 - d. mental representation

Answer: B

Question type: APPLICATION

Level of difficulty: DIFFICULT

Page(s) in text: 35-36

9. Jean, a one-year-old child, squeezes her rubber ducky with both hands, and it squeaks. Next, she squeezes it with one hand to make it squeak. Then, she places the rubber ducky on the ground and steps on it to make it squeak. Finally, she sits on it to make it squeak. In this example, Jean's behavior is an example of a ____.
- primary circular reaction
 - secondary circular reaction
 - tertiary circular reaction
 - reflex

Answer: C

Question type: APPLICATION

Level of difficulty: DIFFICULT

Page(s) in text: 37

10. According to Piaget, one of the earliest indications of internal representations is ____.
- the coordination of secondary circular reactions
 - deferred imitation
 - perspective taking
 - the ability to consider classes and relations together

Answer: B

Question type: FACTUAL

Level of difficulty: EASY

Page(s) in text: 39

11. According to Piaget's distinction between signs and symbols, a ____ is an example of a sign, and a ____ is an example of a symbol.
- pencil representing a telescope, stack of blocks representing a house
 - thumbs-up gesture representing a job well done, pencil representing a telescope
 - stack of blocks representing a house, numeral representing a given number of objects
 - numeral representing a given number of objects, thumbs-up gesture representing a job well done

Answer: B

Question type: APPLICATION

Level of difficulty: DIFFICULT

Page(s) in text: 39

12. After reading a story to her class about a caterpillar changing into a butterfly, Heather, a kindergarten teacher, summarizes the main points of the story. Then, one student, DJ, raises his hand and says "I had pancakes for breakfast this morning." DJ's behavior is an example of ____.
- abstract thinking
 - mental imagery
 - centration
 - none of the above

Answer: D (correct answer is egocentric communication, which is not listed as an option)

Question type: APPLICATION

Level of difficulty: MEDIUM

Page(s) in text: 40

13. Which of the following is **not** characteristic of children in the preoperational stage?
- a. egocentrism
 - b. ability to mentally represent static objects
 - c. tendency to focus on a single dimension to the exclusion of others
 - d. ability to interpret events in terms of their relation to hypothetical events

Answer: D

Question type: APPLICATION

Level of difficulty: MEDIUM

Page(s) in text: 41

14. In the concrete operational period, the central development is the acquisition of ____.
- a. mental representations
 - b. abstract thought
 - c. conservation
 - d. operations

Answer: D

Question type: FACTUAL

Level of difficulty: EASY

Page(s) in text: 42

15. Piaget studied children's understanding of conservation of ____.
- a. number
 - b. mass
 - c. volume
 - d. all of the above

Answer: D

Question type: FACTUAL

Level of difficulty: EASY

Page(s) in text: 43

16. Christine, a five-year-old child, is presented with a number conservation problem involving two rows of checkers (row A and row B). Each row contains six checkers. After row B is spread out to appear longer than row A, Christine is likely to conclude that ____.
- a. row A and row B have the same number of checkers
 - b. row A has a greater number of checkers than row B
 - c. row B has a greater number of checkers than row A
 - d. there are twelve checkers all together

Answer: C

Question type: APPLICATION

Level of difficulty: MEDIUM

Page(s) in text: 44

17. Which of the following problems would a child in the concrete operational period be most likely to solve incorrectly?
- a. chemical combinations problem
 - b. conservation of liquid quantity problem
 - c. class inclusion problem
 - d. three-mountains problem

Answer: A

Question type: CONCEPTUAL

Level of difficulty: EASY

Page(s) in text: 41-49

18. Five-year-old children's performance on conservation problems illustrates their ____.
- a. inability to take perspectives other than their own
 - b. reliance on static perceptual states
 - c. egocentric communication skills
 - d. inability to consider classes and relations together

Answer: B

Question type: CONCEPTUAL

Level of difficulty: MEDIUM

Page(s) in text: 42-48

19. While eating lunch in her highchair, Darci, a six-month-old baby, accidentally drops her spoon. After dropping her spoon, Darci is likely to ____.
- a. appear unaffected
 - b. look in her hand for the spoon
 - c. look on the floor for the spoon, but give up looking if the spoon is not partially visible
 - d. scan and search the floor persistently for the spoon until she finds it

