TOTAL ASSESSMENT GUIDE

Chapter 9
Intelligence, Aptitude, and Cognitive Abilities

Topic		Factual	Conceptual	Applied
Chapter Quiz 1	Multiple Choice		1-10	
MODULE 9.1: MEASURING APTITUDE AND INTELLIGENCE				
	True or False		1-5	
	Essay		1	
***KNOW*...** the key terminology associated with intelligence and intelligence testing	Multiple Choice	5-6, 25-29, 34-36, 41, 43-44	1-2, 7, 24, 30, 39-40, 42	3-4, 32
	Short Answer			2
***UNDERSTAND*...** the purpose of standardization and norms in intelligence testing	Multiple Choice		17	15-16
	Short Answer			
***UNDERSTAND*...** the relationship between reliability and validity in testing	Multiple Choice		8-9, 11-13	10, 14
	Short Answer			
***APPLY*...** the concepts of test standardization and norms to make judgments about specific test scores	Multiple Choice	18, 22	21	19-20, 31, 33, 37-38
	Short Answer	1		
***ANALYZE*...** the use of brain size as an estimate of mental ability	Multiple Choice	45-46	47	
	Short Answer			
***ANALYZE*...** whether intelligence and aptitude tests make useful predictions about performance	Multiple Choice		23	
	Short Answer			
MODULE 9.2: UNDERSTANDING INTELLIGENCE				
	True or False		6-8	
	Essay		2-3	
***KNOW*...** the key terminology related to understanding intelligence	Multiple Choice	48, 65, 71-73, 75	49-50, 64, 68-69	51-52, 63, 74, 76-77
	Short Answer	3, 5		
***UNDERSTAND*...** why intelligence is divided into fluid and crystallized types	Multiple Choice		56-57, 61-62	53-55, 58-60
	Short Answer	4		
***UNDERSTAND*...** the puzzling "Flynn effect"—a generational rise in IQ scores	Multiple Choice	82-83, 85	86-88	84
	Short Answer			
***APPLY*...** your knowledge to identify examples from the triarchic theory of intelligence	Multiple Choice		66-67	70
	Short Answer			
***ANALYZE*...** whether teachers should spend time tailoring lessons to each individual student's learning style	Multiple Choice	79-80	81	78

Topic		Factual	Conceptual	Applied
MODULE 9.3: HEREDITY, ENVIRONMENT, AND INTELLIGENCE				
	True or False	9-10		
	Essay	4-5		
KNOW… the key terminology related to heredity, environment, and intelligence	Multiple Choice	115-116	93, 123-124	125-127
	Short Answer			10
UNDERSTAND… different approaches to studying the genetic basis of intelligence	Multiple Choice	89-91, 94, 97, 99	92, 96, 98	95, 100
	Short Answer		6	
APPLY… your knowledge of entity and incremental theories to understand your own beliefs about intelligence	Multiple Choice	117-119, 121-122		120
	Short Answer		9	
ANALYZE… claims that infant intelligence is increased by viewing educational television programming	Multiple Choice	101-102	103	
	Short Answer			
ANALYZE… the meaning of group level differences in intelligence scores	Multiple Choice	104-106, 108-109, 111	107, 112-114	110
	Short Answer	7	8	

CHAPTER QUIZ

1. Which of the following is the best psychological definition of intelligence?
a. How much a person knows
b. The ability to think, understand, reason, and cognitively adapt to and overcome obstacles
c. The score on an intelligence test
d. The ability to quickly learn new material
Answer: B
Module 9.1

2. Jonah receives the results of his intelligence test, which describes his score as having a percentile rank of .70 (or 70%). What does this information indicate about Jonah's intelligence score?
a. He has an IQ of 70.
b. He has an IQ of 30.
c. His score is greater than the score of 70% of the population.
d. His score is less than the score of 70% of the population.
Answer: C
Module 9.1

3. Using the original formula for the intelligence quotient, an 8-year-old child with a mental age of 10 would have an IQ that:
a. is exactly 100.
b. is greater than 100.
c. is less than 100.
d. cannot be determined without more information.
Answer: B
Module 9.1

4. Which of the following statements is true about the relationship between brain size and some aspects of intelligence?
a. Brain size is moderately related to intelligence.
b. There is no relationship between brain size and intelligence.
c. Brain size is an almost perfect predictor of intelligence.
d. The number and size of cerebral gyri, but not overall brain size, are related to intelligence.
Answer: A
Module 9.1

5. Whereas _____ intelligence tends to decrease in later life, _____ intelligence generally does not decline, and may even continue to increase.
a. general; crystallized
b. general; fluid
c. crystallized; fluid
d. fluid; crystallized
Answer: D
Module 9.2

6. Hussein is a small business owner. He was a C-student in school and does not generally think of himself as very "smart." Nonetheless, Hussein does an excellent job of running his business and dealing intelligently with real-world problems when they arise. According to the triarchic theory of intelligence, which type of intelligence is Hussein demonstrating?
a. Creative
b. Analytical
c. Crystallized
d. Practical
Answer: D
Module 9.2

7. What does the Flynn effect refer to?
a. The increase in average IQ test scores over decades
b. The decrease in average IQ test scores over decades
c. The higher IQ test average scores for Asian Americans compared to European Americans
d. The lower IQ test average scores for African Americans compared to European Americans
Answer: A
Module 9.2

8. Which of the following statements supports the theory that intelligence is determined in part by genes?
a. The correlation between IQ scores is stronger for fraternal twins than it is for identical twins.
b. Diet and lifestyle factors influence intelligence.
c. Offspring are more similar to their parents when they grow up with them as opposed to when children are raised apart from their parents.
d. Identical twins separated by adoption still have highly correlated IQ scores.
Answer: D
Module 9.3

9. Differences between men and women on mental rotation and verbal fluency tests may reflect differences in _____ levels in the brain.
a. testosterone
b. estrogen
c. serotonin
d. dopamine
Answer: A
Module 9.3

10. Carlos, who is Hispanic, is asked to take an IQ test by a job placement company. As he sits down to take the test, Carlos begins to think about how minorities in the United States, including Hispanics, are often viewed as less intelligent than others. These thoughts cause Carlos to experience discomfort and anxiety during the test, which then have a negative impact on his test result. Carlos's dilemma is an example of what psychologists call _____.
a. the Flynn effect
b. covert discrimination
c. stereotype threat
d. confirmation bias
Answer: C
Module 9.3

MAIN TEST BANK

Multiple Choice Items

Module 9.1: Measuring Aptitude and Intelligence

Know…
- the key terminology associated with intelligence and intelligence testing

Understand…
- the purpose of standardization and norms in intelligence testing
- the relationship between reliability and validity in testing

Apply…
- the concepts of test standardization and norms to make judgments about specific test scores

Analyze…
- the use of brain size as an estimate of mental ability
- whether intelligence and aptitude tests make useful predictions about performance

1. Which of the following is the best *psychological* description for intelligence?
A) how creative a person is
B) how much a person knows
C) how well a person can understand, reason, and cognitively adapt to obstacles
D) how "street smart" a person is
Answer: C
Rationale: Intelligence is the ability to think, understand, reason, and cognitively adapt to and overcome obstacles. Thus, intelligence reflects not just how much you know, but how you recognize and solve problems.
Diff: 2 Page Ref: 309
Skill: Conceptual
Objective: *Know the key terminology associated with intelligence and intelligence testing.*
APA SLO: *1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.*

2. _____ tests are designed to measure knowledge in a certain area. In contrast, _____ tests are designed to measure an individual's potential to perform well on a specific range of tasks.
A) IQ; psychometric
B) Psychometric; IQ
C) Aptitude; achievement
D) Achievement; aptitude
Answer: D
Rationale: Achievement tests measure knowledge and thinking skills that an individual has acquired. In contrast, aptitude tests are designed to measure an individual's potential to perform well on a specific range of tasks. In short, achievement tests measure current abilities and aptitude tests predict future performance.
Diff: 2 Page Ref: 309
Skill: Conceptual
Objective: *Know the key terminology associated with intelligence and intelligence testing.*
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

3. When Sheila joins the Air Force, she is given a test to determine which specialty she is most likely to succeed in. Although Sheila had hoped to be trained be an aircraft engineer, her test results suggest she would be a better radar operator. This is an example of how _____ tests are used.
A) intelligence
B) aptitude
C) Stanford-Binet
D) achievement
Answer: B
Rationale: Aptitude tests are designed to measure an individual's potential to perform well on a specific range of tasks. In contrast, Achievement tests measure knowledge and thinking skills that an individual has acquired. Because the test in the example is being used to predict what specialty Shelia will perform best in, the test is an aptitude test. There is no reason to believe that the test is designed to specifically assess Sheila's intelligence.
Diff: 2 Page Ref: 309
Skill: Applied
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

4. The test you are taking right now is an example of
A) an intelligence test.
B) an aptitude test.
C) a culture-free test.
D) an achievement test.
Answer: D
Rationale: Achievement tests measure knowledge and thinking skills that an individual has acquired. In contrast, aptitude tests are designed to measure an individual's potential to perform well on a specific range of tasks. Because this test is specifically designed to test what you have learned about the topics covered in this class, it can be considered an achievement test.
Diff: 2 Page Ref: 309
Skill: Applied
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

5. Most of the intelligence tests reviewed in your textbook test
A) aptitude, but not achievement.
B) achievement, but not aptitude.
C) neither achievement nor aptitude.
D) both achievement and aptitude.
Answer: D
Rationale: Most of the intelligence tests reviewed in the textbook test both knowledge and an individual's potential for future performance. Therefore, they measure both achievement and aptitude.
Diff: 2 Page Ref: 309
Skill: Factual
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

6. The measurement of psychological traits and abilities is referred to as
A) psychometrics.
B) standardized testing.
C) achievement testing.
D) percentile ranking.
Answer: A
Rationale: Psychometrics is an area of psychology that is concerned with the measurement of psychological traits and abilities—including personality, attitudes, and intelligence.
Diff: 1 Page Ref: 309
Skill: Factual
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

7. Which branch of psychology would be concerned with constructing valid and reliable intelligence tests?
A) anthropometrics
B) psychometrics
C) clinical psychology
D) standardized testing
Answer: B
Rationale: Psychometrics is an area of psychology, which is concerned with the measurement of psychological traits and abilities—including personality, attitudes, and intelligence. Anthropometrics is an outdated term that is not used to describe current psychological research.
Diff: 2 Page Ref: 309
Skill: Conceptual
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

8. A test that is classified as a "valid" measure is one that
A) measures what it is intended to measure.
B) produces repeatable scores over time.
C) allows for comparison across groups of people.
D) produces both repeatable scores and measures what it is intended to measure.
Answer: A
Rationale: Validity is the degree to which a test actually measures the trait or ability it is intended to measure. In contrast, reliability is the degree to which a test produces consistent results.
Diff: 2 Page Ref: 309
Skill: Conceptual
Objective: ***Understand the relationship between reliability and validity in testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***
% correct 71 a= 71 b= 8 c= 3 d= 18 *r* = .33

9. A psychological test that measures what we intend it to measure is said to be
A) valid.
B) normed.
C) reliable.
D) standardized.
Answer: A
Rationale: Validity is the degree to which a test actually measures the trait or ability it is intended to measure. In contrast, reliability is the degree to which a test produces consistent results.
Diff: 2 Page Ref: 309
Skill: Conceptual
Objective: ***Understand the relationship between reliability and validity in testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

10. In the Middle Ages, people accused of being witches were often tested by being dunked in a river or pond. If they floated to the surface, they were condemned as witches. If they sank and drowned, they were posthumously acquitted. This test obviously lacks
A) reliability.
B) norms.
C) validity.
D) bias.
Answer: C
Rationale: Validity is the degree to which a test actually measures the trait or ability it is intended to measure. Because there is no real relationship between floating and witchcraft, this test clearly lacks validity. This does not necessarily imply that the test lacks reliability. For example, a person may float every time they are tested, suggesting some degree of reliability.
Diff: 3 Page Ref: 309
Skill: Applied
Objective: ***Understand the relationship between reliability and validity in testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

11. When a test has a high capacity to forecast future behaviors or outcomes, it might be described as having high _____ validity.
A) concurrent
B) predictive
C) future-oriented
D) construct
Answer: B
Rationale: Predictive validity is the degree to which a test predicts future performance.
Diff: 2 Page Ref: 309
Skill: Conceptual
Objective: ***Understand the relationship between reliability and validity in testing.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

12. Psychological tests that yield relatively consistent results are said to be
A) valid.
B) normed.
C) reliable.
D) standardized.
Answer: C
Rationale: Reliability is the degree to which a test produces consistent results. In contrast, validity is the degree to which a test actually measures the trait or ability it is intended to measure.
Diff: 2 Page Ref: 310
Skill: Conceptual
Objective: ***Understand the relationship between reliability and validity in testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***
% correct 87 a= 9 b= 0 c= 87 d= 5 *r* = .50

13. A test is said to be reliable if
A) a person's score on a test is pretty much the same every time he or she takes it.
B) it contains an adequate sample of the skills it is supposed to measure.
C) its results agree with a more direct measure of what the test is designed to predict.
D) it is culture-free.
Answer: A
Rationale: Reliability is the degree to which a test produces consistent results. In contrast, validity is the degree to which a test actually measures the trait or ability it is intended to measure.
Diff: 2 Page Ref: 310
Skill: Conceptual
Objective: ***Understand the relationship between reliability and validity in testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

14. Cameron is so surprised by his score on an intelligence test that he decides to take it again. His second score is almost exactly the same as his first score. The test Cameron took appears to have high
A) predictive validity.
B) test-retest reliability.
C) standardization.
D) convolution.
Answer: B
Rationale: Test-retest reliability is the degree to which a test will produce the same result if it is taken a second time.
Diff: 2 Page Ref: 310
Skill: Applied
Objective: ***Understand the relationship between reliability and validity in testing.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

15. Kwan's 8th grade teacher tells her that the class will be taking a standardized test next week. What does this mean?
A) The test will be administered and scored the same way for everyone who takes it.
B) The results of the test will determine Kwan's placement in the 9th grade.
C) The average grade for the class should be around 100 points.
D) The test will be designed to measure Kwan's intelligence.
Answer: A
Rationale: A standardized test is a test that has a set of questions or problems that are administered and scored in a uniform (in other words, standardized) way across large numbers of individuals. They can be used for a variety of purposes.
Diff: 2 Page Ref: 310
Skill: Applied
Objective: ***Understand the purpose of standardization and norms in intelligence testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

16. Which of the following is a key advantage to using a standardized test?
A) The test can be tailored to individual test takers.
B) Test takers know what information they will be tested on before taking the test.
C) Standardization allows results to be compared across individuals.
D) There are no advantages to standardized tests.
Answer: C
Rationale: A standardized test is a test that has a set of questions or problems that are administered and scored in a uniform (in other words, standardized) way across large numbers of individuals. Standardization allows for comparisons across individuals—a critical component of testing.
Diff: 2 Page Ref: 310
Skill: Applied
Objective: ***Understand the purpose of standardization and norms in intelligence testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

17. Most intelligence scales use standardized testing. This is because standardization allows researchers to
A) determine how much of an individual's intelligence is the result of heredity.
B) make comparisons across large groups of people.
C) avoid stereotype threat.
D) determine what makes each person unique.
Answer: B
Rationale: A standardized test is a test that has a set of questions or problems that are administered and scored in a uniform (in other words, standardized) way across large numbers of individuals. Standardization allows for comparisons across individuals—a critical component of testing.
Diff: 2 Page Ref: 310
Skill: conceptual
Objective: ***Understand the purpose of standardization and norms in intelligence testing.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

18. The average score on most IQ tests is
A) 15.
B) 100.
C) 150.
D) 500.
Answer: B
Rationale: For most intelligence tests, the norm or average score is 100.
Diff: 1 Page Ref: 310
Skill: Factual
Objective: ***Apply the concepts of test standardization and norms to make judgments about specific test scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

19. Francis has his intelligence tested and receives a score of 100. Given the norm for most intelligence tests, Francis' score is
A) extremely below average.
B) slightly below average.
C) average.
D) above average.
Answer: C
Rationale: For most intelligence tests, the norm or average score is 100.
Diff: 1 Page Ref: 310
Skill: Applied
Objective: ***Apply the concepts of test standardization and norms to make judgments about specific test scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

20. Misha receives a score of 115 on a standardized intelligence test. This indicates that Misha is _____ standard deviations _____ average.
A) one; below
B) one; above
C) three; below.
D) three; above.
Answer: B
Rationale: For most intelligence tests, the norm or average score is 100, with a standard deviation of 15. Therefore, a score of 115 is one standard deviation above the mean.
Diff: 2 Page Ref: 310
Skill: Applied
Objective: ***Apply the concepts of test standardization and norms to make judgments about specific test scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

21. A score on an intelligence test with a percentile rank of .30 indicates that
A) The score is two standard deviations above the mean.
B) The score is two standard deviations below the mean.
C) 30% of the population has lower scores.
D) 30% of the population has higher scores.
Answer: D
Rationale: Percentile rank— indicates the percentage of scores below a certain point. A percentile rank of .30 indicates that 30% of the population score below a given score.
Diff: 2 Page Ref: 310
Skill: Conceptual
Objective: ***Apply the concepts of test standardization and norms to make judgments about specific test scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

22. Because of the norms and the distribution of scores for most intelligence tests, a score of 100 usually has a percentile rank of
A) 1.
B) .50.
C) .10.
D) .05.
Answer: B
Rationale: A score of 100 has a percentile rank of .50, meaning that 50% of the population scores below this level.
Diff: 2 Page Ref: 310
Skill: Factual
Objective: ***Apply the concepts of test standardization and norms to make judgments about specific test scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

23. The National Football League (NFL) uses a cognitive aptitude test called the Wonderlic. The leaked Wonderlic scores of several high profile players suggests that the test
A) may have low validity.
B) may have low reliability.
C) has high validity.
D) has high reliability.
Answer: A
Rationale: Both Vince Young and Dan Marino apparently had very low scores on the Wonderlic test, calling into question whether the Wonderlic test is a valid predictor for performance. This does not imply that the test is not reliable.
Diff: 2 Page Ref: 310-311
Skill: Conceptual
Objective: ***Analyze whether intelligence and aptitude tests make useful predictions about performance.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

24. Binet and Simon considered children behind in their schooling if their
A) mental age equals their chronological age.
B) mental age is lower than their chronological age.
C) mental age is higher than their chronological age.
D) mental age does not equal their chronological age.
Answer: B
Rationale: Binet and Simon used the concept of mental age, the average or typical test score for a specific chronological age, to measure achievement. A child with a mental age lower than his or her actual (chronological) age would be considered behind in his or her schooling.
Diff: 1 Page Ref: 312
Skill: Conceptual
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

25. Binet and Simon measured children using what new concept?
A) divergent thinking
B) mental set
C) mental age
D) creativity
Answer: C
Rationale: Binet and Simon used the concept of mental age, the average or typical test score for a specific chronological age, to measure academic achievement.
Diff: 1 Page Ref: 312
Skill: Factual
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

26. Binet and Simon originally developed their famous test to
A) identify children who might have difficulty in school.
B) identify gifted children.
C) measure the intelligence of adults.
D) measure the intelligence of normal children.
Answer: A
Rationale: In 1904, the French government created the Commission on the Education of Retarded Children. As part of this commission, Alfred Binet and Theodore Simon developed a method of assessing children's academic achievement at school, which was then used to identify students who would need extra assistance.
Diff: 3 Page Ref: 312
Skill: Factual
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

27. _____, a professor of psychology at Stanford University, revised Binet and Simon's test so it could be used with American school children.
A) William Stern
B) Lewis Terman
C) Henri Simon
D) David Wechsler
Answer: B
Rationale: Lewis Terman at Stanford University had the achievement test developed by Binet and Simon translated to English and extended the test beyond school ages to include very high-achieving adults. This modified test, published in 1916, was named the Stanford-Binet Intelligence Scale.
Diff: 2 Page Ref: 312
Skill: Factual
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***
% correct 50 a= 26 b= 50 c= 16 d= 8 *r* = .42

28. _____ devised a simple formula for calculating an index of intelligence, or intelligence quotient (IQ).
A) Theo Simon
B) William Stern
C) Franz Gall
D) Louis Thurstone
Answer: B
Rationale: William Stern developed the intelligence quotient (IQ)—a measurement in which the mental age of an individual is divided by the person's chronological age and then multiplied by 100.
Diff: 2 Page Ref: 312
Skill: Factual
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

29. The formula which uses chronological age (CA) and mental age (MA) to calculate the intelligence quotient is:
A) MA ÷ CA × 100.
B) CA ÷ MA × 100.
C) (MA × CA) ÷ 100.
D) 100 ÷ (MA + CA).
Answer: A
Rationale: William Stern developed the intelligence quotient (IQ)—a measurement in which the mental age of an individual is divided by the person's chronological age and then multiplied by 100.
Diff: 2 Page Ref: 312
Skill: Factual
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

30. Who has the highest IQ?
A) Clarissa, with a mental age of 9 and a chronological age of 9.
B) Matt, with a mental age of 9 and a chronological age of 10.
C) Cecilee, with a mental age of 9 and a chronological age of 7.
D) Morgan, with a mental age of 7 and a chronological age of 7.
Answer: C
Rationale: The original formula for calculating the intelligence quotient (IQ) was mental age ÷ chronological age × 100. Because Cecilee is the only one whose mental age is greater than their chronological age, she is the only one with an IQ greater than 100.
Diff: 2 Page Ref: 312
Skill: Conceptual
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

31. Twelve-year-old Arnold received an IQ test score of 75. Using the original definition for IQ, what is his mental age?
A) 9
B) 10
C) 5
D) 7
Answer: A
Rationale: The original formula for calculating the intelligence quotient (IQ) was mental age ÷ chronological age × 100. Using this equation, a 12-year-old would have an IQ of 75 if his mental age was 9, (9 ÷ 12) = 0.75; 0.75 × 100 = 75.
Diff: 3 Page Ref: 312
Skill: Applied
Objective: ***Apply the concepts of test standardization and norms to make judgments about specific test scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

32. What is the IQ of a 10-year-old with a mental age of 8?
A) 125
B) 80
C) 1.25
D) 0.8
Answer: B
Rationale: The original formula for calculating the intelligence quotient (IQ) was mental age ÷ chronological age × 100. Using this equation, a 10-year-old with a mental age of 8 would have an IQ of 80, (8 ÷ 10) = 0.8; 0.8 × 100 = 80.
Diff: 2 Page Ref: 312
Skill: Applied
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

33. Based on IQ score as described by Stern, a student with an IQ score of 120 is likely to answer IQ test questions like someone who is age _____, even though the student is _____.
A) 10; 12
B) 12; 11
C) 10; 8
D) 12; 10
Answer: D
Rationale: The original formula for calculating the intelligence quotient (IQ) was mental age ÷ chronological age × 100. Using this equation, a 10-year-old with a mental age of 12 would have an IQ of 120, (12 ÷ 10) = 1.2; 1.2 × 100 = 120.
Diff: 3 Page Ref: 312
Skill: Applied
Objective: ***Apply the concepts of test standardization and norms to make judgments about specific test scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

34. One of the odd twists in the history of psychology is that Binet and Simon's test started out as a way to measure_____, but was adapted by others into a measure of _____.
A) academic achievement; innate intelligence
B) innate intelligence; academic achievement
C) chronological age; mental age
D) mental age; chronological age
Answer: A
Rationale: Binet had viewed his original test as a measure of achievement, not as a measure of an innate capacity. Nonetheless, the Stanford-Binet test, an adapted version of the original test, quickly came to be used as a measure of innate intelligence.
Diff: 2 Page Ref: 312
Skill: Factual
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

35. What is the most commonly used intelligence for testing adolescents and adults?
A) Standford-Binet
B) Wechsler Adult Intelligence Scale (WAIS)
C) Binet-Simon
D) Raven's Progressive Matrices
Answer: B
Rationale: The Wechsler Adult Intelligence Scale (WAIS) is the most commonly used intelligence test used on adolescents and adults.
Diff: 2 Page Ref: 312
Skill: Factual
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

36. The Wechsler Adult Intelligence Scale provides a Full Scale IQ measurement, but also breaks intelligence into which two indices?
A) General Ability and Cognitive Proficiency
B) Emotional Intelligence and Academic Intelligence
C) Visual and Auditory
D) Achievement and Aptitude
Answer: A
Rationale: The WAIS provides a single IQ score for each test taker—the Full Scale IQ—but also breaks intelligence into a General Ability Index (GAI) and a Cognitive Proficiency Index (CPI).
Diff: 3 Page Ref: 312
Skill: Factual
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

37. Sam and Julie each scored 110 on the WAIS. Based on their scores, which is true?
A) If Sam scored high in math, then Julie scored high in math.
B) If Sam scored high in comprehension, then Julie scored high in comprehension.
C) Two people with the same IQ score could have very different abilities.
D) Two people with the same IQ score should have the same abilities.
Answer: C
Rationale: The Full Scale IQ score for the Wechsler Adult Intelligence Scale (WAIS) is computed from several indexes, which each measure different aspects of intelligence. Therefore, it is entirely possible that two people with the same Full Scale IQ have different scores on the various indexes.
Diff: 2 Page Ref: 312-313
Skill: Applied
Objective: ***Apply the concepts of test standardization and norms to make judgments about specific test scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