Answer: C

Question type: APPLICATION

Level of difficulty: MEDIUM

Page(s) in text: 46

20. According to Piaget, very young infants do not search for a hidden object because they ____.
- a. are uncoordinated
 - b. are not sufficiently interested in the object
 - c. have an underdeveloped visual system
 - d. fail to understand that the object continues to exist

Answer: D

Question type: FACTUAL

Level of difficulty: EASY

Page(s) in text: 46

21. Piaget (1995|1937) documented the following event. Lucienne, Piaget's one-year-old daughter, was in the garden when she spotted Piaget about three feet away. Immediately thereafter, Lucienne's mother asked, "where is Papa?" In response, Lucienne turned and pointed toward Piaget's office window where she was used to seeing him. In this event, Lucienne's behavior could be viewed as a naturalistic example of ____.
- a. egocentric communication
 - b. the A-not-B error
 - c. centration
 - d. the transformation error

Answer: B

Question type: APPLICATION

Level of difficulty: MEDIUM

Page(s) in text: 47

22. An experiment by Bower and Wishart (1972) involving a transparent cup ruled out which of the following accounts of object permanence?
- a. infants lack the necessary coordination to retrieve an object that is placed under a container
 - b. infants do not understand that an object continues to exist when it is hidden
 - c. infants' representations of hidden objects are not strong enough to elicit reaching behaviors
 - d. none of the above

Answer: A

Question type: CONCEPTUAL

Level of difficulty: MEDIUM

Page(s) in text: 47

23. Piaget argued that infants are most likely to classify an object according to its ____.
- a. color
 - b. size
 - c. function
 - d. essence

Answer: C

Question type: FACTUAL

Level of difficulty: EASY

Page(s) in text: 48

24. Mariana, a six-year-old child, is playing with three red checkers and five blue checkers. Mariana's father asks her, "are there more blue checkers, or more checkers?" Mariana is most likely to respond by saying "____."
- a. more checkers
 - b. more blue checkers
 - c. more red checkers
 - d. more purple checkers

Answer: B

Question type: APPLICATION

Level of difficulty: MEDIUM

Page(s) in text: 49

25. According to a study by Inhelder and Piaget (1964) on children's ability to solve multiple classification problems, children acquire the ability to complete the pattern ■ □ ● ○ ■ □ ● __ correctly (i.e., put a white circle in the blank) around age ____.
- a. five
 - b. seven
 - c. nine
 - d. eleven

Answer: C

Question type: APPLICATION

Level of difficulty: DIFFICULT

Page(s) in text: 51

26. According to Piaget's theory, a nine-year-old child is likely to be in the ____ period of development.
- a. sensorimotor
 - b. preoperational
 - c. concrete operational
 - d. formal operational

Answer: C

Question type: FACTUAL

Level of difficulty: EASY

Page(s) in text: 53

27. Research has shown that children in non-Western societies tend to reach each of Piaget's stages ____.
- a. at about the same age as children in Western societies
 - b. at younger ages than children in Western societies
 - c. at older ages than children in Western societies
 - d. none of the above

Answer: C

Question type: FACTUAL

Level of difficulty: EASY

Page(s) in text: 54

28. Research has shown that ____ adolescents exhibit formal operational reasoning.
- a. no
 - b. few
 - c. many
 - d. all

Answer: B

Question type: FACTUAL

Level of difficulty: EASY

Page(s) in text: 54

29. Baillargeon (1987) challenged Piaget's account of infants' knowledge. The study took advantage of infants' ability to habituate to familiar events and look longer at surprising events. Results suggested that infants as young as 4-months-old have a rudimentary understanding of the concept of ____.
- a. number conservation
 - b. class inclusion
 - c. object permanence
 - d. all of the above

Answer: C

Question type: CONCEPTUAL

Level of difficulty: EASY

Page(s) in text: 56

30. Studies performed in the 1980s and 1990s have shown that infants possess ____.
- a. about the same level of cognitive competence as Piaget's theory predicts
 - b. greater cognitive competence than Piaget's theory predicts
 - c. less cognitive competence than Piaget's theory predicts
 - d. knowledge that changes in a stage-like fashion, just as Piaget's theory predicts