38. Zoe wants to test the IQ of a group of ESL students who do not speak any English. What test might you recommend to her?
A) Stanford-Binet
B) Raven's Progressive Matrices
C) WAIS
D) Binet-Simon
Answer: B
Rationale: Raven's Progressive Matrices is an intelligence test that emphasizes problems that are intended not to be bound to a particular language or culture. The other tests listed require knowledge of the test developer's language and culture to varying degrees.
Diff: 2 Page Ref: 313
Skill: Applied
Objective: ***Apply the concepts of test standardization and norms to make judgments about specific test scores.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

39. Which of the following kinds of items would most likely be found on a culture-free IQ test?
A) visual pattern completion
B) sentence completion
C) vocabulary recognition
D) general information
Answer: A
Rationale: Culture-free tests attempt to measure intelligence in a way that is independent of culture and language. Test items that involve visual patterns and pictures are commonly used in culture-free tests, such as Raven's Progressive Matrices.
Diff: 2 Page Ref: 313
Skill: Conceptual
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

40. What is a dominant characteristic of culture-free IQ tests?
A) Minimal verbal skills are required.
B) They feature a large number of items pertaining to the test taker's culture.
C) They offer a large percentage of math-based questions to reduce the strain on language.
D) They are always administered orally.
Answer: A
Rationale: Culture-free tests attempt to measure intelligence in a way that is independent of culture and language. This means that culture-free tests tend to rely on minimal verbal skills.
Diff: 2 Page Ref: 313
Skill: Conceptual
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

41. The cousin of Charles Darwin who suggested that the unusual eminence of his own family was due to genetic gifts was
A) Alfred Binet.
B) James Cattell.
C) Henri Simon.
D) Sir Francis Galton.
Answer: D
Rationale: Sir Francis Galton used heredity to explain the eminence of his family, which included notable scholars such as his cousin, Charles Darwin.
Diff: 2 Page Ref: 314
Skill: Factual
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

42. Which of the following is representative of Sir Francis Galton's perspective on intelligence?
A) Galton believed that intelligence was determined 50% by environment and 50% by genes.
B) Galton placed a lot of stock in heredity and believed that genes significantly influenced intelligence.
C) Galton was an environmentalist and believed that social factors significantly influenced intelligence.
D) Galton believed that intelligence was a trait that changed significantly over time.
Answer: B
Rationale: Sir Francis Galton believed that intelligence was inherited, and was not determined by environmental factors. Because Galton believed that intelligence was not the result of factors such as practice and experience, he believed that it was a very stable trait.
Diff: 3 Page Ref: 314
Skill: Conceptual
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***
% correct 67 a= 15 b= 67 c= 18 d= 0 *r* = .57
% correct 56 a= 20 b= 56 c= 21 d= 3 *r* = .48

43. Which researcher tried to measure intelligence by using perceptual tests?
A) Alfred Binet
B) Theodore Simon
C) Sir Francis Galton
D) Charles Spearman
Answer: C
Rationale: Sir Francis Galton became one of the first to try to scientifically measure intelligence through a program of research he called anthropometrics. Specifically, he presented a series of perceptual tests to hundreds of people.
Diff: 3 Page Ref: 314
Skill: Factual
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

44. According to your textbook, researchers have found a strong positive relationship between intelligence and _____, although the nature of this relationship remains unclear.
A) working memory capacity
B) visual acuity
C) typing speed
D) schizophrenia
Answer: A
Rationale: Researchers have found high correlations between working memory capacity and standardized reasoning tests. However, despite a great deal of overlap in working memory scores and other measures of intelligence, debate persists about exactly how strong this relationship is and why it exists.
Diff: 2 Page Ref: 314
Skill: Factual
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

45. Which of the following is true about the relationship between the brain and intelligence scores?
A) Brain size, but not the degree of convolution, is correlated with intelligence scores.
B) The degree of convolution, but not brain size, is correlated with intelligence scores.
C) Both the size and degree of convolution of the cortex are correlated with intelligence scores.
D) Neither the size, nor the degree of convolution of the cortex, are correlated with intelligence scores.
Answer: C
Rationale: The size of the cortex and increased convolutions (gyri) are associated with higher intelligence scores.
Diff: 2 Page Ref: 315-316
Skill: Factual
Objective: ***Analyze the use of brain size as an estimate of mental ability.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

46. Which of the following was true about the brain of Albert Einstein?
A) It was heavier than the average human brain.
B) It was smaller and lighter than the average human brain.
C) Its weight was average for a human brain.
D) It was never studied.
Answer: B
Rationale: The average human brain is between 1,300 and 1,400 grams. Einstein's brain measured 1,230 grams.
Diff: 2 Page Ref: 316
Skill: Factual
Objective: ***Analyze the use of brain size as an estimate of mental ability.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

47. Which of the following best describes the relationship between a person's brain size, and his or her intelligence?
A) There is no relationship between brain size and intelligence.
B) Brain size is correlated with intelligence, but the relationship is complicated and poorly understood.
C) Large brain size is a consistent predictor of high intellectual ability.
D) Small brain size is a consistent predictor of high intellectual ability.
Answer: B
Rationale: While brain size is moderately correlated with intelligence, other factors may account for individual differences.
Diff: 1 Page Ref: 316
Skill: Conceptual
Objective: ***Analyze the use of brain size as an estimate of mental ability.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

Module 9.2: Understanding Intelligence

Know…

- the key terminology related to understanding intelligence

Understand…

- why intelligence is divided into fluid and crystallized types
- the puzzling "Flynn effect"—a generational rise in IQ scores

Apply…

- your knowledge to identify examples from the triarchic theory of intelligence

Analyze…

- whether teachers should spend time tailoring lessons to each individual student's learning style

48. Who was the inventor of statistical technique called factor analysis, a method that compares results of different correlational measures to identify patterns, or "factors," among them?
A) Alfred Binet
B) Henri Simon
C) Sir Francis Galton
D) Charles Spearman
Answer: D
Rationale: Charles Spearman developed techniques to calculate correlations among multiple measures of mental abilities. One of these techniques, known as factor analysis, is a statistical technique that reveals similarities among a wide variety of items.
Diff: 2 Page Ref: 320
Skill: Factual
Objective: *Know the key terminology related to understanding intelligence.*
APA SLO: *1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.*
% correct 45 a= 5 b= 13 c= 37 d= 45 *r* = .32

49. Who would have supported the notion that intelligence resulted from a single ability and could be represented by a single test score?
A) Gardner
B) Spearman
C) Sternberg
D) Thurstone
Answer: B
Rationale: Charles Spearman hypothesized the existence of a general intelligence (*g*), which could be represented by a single test score. In contrast, many other researchers have suggested the existence of separate or multiple intelligences.
Diff: 3 Page Ref: 320
Skill: Conceptual
Objective: *Know the key terminology related to understanding intelligence.*
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

50. According to Spearman, it is one's _____ intelligence that produces the positive correlations found between math, reading scores, and visual perception tests.
A) general
B) emotional
C) crystallized
D) fluid
Answer: A
Rationale: Charles Spearman hypothesized the existence of a general intelligence (*g*).
Diff: 2 Page Ref: 320
Skill: Conceptual
Objective: *Know the key terminology related to understanding intelligence.*
APA SLO: *1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.*

51. Ms. Bouvier is a first grade teacher. She has just given Chelsea a reading test. Chelsea scored very high in word recognition, so Ms. Bouvier assumes she will score high on the rest of the test. It is clear that Ms. Bouvier believes in the _____ factor of intelligence.
A) g
B) s
C) a
D) r
Answer: A
Rationale: Charles Spearman hypothesized the existence of a general intelligence (abbreviated as "g")—a concept that intelligence is a basic cognitive trait comprising the ability to learn, reason, and solve problems regardless of their nature. According to this concept, a person who was good at reading, would also be good at a number of tasks, because they would all be determined by the same factor (i.e., g).
Diff: 2 Page Ref: 320
Skill: Applied
Objective: *Know the key terminology related to understanding intelligence.*
APA SLO: *1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.*

52. Terence is a skilled musician, writer, computer programmer, and problem solver. The fact that Terence is good at so many diverse activities supports the notion of _____ intelligence.
A) modal
B) transferable
C) triarchic
D) general
Answer: D
Rationale: Charles Spearman hypothesized the existence of a general intelligence (abbreviated as "g")—a concept that intelligence is a basic cognitive trait comprising the ability to learn, reason, and solve problems regardless of their nature. According to this concept, a person who was good at one cognitive task, would also be good at a number of tasks, because they would all be determined by the same factor (i.e., g).
Diff: 2 Page Ref: 320
Skill: Applied
Objective: *Know the key terminology related to understanding intelligence.*
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

53. Because Ken's history professor was a college student during the 1970s, he has extraordinary insight and knowledge of facts concerning the Vietnam War era. This knowledge is associated with the term
A) crystallized intelligence.
B) fluid intelligence.
C) general intelligence.
D) multiple intelligence.
Answer: A
Rationale: Crystallized intelligence (Gc), is a form of intelligence that relies on extensive experience and knowledge and, therefore, tends to be relatively stable and robust. In this example, the history professor's knowledge and insight into the Vietnam War era is a form of Gc. In contrast, fluid intelligence (Gf), is a type of intelligence that is used to adapt to new situations and solve new problems without relying on previous knowledge.
Diff: 3 Page Ref: 321
Skill: Applied
Objective: *Understand why intelligence is divided into fluid and crystallized types.*
APA SLO: *1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.*

54. Brandon can name all 50 states and capitals. Which type of intelligence is he relying most on?
A) semantic
B) fluid
C) crystallized
D) static
Answer: C
Rationale: Crystallized intelligence (Gc), is a form of intelligence that relies on extensive experience and knowledge and, therefore, tends to be relatively stable and robust. In contrast, fluid intelligence (Gf), is a type of intelligence that is used to adapt to new situations and solve new problems without relying on previous knowledge.
Diff: 2 Page Ref: 321-322
Skill: Applied
Objective: *Understand why intelligence is divided into fluid and crystallized types.*
APA SLO: *1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.*

55. Megan is very good at solving problems, even though she has had very little formal training. For example, Megan was able to solve the difficult Rubik's Cube puzzle the first time she tried. Megan clearly has a high degree of _____ intelligence.
A) semantic
B) fluid
C) crystallized
D) static
Answer: B
Rationale: Fluid intelligence (Gf), is a type of intelligence that is used to adapt to new situations and solve new problems without relying on previous knowledge. In contrast, crystallized intelligence (Gc), is a form of intelligence that relies on extensive experience and knowledge and, therefore, tends to be relatively stable and robust.
Diff: 2 Page Ref: 321
Skill: Applied
Objective: *Understand why intelligence is divided into fluid and crystallized types.*
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

56. _____ intelligence allows people to solve problems that they have not previously experienced, while _____ intelligence involves applying previous experience and knowledge to solving a problem.
A) Crystallized; fluid
B) Fluid; crystallized
C) Analytical; practical
D) Practical; Analytical
Answer: B
Rationale: Fluid intelligence (Gf), is a type of intelligence that is used to adapt to new situations and solve new problems without relying on previous knowledge. In contrast, crystallized intelligence (Gc), is a form of intelligence that relies on extensive experience and knowledge and, therefore, tends to be relatively stable and robust.
Diff: 2 Page Ref: 321
Skill: Conceptual
Objective: ***Understand why intelligence is divided into fluid and crystallized types.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

57. Vocabulary tests primarily measure _____ intelligence.
A) crystallized
B) fluid
C) creative
D) existential
Answer: A
Rationale: Crystallized intelligence (Gc), is a form of intelligence that relies on extensive experience and knowledge and, therefore, tends to be relatively stable and robust. Vocabulary tests measure Gc because they test for prior knowledge (i.e., the meaning of words).
Diff: 3 Page Ref: 321
Skill: Conceptual
Objective: ***Understand why intelligence is divided into fluid and crystallized types.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

58. It is generally the case that most great scientists have their ground-breaking ideas when they are in early to middle adulthood, but rarely when they are older. What might explain this fact?
A) The brain shrinks with age.
B) General intelligence declines steeply after middle adulthood.
C) Fluid intelligence peaks in middle adulthood, and then declines in later life.
D) Crystallized intelligence peaks in middle adulthood, and then declines in later life.
Answer: C
Rationale: Crystallized intelligence tends to increase throughout life, but fluid intelligence peaks around early to middle adulthood. Because making ground breaking discoveries can require problem solving that requires new ways of thinking, not just acquired knowledge, this is likely the reason scientific breakthroughs decline with age.
Diff: 3 Page Ref: 322
Skill: Applied
Objective: ***Understand why intelligence is divided into fluid and crystallized types.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

59. Research indicates that _____ intelligence peaks in early to middle adulthood and then begins declining.
A) crystallized
B) fluid
C) verbal
D) existential
Answer: B
Rationale: Fluid intelligence peaks around early to middle adulthood and then decline. In contrast, crystallized intelligence tends not to decrease in healthy adults, and may even increase with experience.
Diff: 3 Page Ref: 322
Skill: Applied
Objective: ***Understand why intelligence is divided into fluid and crystallized types.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

60. Which of the following typically happens to crystallized intelligence as healthy adults age?
A) Crystallized intelligence peaks at middle age and then declines.
B) Crystallized intelligence is slowly replaced by fluid intelligence.
C) Crystallized intelligence remains stable or increases with experience.
D) Crystallized intelligence steadily declines throughout the lifespan.
Answer: C
Rationale: Fluid intelligence peaks around early to middle adulthood and then decline. In contrast, crystallized intelligence tends not to decrease in healthy adults, and may even increase with experience.
Diff: 3 Page Ref: 322
Skill: Applied
Objective: ***Understand why intelligence is divided into fluid and crystallized types.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

61. Which of the following is a healthy older adult most likely to do as well—or even better than—a younger adult?
A) pattern recognition
B) a geometric puzzle
C) a vocabulary test
D) a timed problem solving task
Answer: C
Rationale: Fluid intelligence peaks around early to middle adulthood and then decline. In contrast, crystallized intelligence tends not to decrease in healthy adults, and may even increase with experience. Vocabulary tests primarily measure crystallized intelligence, whereas the other options involve fluid intelligence.
Diff: 2 Page Ref: 322
Skill: Conceptual
Objective: ***Understand why intelligence is divided into fluid and crystallized types.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

62. Which of the following is a younger adult most likely to do better than a healthy older adult?
A) naming the capitals of states.
B) solving a geometric puzzle.
C) defining vocabulary words
D) calculating the area of a circle from the length of the radius
Answer: B
Rationale: Fluid intelligence peaks around early to middle adulthood and then decline. In contrast, crystallized intelligence tends not to decrease in healthy adults, and may even increase with experience. Solving a geometric puzzle relies on fluid intelligence, whereas the other options rely primarily on crystallized intelligence.
Diff: 2 Page Ref: 322
Skill: Conceptual
Objective: ***Understand why intelligence is divided into fluid and crystallized types.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

63. Janet has IQ score that is much lower than average and has been diagnosed as having a form of autism. Despite her disabilities, Janet can perform incredible feats of mental arithmetic, including finding the square root of five-digit numbers without a calculator or paper and pencil! Janet would be classified as a
A) kinetic learner.
B) crystallized thinker.
C) fluid thinker.
D) savant.
Answer: D
Rationale: Savants are individuals with low mental capacity in most domains but extraordinary abilities in other specific areas such as music, mathematics, or art.
Diff: 1 Page Ref: 323
Skill: Applied
Objective: ***Know the key terminology related to understanding intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

64. Which of the following does NOT support the idea of multiple intelligences?
A) Head injury can lead to the loss of one ability but not others.
B) People who score highly on intelligence tests often excel in a number of areas.
C) Intelligent people vary a great deal in terms of physical, social, and artistic skills.
D) Savants may have low mental capacities, but excel at specific abilities.
Answer: B
Rationale: The fact that high intelligence scores often predict a person will excel in a number of different areas supports the concept of general intelligence, not multiple intelligences. All of the other options support the existence of distinct intelligences.
Diff: 2 Page Ref: 323
Skill: Conceptual
Objective: ***Know the key terminology related to understanding intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

65. What three types of intelligence constitute Sternberg's triarchic theory of intelligence?
A) global, intuitive, and special
B) general, global, and specific
C) mathematical, reasoning, and verbal
D) analytical, creative, and practical
Answer: D
Rationale: Robert Sternberg's triarchic theory is a model of intelligence consisting of three domains: analytical intelligence, practical intelligence, and creative intelligence.
Diff: 2 Page Ref: 323-324
Skill: Factual
Objective: ***Know the key terminology related to understanding intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***
% correct 89 a= 3 b= 3 c= 5 d= 89 *r* = .36

66. According to Robert Sternberg, _____ is the ability to come up with new ways of solving problems.
A) analytical intelligence
B) creative intelligence
C) practical intelligence
D) general intelligence
Answer: B
Rationale: According to Robert Sternberg's triarchic theory, creative intelligence is the ability to create new ideas to solve problems.
Diff: 2 Page Ref: 324
Skill: Conceptual
Objective: ***Apply your knowledge to identify examples from the triarchic theory of intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

67. According to Robert Sternberg, _____ is best described as the ability to use information to address real-world problems.
A) analytical intelligence
B) creative intelligence
C) practical intelligence
D) general intelligence
Answer: C
Rationale: According to Robert Sternberg's triarchic theory, practical intelligence is the ability to address real-world problems that are encountered in daily life, especially those that occur in an individual's specific work context and family life.
Diff: 2 Page Ref: 324
Skill: Conceptual
Objective: ***Apply your knowledge to identify examples from the triarchic theory of intelligence.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

68. According to Sternberg's theory, which statement is true?
A) Creative intelligence is similar to crystallized intelligence.
B) Practical intelligence involves our ability to use original thinking to solve problems.
C) Analytical intelligence is similar to Spearman's g factor of intelligence.
D) Practical intelligence is similar to Gardner's naturalistic intelligence.
Answer: C
Rationale: Analytical intelligence is the verbal, mathematical problem-solving type of intelligence that probably comes to mind when we speak of intelligence. It is close to the concept of academic achievement and the notion of intelligence as measured by g.
Diff: 3 Page Ref: 324
Skill: Conceptual
Objective: ***Know the key terminology related to understanding intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

69. According to Sternberg, _____ intelligence is akin to what most people think of when they think of the tern intelligence.
A) analytical
B) creative
C) practical
D) fluid
Answer: A
Rationale: Analytical intelligence is the verbal, mathematical problem-solving type of intelligence that probably comes to mind when we speak of intelligence. It is close to the concept of academic achievement and the notion of intelligence as measured by g.
Diff: 2 Page Ref: 324
Skill: Conceptual
Objective: ***Know the key terminology related to understanding intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

70. Frank doesn't necessarily have a high IQ as measured on standardized intelligence tests, but he is well aware of his strengths and weaknesses. He chooses jobs that suit his strengths and is particularly skilled at adapting to any changes in his environment. Frank likely has high _____ intelligence as defined in the triarchic theory.
A) creative
B) analytical
C) experiential
D) practical
Answer: D
Rationale: According to Robert Sternberg's triarchic theory, practical intelligence is the ability to address real-world problems that are encountered in daily life, especially those that occur in an individual's specific work context and family life. In this example, Frank's ability to choose jobs that suit his abilities and adapt to changes in his life indicates a high degree of practical intelligence.
Diff: 3 Page Ref: 324
Skill: Applied
Objective: ***Apply your knowledge to identify examples from the triarchic theory of intelligence.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

71. A theory of intelligence with eight components was postulated by
A) Gardner.
B) Spearman.
C) Sternberg.
D) Terman.
Answer: A
Rationale: Howard Gardner proposed the concept of multiple intelligences, a model claiming that eight different forms of intelligence exist, each independent from the others.
Diff: 2 Page Ref: 324
Skill: Factual
Objective: *Know the key terminology related to understanding intelligence.*
APA SLO: *1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.*
% correct 82 a= 82 b= 11 c= 8 d= 0 *r* = .23

72. Gardner and his associates are known for proposing
A) the generalized theory of intelligence.
B) the triarchic theory of intelligence.
C) the theory of multiple intelligences.
D) the theory of emotional intelligence.
Answer: C
Rationale: Howard Gardner proposed the concept of multiple intelligences, a model claiming that eight different forms of intelligence exist, each independent from the others.
Diff: 2 Page Ref: 324
Skill: Factual
Objective: *Know the key terminology related to understanding intelligence.*
APA SLO: *1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.*
% correct 76 a= 11 b= 5 c= 76 d= 8 *r* = .39
% correct 73 a= 6 b= 9 c= 73 d= 12 *r* = .38

73. According to Gardner there are _____ types of intelligence.
A) two
B) four
C) six
D) eight
Answer: D
Rationale: Howard Gardner proposed the concept of multiple intelligences, a model claiming that eight different forms of intelligence exist, each independent from the others.
Diff: 2 Page Ref: 324
Skill: Factual
Objective: *Know the key terminology related to understanding intelligence.*
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

74. Whose theory suggests that Tiger Woods's ability to hit a golf ball might be considered a form of intelligence?
A) Spearman
B) Galton
C) Binet
D) Gardner
Answer: D
Rationale: Gardner's theory of multiple intelligences holds that many different human abilities could be considered forms of intelligence, including linguistic, interpersonal, and bodily-kinesthetic (as in Woods's case).
Diff: 2 Page Ref: 324
Skill: Applied
Objective: *Know the key terminology related to understanding intelligence.*
APA SLO: *1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.*
% correct 58 a= 13 b= 21 c= 8 d= 58 *r* = .45

75. Which of these is one of Howard Gardner's multiple intelligences?
A) poetic
B) digital
C) creative
D) naturalistic
Answer: D
Rationale: Naturalistic intelligence—the ability to recognize and identify processes in the natural world—is one of Gardner's eight intelligences. The other options are not.
Diff: 3 Page Ref: 324
Skill: Factual
Objective: *Know the key terminology related to understanding intelligence.*
APA SLO: *1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.*
% correct 60 a= 9 b= 3 c= 29 d= 60 *r* = .48

76. Corrie is well liked by all her classmates. She has lots of friends and is always one of the first people chosen whenever there are group projects. According to Gardner, at which type of intelligence does Corrie likely excel?
A) interpersonal
B) intrapersonal
C) naturalistic
D) visuospatial
Answer: A
Rationale: Interpersonal intelligence is the ability to detect another person's emotional states, motives, and thoughts. In contrast, intrapersonal (self) intelligence involves self-awareness; the ability to accurately judge one's own abilities, and identify one's own emotions and motives. While both types of intelligences may contribute to the fact that Corrie is well liked, interpersonal intelligence is likely to be the most important.
Diff: 3 Page Ref: 324
Skill: Applied
Objective: *Know the key terminology related to understanding intelligence.*
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

77. Marcos, a geology professor, has always been fascinated by the study of fossils, shells, and rock formations. According to Gardner, Marcos is strong in the area of _____ intelligence.
A) kinesthetic
B) naturalistic
C) visuospatial
D) logical
Answer: B
Rationale: According to Gardner's concept of multiple intelligences, naturalistic intelligence is the ability to recognize and identify processes in the natural world—plants, animals, and so on.
Diff: 2 Page Ref: 324
Skill: Applied
Objective: ***Know the key terminology related to understanding intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

78. Mrs. Evergreen is an elementary school teacher. She tries to match her teaching style to way in which each student seems to learn best. For example, she believes some of her students learn best when she illustrates ideas on the board, while other students appear to learn best when they perform hands-on actives. Mrs. Evergreen likely agrees with the existence of
A) general intelligence.
B) triarchic intelligence.
C) the Flynn effect.
D) learning styles.
Answer: D
Rationale: Learning styles are hypothetical ways in which individuals are fundamentally different in how they best acquire information. The most common sets of learning styles include divisions such as visual, auditory, reading/writing, and kinesthetic/tactile.
Diff: 2 Page Ref: 324-325
Skill: Applied
Objective: ***Analyze whether teachers should spend time tailoring lessons to each individual student's learning style.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

79. The hypothesis that individuals are fundamentally different in how they best acquire information is associated with the concept of
A) learning styles.
B) triarchic intelligence.
C) the Flynn effect.
D) general intelligence.
Answer: A
Rationale: Learning styles are hypothetical ways in which individuals are fundamentally different in how they best acquire information. The most common sets of learning styles include divisions such as visual, auditory, reading/writing, and kinesthetic/tactile.
Diff: 1 Page Ref: 324-325
Skill: Factual
Objective: ***Analyze whether teachers should spend time tailoring lessons to each individual student's learning style.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