Answer: B

Question type: FACTUAL

Level of difficulty: EASY

Page(s) in text: 56-57

31. Piaget argued that preschoolers do not grasp the concept of number. However, since that time, Gelman and her colleagues have found that preschoolers can ____.
- a. count accurately
 - b. understand the effects of addition and subtraction on collections of objects
 - c. indicate which of two numbers is bigger and which is smaller
 - d. all of the above

Answer: D

Question type: FACTUAL

Level of difficulty: MEDIUM

Page(s) in text: 57

32. When scientists look at children's thinking at a fine-grained level, changes in thinking appear to be ____.
- However, when they look at a course-grained level, changes in thinking appear to be ____.
- a. abrupt, gradual
 - b. abrupt, unpredictable
 - c. unpredictable, gradual
 - d. gradual, abrupt

Answer: D

Question type: CONCEPTUAL

Level of difficulty: MEDIUM

Page(s) in text: 58

True or False

33. _____ Piaget argued that basic categories of knowledge, such as space and time, are innate.

Answer: F

Question type: FACTUAL

Level of difficulty: MEDIUM

Page(s) in text: 29

34. _____ Assimilation is never present without accommodation.

Answer: T

Question type: FACTUAL

Level of difficulty: MEDIUM

Page(s) in text: 31

35. _____ Piaget's account of infancy is based on observations of his own children.

Answer: T

Question type: FACTUAL

Level of difficulty: EASY

Page(s) in text: 33

36. _____ The main difference between primary circular reactions and secondary circular reactions is that primary circular reactions are limited to actions and outcomes involving one's own body, whereas secondary circular reactions can involve objects in the external world.

Answer: T

Question type: FACTUAL

Level of difficulty: EASY

Page(s) in text: 35-36

37. _____ During the early portions of the preoperational period (around age 2) children tend to use more signs than symbols.

Answer: F

Question type: CONCEPTUAL

Level of difficulty: DIFFICULT

Page(s) in text: 39

38. _____ Preschool children cannot consider both the size and the shape of an object simultaneously.

Answer: T

Question type: CONCEPTUAL

Level of difficulty: EASY

Page(s) in text: 41-42, 53

39. _____ When nine-year-old children are asked to explain their reasoning on a conservation of liquid quantity problem, they are likely to say something like “this glass has more water because it is taller.”

Answer: F

Question type: CONCEPTUAL

Level of difficulty: MEDIUM

Page(s) in text: 44

40. _____ In general, the attempts to replicate Piaget’s observations with larger, more representative samples of children were successful.

Answer: T

Question type: FACTUAL

Level of difficulty: MEDIUM

Page(s) in text: 54

41. _____ When young children are tested on nonverbal versions of Piaget’s tasks, their reasoning is more advanced than Piaget’s theory predicts.

Answer: F

Question type: FACTUAL

Level of difficulty: MEDIUM

Page(s) in text: 55

42. _____ Piaget argued that, with proper instruction, a four-year-old child could be taught how to solve a conservation of mass problem.

Answer: F

Question type: APPLICATION

Level of difficulty: MEDIUM

Pages(s) in text: 60

Short Answer/Essay

43. Suppose Sabine, a six-month-old baby, fails to realize that her crib mobile continues to exist when she is not looking at it. Describe how Sabine's thinking on this issue might change as she progresses through the three stages of equilibration.

Answer: Students' answer to this question should focus on the progression through the three stages from (1) stability of thinking to (2) instability of thinking to (3) stability of thinking. To receive full credit, students should note that the final stage of equilibration is even more stable than the initial stage. The following is an example of a good answer: In the first stage, Sabine is stable and satisfied. She doesn't think of the mobile at all unless it is in her field of vision—out of sight, out of mind. One day when she is playing in her crib, she may look at the mobile, turn her head away from the mobile, and then look at the mobile again. At this point, she may notice that the mobile is still in the same spot when she looks away and then looks back again. As a result, she may enter the second stage, a state of disequilibria in which she thinks of the mobile when it is out of sight, but questions whether or not it still exists when she can't see it. After some investigation, she will enter the third stage as she develops a mental representation of the mobile and realize that it continues to exist even when it is out of sight. This way of thinking will be more stable than her original way of thinking because further observations will not call it into question (i.e., the mobile will remain constant every time she looks away and then back again).