80. Many studies have been done to investigate whether people learn better when the teaching method match a specific learning style. What have these studies found?
A) All individuals are either visual or kinesthetic learners.
B) All individuals learn best when the teaching method is kinetic/tactile.
C) The studies failed to find evidence that individuals have specific learning styles.
D) The studies found evidence for at least four distinct learning styles.
Answer: C
Rationale: The idea that each individual has his or her own learning style might make intuitive sense, but finding evidence to support it has proved difficult. In fact, dozens of studies have failed to show any benefit for studying according to an individual's learning style; this is true even in large-scale reviews analyzing results of dozens of studies.
Diff: 2 Page Ref: 325
Skill: Factual
Objective: ***Analyze whether teachers should spend time tailoring lessons to each individual student's learning style.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

81. According to your textbook, how should teachers tailor their instruction styles to maximize learning?
A) Teachers should tailor their teaching to fit the material.
B) Teachers should tailor their teaching to match each individual student's learning style.
C) Teachers should tailor their teaching to match the modal (i.e., most frequent) learning style found in their classroom.
D) Teachers should tailor their teaching primarily towards reading/writing learners.
Answer: A
Rationale: Dozens of studies have failed to show any benefit for studying according to an individual's learning style; this is true even in large-scale reviews analyzing results of dozens of studies. As a result, it would not make sense for teachers to tailor their instructional styles to fit individual students. Instead, teachers should tailor their teaching to fit the material.
Diff: 2 Page Ref: 325
Skill: Conceptual
Objective: ***Analyze whether teachers should spend time tailoring lessons to each individual student's learning style.***
APA SLO: 4.4—*Apply psychological concepts, theories, and research findings as these relate to everyday life.*

82. The "Flynn effect" refers to
A) the finding that IQ scores have stayed over time.
B) the finding that IQ scores have steadily increased over time.
C) the finding that IQ scores have steadily decreased over time.
D) the finding that IQ scores are negatively correlated with education levels.
Answer: B
Rationale: The Flynn effect refers to the steady population level increases in intelligence test scores over time.
Diff: 1 Page Ref: 326
Skill: Factual
Objective: ***Understand the puzzling "Flynn effect"—a generational rise in IQ scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***
% correct 84 a= 16 b= 84 c= 0 d= 0 *r* = .21

83. When researcher had the same individuals take an intelligence test that had been developed in 1978 and another test that had been developed in 1947, they found that
A) they scored about 8 points higher on the newer test.
B) they scored about 8 points higher on the older test.
C) they scored about the same on both tests.
D) some individuals scored higher on the old test, and some scored higher on the newer test.
Answer: B
Rationale: When participants took both the newer and older tests, they scored higher on the older test. Because each test was normed when it was developed so that a score of 100 was average, this suggests that average performance on intelligence tests increased overtime.
Diff: 3 Page Ref: 326
Skill: Factual
Objective: ***Understand the puzzling "Flynn effect"—a generational rise in IQ scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

84. Henrietta's grandfather used to be a psychologist in the 1950s. While going through is old papers, Henrietta finds an old intelligence test that was tested and normed over fifty years earlier. Just for fun, Henrietta decides to take the test, which gives her an IQ of 110. Which of the following is true?
A) She would probably receive a similar score from a more recent test.
B) The score is probably too high, because the average score on the test when it was normed is lower than it would be today.
C) The score is probably too low, because the average score on the test when it was normed was lower than it would be today.
D) The score is probably too high, because the average score on the test when it was normed was higher than it would be today.
Answer: B
Rationale: When older intelligence tests are taken, individuals typically have higher IQs than they do on modern tests. This is because the average score on these tests was lower when they were normed.
Diff: 3 Page Ref: 326
Skill: Applied
Objective: ***Understand the puzzling "Flynn effect"—a generational rise in IQ scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

85. IQs of Americans have gone up about _____ point(s) every three years in recent decades.
A) 1
B) 2
C) 3
D) 4
Answer: A
Rationale: After reviewing many studies that were reported between 1932 and 2007, James Flynn has estimated that the averages increase about 1 point every 3 years.
Diff: 2 Page Ref: 326
Skill: Factual
Objective: ***Understand the puzzling "Flynn effect"—a generational rise in IQ scores.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

86. According to the Flynn effect, for at least several generations
A) the IQ scores of the children are higher than those of their parents.
B) the IQ scores of the children are lower than those of their parents.
C) the IQ scores of both children and parents have remained about the same.
D) there is no correlation between the IQ scores of children and their parents.
Answer: A
Rationale: The Flynn effect refers to the steady population level increases in intelligence test scores over time.
Diff: 2 Page Ref: 326
Skill: Conceptual
Objective: ***Understand the puzzling "Flynn effect"—a generational rise in IQ scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

87. Suppose a psychologist believes that people are on average actually smarter today then people a couple of generations ago. Which of the following explanations is most likely to be cited for the rise in IQ scores?
A) easier intelligence tests
B) the use of culture-free tests
C) more experience taking tests
D) early childhood educational programs
Answer: D
Rationale: Factors such as improved nutrition, health care, and early childhood educational programs may have increased the actual cognitive abilities of people compared to previous generations. The other explanations given could explain the increase in intelligence test *scores*, but would not lead to an actual increase in intelligence.
Diff: 1 Page Ref: 326-327
Skill: Conceptual
Objective: ***Understand the puzzling "Flynn effect"—a generational rise in IQ scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

88. According to your textbook, which of the following is true regarding the population level increases in intelligence test scores over time?
A) The increase indicates that children today are actually smarter than their parents were.
B) The increase is due to the fact that people are better test takers, not that they are smarter.
C) The increase is an illusion created by the way intelligence tests are normed.
D) The reasons for the increase are unclear, but may reflect the increased ability to process information quickly.
Answer: D
Rationale: It is unclear whether the Flynn effect is due to an actual increase in intelligence or simply an increase in test performance. One current theory suggests that exposure to technology has made recent generations better at processing information quickly.
Diff: 2 Page Ref: 326-327
Skill: Conceptual
Objective: ***Understand the puzzling "Flynn effect"—a generational rise in IQ scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

Module 9.3: Heredity, Environment, and Intelligence

Know…

- the key terminology related to heredity, environment, and intelligence

Understand…

- different approaches to studying the genetic basis of intelligence

Apply…

- your knowledge of entity and incremental theories to understand your own beliefs about intelligence

Analyze…

- claims that infant intelligence is increased by viewing educational television programming
- the meaning of group level differences in intelligence scores

89. Which of the following is true regarding the study of the heritability of intelligence?
A) The study of intelligence and its heritability is only a few decades old.
B) The study of heritability has not changed very much over the last 50 years.
C) The study of intelligence and its heritability is over a hundred years old.
D) Modern research on the heredity focuses almost exclusively on ethnicity.
Answer: C
Rationale: Research on the heritability of intelligence goes back at least to Galton in the 1860s, although recent scientific advances, such as the Human Genome Project have had a profound impact on the field.
Diff: 2 Page Ref: 330
Skill: Factual
Objective: ***Understand different approaches to studying the genetic basis of intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

90. Plomin and Spinath describe behavioral genetics as a three-layered approach, which can be referred to as
A) genetics, genes, and genome.
B) brain, body, and mind.
C) translation, transcription, and expression.
D) cell, organ, organism.
Answer: A
Rationale: Plomin and Spinath describe behavioral genetics as a three-layered approach, with each layer asking different, yet related questions. Each question corresponds to a different domain: genetics, genes, and the genome.
Diff: 2 Page Ref: 330
Skill: Factual
Objective: ***Understand different approaches to studying the genetic basis of intelligence.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

91. Which of the following is true concerning "twin study" research findings?
A) Identical twins and fraternal twins share similarly high IQ correlations.
B) Fraternal twins have more similar IQ scores than identical twins.
C) Identical twins have more similar IQ scores than fraternal twins.
D) Identical twins raised together have less similar scores than identical twins raised apart.
Answer: C
Rationale: Identical twins are more alike in intelligence than are fraternal twins. Specifically, identical twins' intelligence scores have a correlation of approximately .85 when they are raised together, and approximately .80 when raised apart.
Diff: 2 Page Ref: 330-331
Skill: Factual
Objective: ***Understand different approaches to studying the genetic basis of intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

92. If intelligence is determined primarily by heredity, which pair should show the highest correlation between IQ scores?
A) fraternal twins
B) identical twins
C) brothers and sisters
D) parents and children
Answer: B
Rationale: Identical twins both inherit the same genetic material. Therefore, if intelligence is primarily determined by heredity, you would expect identical twins to have the highest correlation between IQ scores.
Diff: 1 Page Ref: 330-331
Skill: Conceptual
Objective: ***Understand different approaches to studying the genetic basis of intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

93. In general, studies examining the correlations between intelligence scores for different family members indicate that _____ is the greatest determinant for shared intelligence.
A) education
B) shared experience
C) biological relatedness
D) shared environment
Answer: C
Rationale: While the contribution of environmental factors to intelligence is not insignificant, generally speaking, the closer the biological relationship between people, the more similar their intelligence scores.
Diff: 1 Page Ref: 330-331
Skill: Conceptual
Objective: ***Know the key terminology related to heredity, environment, and intelligence***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

94. The study of how specific genes interact with the environment to influence behavior is called
A) behavioral genomics.
B) anthropometrics.
C) psychometrics.
D) transgenics.
Answer: A
Rationale: Behavioral genomics is the study of how specific genes interact with the environment to influence behavior. The focus of the behavioral genomic approach to intelligence is to identify genes that are related to increases or decreases in certain types of learning and problem solving.
Diff: 1 Page Ref: 331
Skill: Factual
Objective: ***Understand different approaches to studying the genetic basis of intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

95. Dr. Ming hypothesizes that a particular gene is involved in intelligence. He breeds a strain of mice that have had this particular gene removed to see if they show an impaired ability to solve problems compared to mice that have not had this gene removed. This is an example of a _____ study.
A) transgenic
B) anthropometric
C) psychometric
D) gene knockout
Answer: D
Rationale: Gene knockout (KO) studies involve removing a specific gene thought to be involved in a trait (such as intelligence) and testing the effects of removing the gene by comparing behavior of animals without the gene with those that have it.
Diff: 1 Page Ref: 331
Skill: Applied
Objective: ***Understand different approaches to studying the genetic basis of intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

96. _____ involves breeding mice that have had a specific gene removed from their genome. In contrast, _____ involves inserting a new gene into an animal's genome.
A) Transgenics; biomutation
B) Gene Knockout; transgenics
C) Biomutation; transgenics
D) X-inactivation; biomutation
Answer: B
Rationale: Gene knockout (KO) studies involve removing a specific gene thought to be involved in a trait (such as intelligence) and testing the effects of removing the gene by comparing behavior of animals without the gene with those that have it. In contrast, transgenic animals have had a new gene inserted into their DNA.
Diff: 1 Page Ref: 331
Skill: Conceptual
Objective: ***Understand different approaches to studying the genetic basis of intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

97. Which of the following is true regarding the relationship between nutrition and intelligence?
A) There is no correlation between intelligence and nutrition.
B) There is a relationship between intelligence and nutrition, but only when comparing children living in poverty and those in affluent households.
C) Even when comparing children who come from affluent households, there is evidence for a relationship between healthy eating and intelligence.
D) Intelligence is correlated with the number of calories consumed, but not the nutritional value of a child's diet.
Answer: C
Rationale: According to a Spanish study, even among high-socioeconomic grade-school children, there is a statistically significant relationship between nutrition and intelligence. This relationship holds even after influences of gender and income are removed from the analysis. As for children who may not consume balanced diets, there is even evidence that nutritional supplements can help overcome this factor.
Diff: 3 Page Ref: 332
Skill: Factual
Objective: ***Understand different approaches to studying the genetic basis of intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

98. According to your textbook, a key factor in why growing up in a low-income family is associated with lower IQs is likely
A) stress.
B) genetics.
C) a lack of interest in learning.
D) season of birth.
Answer: A
Rationale: Low-income households face higher stress levels on a day-to-day basis, and this stress can distract children from school; in addition, the stress responses can negatively impact brain development.
Diff: 2 Page Ref: 333
Skill: Conceptual
Objective: ***Understand different approaches to studying the genetic basis of intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

99. According to your textbook, what is the most likely explanation for why children born during the first part of the calendar year tend to have higher verbal and mathematical aptitude?
A) prenatal exposure to flu
B) they are the oldest students in their class year
C) temperature during infancy
D) exposure to sunlight during infancy
Answer: B
Rationale: Children born during the first part of the calendar year have higher verbal and mathematical aptitude, according to a number of sources. It appears that this is because children who are the oldest in their class get the most out of school, perhaps because they are, on average, slightly more mature and prepared to learn.
Diff: 2 Page Ref: 333
Skill: Factual
Objective: ***Understand different approaches to studying the genetic basis of intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

100. Able, Bob, and Chris are brothers. Able was born in 1985, Baker in 1988, and Chris in 1990. Statistically speaking, which sibling is slightly more likely to have the greatest IQ score?
A) Able
B) Bob
C) Chris
D) no one; they are all equally likely to have the greatest IQ score.
Answer: A
Rationale: Older siblings tend to score slightly higher on intelligence tests than younger siblings.
Diff: 2 Page Ref: 333
Skill: Applied
Objective: ***Understand different approaches to studying the genetic basis of intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

101. What does the American Academy of Pediatrics recommend to parents about children watching television?
A) Infants should only watch special educational videos that stimulate brain development prior to the age of 2.
B) Children under the age of 2 should watch television for no more than 4 hours each day.
C) Children under the age of 2 should not watch television at all.
D) Children under the age of 10 should not watch television at all.
Answer: C
Rationale: The American Academy of Pediatrics, however, recommends that children younger than age 2 years do not watch television at all. However, television is not all bad. Its effects may be neutral or even positive after age 3 or so, when children can understand more complex programs.
Diff: 2 Page Ref: 334
Skill: Factual
Objective: ***Analyze claims that infant intelligence is increased by viewing educational television programming.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

102. The American Academy of Pediatrics recommends that children younger than _____ old do not watch television at all.
A) 6 months
B) 1 year
C) 2 years
D) 5 years
Answer: C
Rationale: The American Academy of Pediatrics, however, recommends that children younger than age 2 years do not watch television at all.
Diff: 3 Page Ref: 334
Skill: Factual
Objective: ***Analyze claims that infant intelligence is increased by viewing educational television programming.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

103. Some companies sell special educational programs designed to be watched by infants. Which of the following is true regarding these programs?
A) They significantly stimulate brain development.
B) They lower the age at which children first speak, but do not otherwise affect brain development.
C) They do not stimulate cognitive development, but are otherwise harmless.
D) They can actually slow down vocabulary and language development.
Answer: D
Rationale: The more time infants spend viewing educational television, the lower their verbal comprehension and performance scores achieved when tested at age 6 or 7 years. Shows based mostly on pantomime or simplified sing-along songs (rather than narrative) have also been negatively correlated with vocabulary development between 6 months and 2½ years of age.
Diff: 2 Page Ref: 334
Skill: Conceptual
Objective: ***Analyze claims that infant intelligence is increased by viewing educational television programming.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

104. When researchers compare the distribution of IQ scores for males to the one for females, which of the following differences is most consistently found?
A) The mean score for the male distribution is greater than the one for the females.
B) The mean score for the female distribution is greater than the one for the males.
C) The variability among males is greater than it is among females.
D) The variability among females is greater than it is among males.
Answer: C
Rationale: There tends to be greater variability among male IQ scores than among women. This means that, although both distributions have very similar means, there are more males with extremely high and low scores.
Diff: 2 Page Ref: 335
Skill: Factual
Objective: ***Analyze the meaning of group level differences in intelligence scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

105. Which of the following is true about the distribution of intelligence test scores for men compared to the distribution for women?
A) There are more men than women with extremely high and extremely low scores.
B) There are more women than men with extremely high and extremely low scores.
C) The mean intelligence test score for women is consistently higher than the mean for men.
D) The mean intelligence test score for men is consistently higher than the mean for women.
Answer: A
Rationale: There tends to be greater variability among male IQ scores than among women. This means that, although both distributions have very similar means, there are more males with extremely high and low scores.
Diff: 2 Page Ref: 335
Skill: Factual
Objective: ***Analyze the meaning of group level differences in intelligence scores.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

106. There is some evidence that women do better than average on tests of _____, while men do better than women on tests of_____.
A) fluid intelligence; crystallized intelligence
B) crystallized intelligence; fluid intelligence
C) visual-spatial manipulation; verbal fluency
D) verbal fluency; visual-spatial manipulation
Answer: D
Rationale: Although it's important not to over-generalize, average scores on verbal fluency tasks often tip in the favor of females. Conversely, average scores on tests of visual-spatial manipulation ability tend to favor males.
Diff: 2 Page Ref: 335
Skill: Factual
Objective: ***Analyze the meaning of group level differences in intelligence scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

107. Which of the following is an environmental explanation for differences between male and female cognitive abilities?
A) differences in estrogen and testosterone levels
B) differences in social treatment
C) genes located on the x chromosome
D) genes located on the y chromosome
Answer: B
Rationale: Gender stereotypes and social differences in the way boys and girls are treated are possible environmental explanations for gender differences in cognitive skills. The other options are potential genetic (biological) explanations.
Diff: 1 Page Ref: 336
Skill: Conceptual
Objective: ***Analyze the meaning of group level differences in intelligence scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

108. Which of the following is true about sex hormones?
A) Testosterone and estrogen can be found all over the body, except in the brain.
B) Hormones such as testosterone and estrogen control growth and physical development only.
C) Testosterone is not found in women.
D) Individual differences in cognitive skills are related to hormonal levels.
Answer: D
Rationale: Psychologists have found that women who have higher testosterone levels, compared to other women, do better on mental rotation tasks. Likewise, men with lower testosterone levels do better on verbal fluency tests than men with high testosterone levels.
Diff: 2 Page Ref: 336
Skill: Factual
Objective: ***Analyze the meaning of group level differences in intelligence scores.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

109. Verbal and spatial ability in both men and women may be related to the hormone
A) estrogen.
B) cortisol.
C) testosterone.
D) adrenaline.
Answer: C
Rationale: Psychologists have found that women who have higher testosterone levels, compared to other women, do better on mental rotation tasks. Likewise, men with lower testosterone levels do better on verbal fluency tests than men with high testosterone levels.
Diff: 2 Page Ref: 336
Skill: Factual
Objective: ***Analyze the meaning of group level differences in intelligence scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

110. Sandra is a female body builder. To build extra muscle, Sandra begins illegally taking testosterone injections. Based on studies investigating the relationship between cognitive ability and testosterone levels in women, which of the following is most likely to be a side effect of her treatment?
A) Her performance on a verbal fluency test would improve.
B) Her performance on a mental rotation test would improve.
C) Her performance on both mental rotation and verbal fluency tests would improve.
D) Her performance on both mental rotation and verbal fluency tests would decrease.
Answer: B
Rationale: Psychologists have found that women who have higher testosterone levels, compared to other women, do better on mental rotation tasks. Likewise, men with lower testosterone levels do better on verbal fluency tests than men with high testosterone levels.
Diff: 2 Page Ref: 336
Skill: Applied
Objective: ***Analyze the meaning of group level differences in intelligence scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

111. The difference between the intelligence scores of African Americans and Asian Americans has been estimated to be as high as ___ points.
A) 5
B) 10
C) 15
D) 25
Answer: C
Rationale: The difference between African Americans and Asian Americans is quite large—approximately 15 points (one standard deviation).
Diff: 3 Page Ref: 337
Skill: Factual
Objective: ***Analyze the meaning of group level differences in intelligence scores.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

112. Your textbook argues that racial differences in intelligence test scores are likely due to
A) genetics.
B) culture.
C) motivation.
D) social class.
Answer: D
Rationale: Differences in social class, rather than genetic heritage, may actually be responsible for the disparity in intelligence scores between different races and ethnicities.
Diff: 2 Page Ref: 337
Skill: Conceptual
Objective: ***Analyze the meaning of group level differences in intelligence scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

113. One of the difficulties with interpreting group-differences in intelligence, is that these studies are almost all
A) experimental.
B) correlational.
C) biased.
D) unfalsifiable.
Answer: B
Rationale: Group-differences research on intelligence is almost entirely correlational—it is just not possible to conduct randomized experiments (e.g., randomly assigning someone to a certain socioeconomic class, for example). Correlations do not provide evidence for cause-and-effect relationships. Therefore, we should not assume that the genetic patterns that contribute to a particular race also account for differences in intelligence.
Diff: 2 Page Ref: 337
Skill: Conceptual
Objective: ***Analyze the meaning of group level differences in intelligence scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

114. Regarding group racial differences in IQ scores, the authors of your textbook would agree with which statement?
A) There are strong genetically based differences between ethnic and racial groups in the area of IQ test performance.
B) Although differences between ethnic and racial groups on standardized IQ tests may be demonstrated, the more likely factor in this difference is environmental.
C) The issue should not be studied because of its disruptive nature to society.
D) The cultural differences between races completely accounts for the differences in IQ scores.
Answer: B
Rationale: Differences in social class, rather than genetic heritage, may actually be responsible for the disparity in intelligence scores between different races and ethnicities.
Diff: 2 Page Ref: 337
Skill: Conceptual
Objective: ***Analyze the meaning of group level differences in intelligence scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

115. People from different cultures tend to think about the concept of intelligence differently. For example people from Western cultures tend to focus on
A) common sense.
B) "street smarts."
C) intellectual intelligence.
D) emotional intelligence.
Answer: C
Rationale: Western cultures (the United States and Europe) focus primarily on intellectual intelligence, whereas African and Asian cultures are more likely to include concepts such as respectfulness and empathy.
Diff: 2 Page Ref: 338
Skill: Factual
Objective: ***Know the key terminology related to heredity, environment, and intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

116. Rita is a brilliant biochemist, but she has trouble controlling her emotions and does not tolerate other people well. In which of the following countries would this likely be seen as a mark against her intelligence?
A) The United States
B) China
C) Canada
D) France
Answer: B
Rationale: Western cultures (the United States and Europe) focus primarily on intellectual intelligence, whereas African and Asian cultures are more likely to include concepts such as respectfulness and empathy.
Diff: 2 Page Ref: 338
Skill: Factual
Objective: ***Know the key terminology related to heredity, environment, and intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

117. People who hold an entity theory of intelligence believe
A) that a person's intelligence is fixed and very difficult to change.
B) that a person's intelligence is shaped by experience and effort.
C) that there is only one type of intelligence.
D) that there are multiple types of intelligences.
Answer: A
Rationale: Entity theory is the belief that intelligence is a fixed characteristic and relatively difficult (or impossible) to change. In contrast, incremental theory is the belief that intelligence can be shaped by experiences, practice, and effort.
Diff: 2 Page Ref: 339
Skill: Factual
Objective: ***Apply your knowledge of entity and incremental theories to understand your own beliefs about intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

118. People who hold an incremental theory of intelligence believe
A) that a person's intelligence is fixed and very difficult to change.
B) that a person's intelligence is shaped by experience and effort.
C) that there is only one type of intelligence.
D) that there are multiple types of intelligences.
Answer: B
Rationale: Incremental theory is the belief that intelligence can be shaped by experiences, practice, and effort. In contrast, entity theory is the belief that intelligence is a fixed characteristic and relatively difficult (or impossible) to change.
Diff: 2 Page Ref: 339
Skill: Factual
Objective: ***Apply your knowledge of entity and incremental theories to understand your own beliefs about intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

119. People who hold an incremental theory of intelligence tend to _____ when faced with challenging academic problems.
A) give up
B) cheat
C) feel hopeless
D) be resilient
Answer: D
Rationale: People who hold entity theories are more likely to give up when confronted with a challenging academic problem, whereas those who hold an incremental view are more likely to be resilient and persevere.
Diff: 2 Page Ref: 339
Skill: Factual
Objective: ***Apply your knowledge of entity and incremental theories to understand your own beliefs about intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

120. Tang believes that everyone is born with a certain amount of intelligence that cannot change. When he is confronted with a difficult problem in math class that he cannot solve right away, he is likely to
A) give up.
B) ask a "smart" student for guidance.
C) ask the teacher for guidance.
D) keep trying
Answer: A
Rationale: People who believe intelligence is fixed (entity theory) are more likely to give up when confronted with a challenging academic problem, whereas those who hold an incremental view are more likely to be resilient and persevere.
Diff: 2 Page Ref: 339
Skill: Applied
Objective: ***Apply your knowledge of entity and incremental theories to understand your own beliefs about intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

121. Which of the following is true about incremental theories?
A) Children who hold incremental views tend to give up when confronted with difficult problems in school.
B) Children who hold incremental theories view their intelligence as something that cannot be changed.
C) Children who hold incremental theories tend to do poorly academically compared to those who hold entity theories.
D) Children can be taught incremental views.
Answer: D
Rationale: Dweck and her colleagues found that junior high students could be taught incremental views. This resulted in higher grades compared to controls.
Diff: 2 Page Ref: 339
Skill: Factual
Objective: ***Apply your knowledge of entity and incremental theories to understand your own beliefs about intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