Question type: APPLICATION

Level of difficulty: MEDIUM

Page(s) in text: 32

44. In a study by Schauble (1990), children played a computer game in which they set up races between different cars. The children's goal was to determine which of five car features (wheels, engine, tailfin, color, and muffler) had a causal relation to speed. Describe a strategy that might be used by a child in the formal operations period to solve this problem. Contrast that strategy with a strategy that might be used by a child in the concrete operations period.

Answer: A child in the formal operations period would generate all possible combinations of features. They would set up races between cars that differed according to specific features of interest, and they would interpret results appropriately. They would collect data systematically, and they would continue to collect data until they checked all possible feature combinations. In contrast, a child in the concrete operations period would not generate all possible combinations of features. They might repeat combinations that they already tried, and they might stop collecting data after only a few races. They might set up a race between two cars that differ in terms of multiple features, and then conclude that all of the features that differ between the two cars influence speed.

Question type: APPLICATION

Level of difficulty: MEDIUM

Page(s) in text: 45

45. Piaget studied children's performance on a variety of problems, including the three-mountains problem and the class-inclusion problem. Choose **either** the three-mountains problem **or** the class-inclusion problem. Describe the features of the problem, give an example of how a child in the preoperational period might solve the problem, and discuss how Piaget interpreted preoperational children's performance on the problem.

Answer: In **the three-mountains problem**, an experimenter places a model of three mountains of different sizes on a table in front of child. The child's goal is to identify which view of the mountains people sitting at different points around the table would see. Preoperational children tend to say that another person at the table would see the same view as they do, regardless of the person's position at the table. Piaget interpreted children's performance as evidence of their egocentrism. In **the class-inclusion problem**, an experimenter presents children with a set of objects that can either be grouped together as superset (e.g., 7 checkers), or be separated into two subsets (e.g., 5 blue checkers and 2 red checkers). The children's goal is to say whether there are more objects in the larger subset (e.g., 5 blue checkers) or more objects in the superset (7 checkers). Preoperational children tend to say that there are more objects in the larger subset than in the superset. Piaget interpreted children's performance as evidence of their tendency to focus on a single dimension to the exclusion of others.

Question type: FACTUAL + CONCEPTUAL

Level of difficulty: MEDIUM

Pages(s) in text: 41, 49

46. List the four main stages of Piaget's theory, along with their relevant age ranges. Describe one significant limitation of children's thinking in each of the first three stages.

Answer: The sensorimotor period is from birth to two years. One significant limitation in children's thinking is their poor understanding of object permanence. Very young infants act as if they do not understand that an object continues to exist when it is out of their sight, and even older infants demonstrate some misconceptions, such as the A-not-B error. The preoperational period is from ages 2-7. One significant limitation in children's thinking is their inability to focus on more than one object dimension at a time. The concrete operational period is from ages 7-12. One significant limitation in children's thinking is their inability to interpret the world in terms of hypothetical events. The formal operational period is from 12 years onward.

Question type: FACTUAL + CONCEPTUAL

Level of difficulty: MEDIUM

Pages(s) in text: 53

47. A number of studies have challenged aspects of Piaget's theory. Two examples are Diamond's (1985) study on infants' ability to reach for hidden objects and Gelman and colleagues' studies on preschoolers understanding of number. Review **either** Diamond's findings **or** Gelman's findings, and discuss how the findings challenge an aspect of Piaget's theory.

Answer: **Diamond** showed that infants' tendency to search for a hidden object is related to how long ago the object was hidden. As infants get older, they become able to search after longer and longer delays. Findings suggest that the ability to reach for hidden objects develops gradually, and they challenge Piaget's notion that cognitive change happens abruptly, in a stage-like fashion. **Gelman and colleagues** have shown that preschool children understand some aspects of the concept of number (e.g., they can count accurately, they understand the effects of the addition and subtraction of objects on a set of objects, they can identify which numbers in a set of numbers are larger and which are smaller). These studies challenge Piaget's claim that preschoolers do not understand the concept of number. More generally, they suggest that Piaget may have underestimated young children's capabilities.

Question type: FACTUAL + CONCEPTUAL

Level of difficulty: MEDIUM

Pages(s) in text: 57-58