122. When Dweck and her colleagues taught _____ views to a group of junior high students, they found that the group's grades _____.
A) entity; improved
B) entity; worsened
C) incremental; improved
D) incremental; worsened
Answer: C
Rationale: Dweck and her colleagues found that junior high students could be taught incremental views. This resulted in higher grades, whereas the control group's grades actually declined.
Diff: 2 Page Ref: 339
Skill: Factual
Objective: ***Apply your knowledge of entity and incremental theories to understand your own beliefs about intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

123. Stereotype threat refers to
A) poor performance on IQ tests by minorities.
B) the fear that poor performance on an IQ test will confirm minority stereotypes.
C) threats against minorities if they perform well on an IQ test.
D) the stereotype that minorities are less intelligent than others.
Answer: B
Rationale: Stereotype threat occurs when people who are aware of stereotypes about their social group may fear being reduced to that stereotype. The anxiety and distraction from stereotype threat can often impair performance.
Diff: 3 Page Ref: 340
Skill: Conceptual
Objective: ***Know the key terminology related to heredity, environment, and intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

124. Disidentification can occur when
A) children begin to think of themselves as "dumb" when they do poorly on tests.
B) women who are good at math feel that they do not fit the female stereotype.
C) people feel that they are being discriminated against because of racial or gender stereotypes.
D) children begin to believe that intelligence can change over time.
Answer: A
Rationale: When, for various reasons not related to intelligence, children do poorly in school, this can become incorporated into their self-concept, a process called disidentification.
Diff: 3 Page Ref: 340
Skill: Conceptual
Objective: *Know the key terminology related to heredity, environment, and intelligence.*
APA SLO: *1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.*

125. Carmen is taking an advanced math test and she feels a burden of doubt because she knows the negative stereotypes about women's abilities in mathematics. This feeling has been labeled
A) test anxiety.
B) gender dissonance.
C) gender bias.
D) stereotype threat.
Answer: D
Rationale: Stereotype threat occurs when people who are aware of stereotypes about their social group may fear being reduced to that stereotype. The anxiety and distraction from stereotype threat can often impair performance.
Diff: 2 Page Ref: 340
Skill: Applied
Objective: *Know the key terminology related to heredity, environment, and intelligence.*
APA SLO: *1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.*

126. As an African American, Sanyu is aware of the negative stereotypes regarding racial differences in intelligence. If he experiences stereotype threat while taking an intelligence test, it is likely that
A) Sanyu's self-conscious awareness of the stereotype may worsen his test performance.
B) Sanyu's test score will be unaffected but he will feel uncomfortable throughout the test.
C) Sanyu's awareness of the stereotype will motivate him to excel on the test.
D) Sanyu will return the test to the administrator completely blank.
Answer: A
Rationale: Stereotype threat occurs when people who are aware of stereotypes about their social group may fear being reduced to that stereotype. The anxiety and distraction from stereotype threat can often impair performance.
Diff: 2 Page Ref: 340
Skill: Applied
Objective: Know the key terminology related to heredity, environment, and intelligence.
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

127. Taylor is the only girl on her baseball team. Today she will be playing in the championship game and is worried that she will "choke" (not be able to play as well as she usually does) because she was told that girls always "choke" in the big games. What concept is being represented?
A) between-group heritability
B) confirmation bias
C) stereotype threat
D) test bias
Answer: C
Rationale: Stereotype threat occurs when people who are aware of stereotypes about their social group may fear being reduced to that stereotype. The anxiety and distraction from stereotype threat can often impair performance.
Diff: 2 Page Ref: 340
Skill: Applied
Objective: ***Know the key terminology related to heredity, environment, and intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

Fill in the Blank Items

1. Most intelligence tests are normed so that the average (mean) IQ is _____, with a standard deviation of _____.
Answer: 100; 15
Rationale: Using a statistical technique, the scores for intelligence tests are typically adjusted so that the average and standard deviation are 100 and 15, respectively.
Diff: 2 Page Ref: 310
Skill: Factual
Objective: ***Apply the concepts of test standardization and norms to make judgments about specific test scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

2. Marcus is only 8 years old. However, his score on the Stanford-Binet test is the same as the average 10 year old. Therefore, Marcus' _____ is 10.
Answer: mental age
Rationale: Binet and Simon used the concept of mental age, the average or typical test score for a specific chronological age, to measure achievement. A child with a mental age lower than his or her actual (chronological) age would be considered behind in his or her schooling.
Diff: 1 Page Ref: 312
Skill: Applied
Objective: ***Know the key terminology associated with intelligence and intelligence testing.***
APA SLO: 1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.

3. Charles Spearman used the letter g as an abbreviation for _____.
Answer: general intelligence
Rationale: Charles Spearman hypothesized the existence of a general intelligence (*g*), which could be represented by a single test score.
Diff: 1 Page Ref: 320
Skill: Factual
Objective: *Know the key terminology related to understanding intelligence.*
APA SLO: *1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.*

4. In healthy adults, _____ does not decline very much in later adulthood, and may even increase.
Answer: crystallized intelligence.
Rationale: Crystallized intelligence (Gc), is a form of intelligence that relies on extensive experience and knowledge and, therefore, tends to be relatively stable and robust. Healthy, older adults generally do not show much decline in Gc, in fact, some evidence indicates that Gc may increase with age.
Diff: 2 Page Ref: 321
Skill: Factual
Objective: *Understand why intelligence is divided into fluid and crystallized types.*
APA SLO: *1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.*

5. Analytical, creative, and practical intelligence constitute Sternberg's _____ theory of intelligence.
Answer: triarchic
Rationale: Robert Sternberg's triarchic theory is a model of intelligence consisting of three domains: analytical intelligence, practical intelligence, and creative intelligence.
Diff: 2 Page Ref: 323-324
Skill: Factual
Objective: *Know the key terminology related to understanding intelligence.*
APA SLO: *1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.*

6. One way to determine how specific genes influence behavior is to breed mice that have had the gene removed from their genome. A research project using this technique is referred to as a _____ study.
Answer: gene knockout
Rationale: Gene knockout (KO) studies involve removing a specific gene thought to be involved in a trait (such as intelligence) and testing the effects of removing the gene by comparing behavior of animals without the gene with those that have it.
Diff: 2 Page Ref: 331
Skill: Conceptual
Objective: *Understand different approaches to studying the genetic basis of intelligence.*
APA SLO: *1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.*

7. Some research suggests that gender differences in verbal fluency and visual-spatial cognitive ability are due to the hormone _____.
Answer: testosterone.
Rationale: Psychologists have found that women who have higher testosterone levels, compared to other women, do better on mental rotation tasks. Likewise, men with lower testosterone levels do better on verbal fluency tests than men with high testosterone levels.
Diff: 2 Page Ref: 336
Skill: Factual
Objective: ***Analyze the meaning of group level differences in intelligence scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

8. According to the authors of your textbook, _____ bias can lead researchers to interpret correlational data in a way that supports their preexisting beliefs.
Answer: confirmation
Rationale: Correlations often support a reasoning error known as the confirmation bias: If you believe something is true, then you are likely to interpret a correlation in a way that supports your conviction.
Diff: 2 Page Ref: 337
Skill: Conceptual
Objective: ***Analyze the meaning of group level differences in intelligence scores.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

9. Children who hold a(n) _____ theory of intelligence are more likely to give up in the face of highly challenging problems, than other children.
Answer: entity
Rationale: Dweck and her colleagues found that those students who held entity theories were more likely to give up in the face of highly challenging problems, and they were likely to withdraw from situations that resulted in failure. These individuals believe that successful people were born that way, so they do not see the point in continuing to work at difficult problems.
Diff: 2 Page Ref: 339
Skill: Conceptual
Objective: ***Apply your knowledge of entity and incremental theories to understand your own beliefs about intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

10. Oscar is an African American, and is aware of the fact that, on average, African Americans score lower on aptitude tests compared to European Americans. While taking an aptitude test, Oscar spends so much time worrying about this fact, that he has trouble concentrating on the test itself. It is likely that _____ will cause Oscar to underperform on the test.
Answer: stereotype threat
Rationale: Stereotype threat occurs when people who are aware of stereotypes about their social group may fear being reduced to that stereotype. The anxiety and distraction from stereotype threat can often impair performance.
Diff: 3 Page Ref: 340
Skill: Applied
Objective: ***Know the key terminology related to heredity, environment, and intelligence.***
APA SLO: ***1.2—Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, the overarching themes, and relevant ethical issues.***

True-False Questions

1. Achievement tests and aptitude tests measure the same construct.
Answer: False
Module: 9.1 Page Ref: 309
Rationale: Achievement tests measure current abilities and aptitude tests predict future performance.

2. Alfred Binet designed his famous test to measure innate intelligence.
Answer: False
Module: 9.1 Page Ref: 312
Rationale: Binet's intention was to design an academic achievement test, not a test of innate capacity.

3. A 10 year old child with a mental age of 9 would have an IQ of 90.
Answer: True
Module: 9.1 Page Ref: 312
Rationale: Using the original formula, IQ equals the mental age of an individual divided by the person's chronological age and then multiplied by 100. In this example, 9/10 × 100 = 90.

4. The Wechsler Adult Intelligence Scale (WAIS) is the most commonly used intelligence test used on adolescents and adults.
Answer: True
Module: 9.1 Page Ref: 312
Rationale: Statement of fact.

5. **There is a modest relationship between brain size and intelligence.**
Answer: True
Module: 9.1 Page Ref: 316
Rationale: Statement of fact.

6. Crystallized intelligence is used to solve problems without relying on previous knowledge.
Answer: False
Module: 9.2 Page Ref: 321
Rationale: Crystallized intelligence (Gc) is a form of intelligence that relies on extensive experience and knowledge.

7. Scientists agree that a general intelligence underlies the specific abilities and talents measured by intelligence tests.
Answer: False
Module: 9.2 Page Ref: 323
Rationale: There is an ongoing debate about whether a general intelligence exists, or whether there are multiple types of intelligences.

8. There is little scientific support for the idea that individuals have distinct learning styles.
Answer: True
Module: 9.2 Page Ref: 325
Rationale: Dozens of studies have failed to show any benefit for studying according to an individual's learning style.

9. The birth order effect on intelligence test scores is likely due to genetic factors.
Answer: False
Module: 9.3 Page Ref: 333
Rationale: It is unlikely that the birth order effect is due to genetic factors, because the pattern holds true even if an elder sibling dies during infancy.

10. Since there is a cultural stereotype in the United States that women are not good at math, most women do especially well on math tests in order to prove the stereotype wrong.
Answer: False
Module: 9.3 Page Ref: 340
Rationale: Knowledge of stereotypes about a person's group often leads to stereotype threat, which in turn can impair test performance.

Essay Questions

1. Alfred Binet's insight regarding a method of measuring achievement had an international impact in the twentieth century. What was the original purpose of his test and how did he quantify (measure) achievement? What scoring system did later researchers base on Binet's method, and how was it originally calculated?
Modules: 9.1 Page Ref: 312
Answer: A good answer will include the following key points.
- **The purpose of Binet's test was to determine which children were slow learners so that they could be given remedial work and brought up to the average.**
- **A child's score on the test allowed him to calculate the child's mental age (i.e., the average age associated with that score) and compare it to the child's chronological age.**
- **Later researchers used Binet's concept of mental age to calculate an intelligence quotient (IQ) score for individuals.**
- **Originally, IQs were calculated by dividing a child's mental age by his or her chronological age and then multiplying by 100.**

2. Some researchers have used factor analysis to support the idea that there are multiple types of intelligences. Explain why evidence from head injuries, the existence of savants, and most people's everyday experiences with those around them also support the theory of multiple intelligences.
Modules: 9.2 Page Ref: 323
Answer: A good answer will include the following key points.
- **An individual may experience a head injury or stroke and lose one ability (such as language production) without any loss in other aspects of intelligence.**
- **Savants are individuals with low mental capacity in most domains but extraordinary abilities in other specific areas such as music, mathematics, or art. If intelligence was a single ability, then we would not expect such brilliance in one area and impaired functioning in others.**
- **Most people know individuals that excel in some cognitive abilities, but do poorly on some specific tasks.**

3. One well-known theory of intelligence, the triarchic theory proposed by Robert Sternberg, distinguishes three different aspects of intelligence. Explain each of these aspects and provide an example of each.
Modules: 9.2 Page Ref: 323-324
Answer: A good answer will include the following key points. Example will vary.
- **Analytical intelligence—the verbal, mathematical problem-solving type of intelligence that is closest to traditional notions of intelligence. Example: being able to solve a pattern matching test.**
- **Practical intelligence—the ability to address real-world problems that are encountered in daily life, especially those that occur in an individual's specific work context and family life. Example: being able to complete projects successfully and on time.**
- **Creative intelligence—the ability to create new ideas to solve problems. Example: being able to find a creative solution to a unique problem.**

- 4. Suppose you identify a gene that may be involved in intelligence. Describe two different techniques using mice that might be used to determine the specific effect of this gene on cognitive ability. If the gene really is important for specific cognitive abilities, how would each technique demonstrate this?

Modules: 9.3 Page Ref: 331

Answer: A good answer will include the following key points.

- **In Gene knockout (KO) studies, researchers breed mice with a specific gene is removed.**
- **These mice are then tested and compared to those who still have the gene.**
- **If the gene is a factor in cognitive ability, then the KO mice would be expected to perform worse than the normal mice at one or more cognitive tests.**
- **Another approach is to create transgenic mice that have had a gene added to their DNA.**
- **If the transgenic mice perform *better* than normal mice at one or more cognitive tasks, it suggests that the gene is involved in intelligence.**

5. One reason individuals from certain populations underperform on aptitude tests is stereotype threat. Explain what stereotype threat is and then describe three different ways it can lower test scores.

Modules: 9.3 Page Ref: 340

Answer: A good answer will include the following key points.

- **Stereotype threat occurs when people are aware of stereotypes about their social group, and fear being reduced to that stereotype.**
- **Stereotype threat can lead to physiological anxiety, which impairs test performance.**
- **It can also cause individuals to focus more on how they are performing than on the test itself.**
- **Finally, individuals try to ignore negative thoughts about their performance, which can use up working memory, leaving fewer cognitive resources for actually answering test questions.**

QUESTIONS FROM THE TEXTBOOK

1. The SAT is an example of which kind of test?
a. Intelligence test
b. Aptitude test
c. Achievement test
d. Performance test
Answer: B
Module 9.1

2. Which statistic, often used for understanding and evaluating standardized tests, measures the average variability around a mean?
a. Validity
b. Standard deviation
c. Norms
d. Percentile rank
Answer: B
Module 9.1

3. A test that measures what a researcher intended to measure is _____, while obtaining consistent scores on that test suggests that it is _____.
a. reliable; valid
b. psychometric; reliable
c. valid; reliable
d. valid; normed
Answer: C
Module 9.1

4. Because of norms in intelligence testing, psychologists are able to:
a. evaluate an intelligence test to determine if it is reliable.
b. evaluate an intelligence test to determine if it is valid.
c. understand why there are learning disabilities.
d. evaluate individuals relative to a typical or standard score on an intelligence test.
Answer: D
Module 9.1

5. Bill received a score of 115 on his IQ test and as a result is a part of the 84th percentile. In terms of his score compared to the population, this result means that:
a. 84% of the population's scores are lower than Bill's score.
b. 84% of the population's scores are higher than Bill's score.
c. The test must be valid.
d. Bill is 84-years-old.
Answer: A
Module 9.1

6. A high-tech company successfully hired 50 new employees, each of whom scored very high on a standardized achievement test. The employees were assigned to different jobs based on the needs of the company. By the end of the year, half were either reassigned or fired. Which is the most likely explanation for this outcome?
a. The company should not have assumed intelligent people are needed for high-tech jobs.
b. The achievement test was not reliable.
c. The company should have given an aptitude test to determine who should work in which sector.
d. The company's test was culturally biased.
Answer: C
Module 9.1

7. Galton developed anthropometrics as a means to measure intelligence based on _____.
a. creativity
b. speed and perception
c. physical size and body type
d. brain convolution
Answer: B
Module 9.1

8. Although the WAIS provides a full IQ score as a measure of general intelligence, it also includes subscales for:
a. progression and matrices.
b. working memory and working perception IQs.
c. general ability and cognitive proficiency.
d. reading and writing skills.
Answer: C
Module 9.1

9. The Raven Matrices were developed to improve upon which issue with intelligence tests?
a. Cross-cultural barriers
b. Inconsistency of scores with retesting
c. The time needed to complete a test
d. Comparisons of old versus young people
Answer: A
Module 9.1

10. If someone's mental age is double her chronological age, what would her IQ be?
a. 100
b. 50
c. 200
d. Cannot be determined with this information
Answer: D
Module 9.1

11. Which of the following statements best summarizes the relationship between brain size and intelligence?
a. Brain size is a perfect predictor of intelligence-the larger the brain, the greater the intelligence.
b. There is no relationship between brain size and intelligence whatsoever.
c. Brain size and intelligence are related only in Caucasian people.
d. There are modest correlations between brain size, convolutions of the cortex, and intelligence.
Answer: D
Module 9.1

12. The ability to adapt to new situations and solve new problems reflects _____ intelligence(s), whereas the ability to draw on one's experiences and knowledge reflects _____ intelligence(s).
a. fluid; crystallized
b. crystallized; fluid
c. general; multiple
d. multiple; general
Answer: A
Module 9.2

13. What is factor analysis?
a. A method of ranking individuals by their intelligence
b. A statistical procedure that is used to identify which sets of psychological measures are highly correlated with each other
c. The technique of choice for testing fluid intelligence
d. The technique of choice for testing crystallized intelligence
Answer: B
Module 9.2

14. Which of the following is not a reason why intelligence is divisible into both fluid and crystallized forms?
a. The two types are not equally affected in old age.
b. Valid and unique tests for each type have been developed.
c. Intelligence tests are difficult to score if problems are not divided into categories.
d. The two types of intelligence can more fully capture the complex and individualized ways that people express their cognitive skills.
Answer: C
Module 9.2

15. Which of the following is not part of the triarchic theory of intelligence?
a. Practical
b. Analytical
c. Kinesthetic
d. Creative
Answer: C
Module 9.2

16. _____ proposed that there are eight different forms of intelligence, each independent from the others.
a. Robert Sternberg
b. Howard Gardner
c. L. L. Thurstone
d. Raymond Cattell
Answer: B
Module 9.2

17. A teacher is struggling to get his students to understand the concept of how electricity works. Based on learning and educational research, what might he need to do to help his students understand?
a. Modify his teaching style for this topic.
b. Go out into the real world and point to examples.
c. Offer separate tutorials for visual and auditory learners.
d. Get the class to choreograph and interpretive dance of how electricity works.
Answer: A
Module 9.2

18. Which of the following statements is an argument for multiple intelligences?
a. Statistical analyses show that all varieties of intelligence tests are highly correlated with one another.
b. Most individuals who score high on verbal tests also score high on quantitative and performance tests.
c. Some individuals score high on verbal tests but very low on quantitative tests, and vice versa.
d. Some people would rather listen to a lecture than view a film because they are “auditory” learners.
Answer: C
Module 9.2

19. _____ refers to the steady population level increases in intelligence test scores over time.
a. Fluid intelligence
b. The Flynn effect
c. The triarchic theory
d. The reliability effect
Answer: B
Module 9.2

20. Which of the following is a more likely explanation of the Flynn effect?
a. Better nutrition
b. Practice effects of taking intelligence tests
c. Improvements in the gene pool
d. Exposure to technology
Answer: D
Module 9.2

21. When scientists insert genetic material into an animal's genome, the result is called a _____.
a. genomic animal
b. transgenic animal
c. knockout animal
d. fraternal twin
Answer: B
Module 9.3

22. How do gene knockout studies help to identify the contribution of specific genes to intelligence?
a. After removing or suppressing a portion of genetic material, scientists can look for changes in intelligence.
b. After inserting genetic material, scientists can see how intelligence has changed.
c. Scientists can rank animals in terms of intelligence, and then see how the most intelligent animals differ genetically from the least intelligent.
d. By allowing scientists to compare identical and fraternal twins.
Answer: A
Module 9.3

23. Identical twins reared together and apart tend to score very similarly on standardized measures of intelligence. Which of the following statements does this finding support?
a. Intelligence levels are based on environmental factors for both twins reared together and twins reared apart.
b. Environmental factors are stronger influences on twins raised together compared to twins reared apart.
c. The "intelligence gene" is identical in both twins reared together and reared apart.
d. Genes are an important source of individual variations in intelligence test scores.
Answer: D
Module 9.3

24. What have controlled experiments with animals found in regard to the effects of the environment on intelligence?
a. Stimulating environments result in faster learning.
b. Deprived environments result in faster learning.
c. Stimulating environments result in slower learning.
d. Deprived environments have no effect on learning.
Answer: A
Module 9.3

25. In which way have psychologists studied the major environmental factors that, through their interaction with genes, influence intelligence?
a. By measuring stress hormones among poor and affluent children
b. By depriving some children of education and comparing them to others who attended school
c. By monitoring children's nutrition and then correlating it with intelligence scores
d. Both a and c
Answer: D
Module 9.3

26. Research on television viewing by very young children shows that:
a. TV is especially detrimental to children aged three years or older.
b. there is never any benefit from television, not even from educational programs.
c. infants who watch educational shows are, on average, better learners when they reach school age.
d. even educational programming shows no benefit, and can even slow some aspects of cognitive development.
Answer: D
Module 9.3

27. Which of the following might explain why ethnic groups differ in intelligence scores?
a. Genetic factors
b. Educational history
c. Cultural value placed on education
d. All of the above are possible
Answer: D
Module 9.3

28. When psychologists have compared men and women on different cognitive tasks, men tend to perform slightly better on _____ tasks, while women tend to perform better on _____ tasks.
a. verbal fluency; mental rotation
b. mental rotation; verbal fluency
c. fluid; crystallized
d. mental rotation; visual-spatial
Answer: B
Module 9.3

29. Which of the following is evidence that intelligence can change with experience?
a. People who inherit the right genes can become more intelligent.
b. Children who have been adopted into a life that includes an enriched environment show increases in IQ scores.
c. Giving individuals testosterone injections improves intelligence test scores.
d. The IQ scores of identical twins reared apart are very similar.
Answer: B
Module 9.3

30. People who believe that intelligence is relatively fixed are said to advocate a(n) _____ theory of intelligence.
a. incremental
b. entity
c. sexist
d. hereditary
Answer: B
Module 9.3

31. _____ is the situation in which when people are aware of stereotypes about their social group, they may fear being reduced to that stereotype.
a. Incremental intelligence
b. Hereditary intelligence
c. Stereotype threat
d. Intelligence discrimination
Answer: C
Module 9.3

32. As a major exam approaches, a teacher who is hoping to reduce stereotype threat and promote an incremental theory of intelligence would most likely:
a. remind test takers that males tend to do poorly on the problems.
b. remind students that they inherited their IQ from their parents.
c. cite research of a recent study showing that a particular gene is linked to IQ.
d. let students know that hard work is the best way to prepare for the exam.
Answer: D
Module 9.3

GENERAL TEST BANK

1. Which of these might be an example of a performance item on the Wechsler tests of intelligence?
a. repeating a series of digits
b. defining a word such as lunch
c. using blocks to make a design like one shown in a picture
d. adding a series of orally presented numbers

Answer c % correct 52 a= 25 b= 17 c= 52 d= 6 r = .21
Module 9.1

2. The Binet intelligence test measured children on what new concept?
a. divergent thinking
b. mental set
c. mental age
d. creativity

Answer c % correct 79 a= 11 b= 4 c= 79 d= 7 r = .20
Module 9.1

3. The Binet scale was originally developed to _____.
a. identify children who might have difficulty in school
b. identify gifted children
c. measure scholastic achievement
d. measure the intelligence of normal children

Answer a % correct 66 a= 66 b= 10 c= 7 d= 15 r = .43
Module 9.1

4. What score indicates how one individual compares to others on an intelligence test?
a. intelligence quotient
b. deviation
c. intelligence component
d. mental estimate

Answer a % correct 48 a= 48 b= 44 c= 5 d= 3 r = .04
Module 9.1

5. _____ percent of the population has IQ scores between 70 and 130.
a. Sixty-five
b. Seventy-five
c. Eighty-five
d. Ninety-five

Answer d % correct 52 a= 6 b= 19 c= 23 d= 52 r = .29
Module 9.1

6. Which of these might be an example of a performance item on the Wechsler tests of intelligence?
a. defining a word such as lunch
b. repeating a series of digits
c. using blocks to make a design like one shown in a picture
d. adding a series of orally presented numbers

Answer c % correct 65 a= 7 b= 21 c= 65 d= 7 r = .11
Module 9.1

7. Developmental norms are useful because they _____.
a. tell parents when their child will begin to talk
b. tell parents when their child is ready to talk
c. give an indication of future skills and potentials
d. alert parents to extreme developmental deviations

Answer d % correct 70 a= 2 b= 2 c= 26 d= 70 r = .26
Module 9.1

8. When a test actually measures what it is supposed to measure, the test has _____.
a. reliability
b. discriminative power
c. statistical power
d. validity

Answer d % correct 86 a= 14 b= 0 c= 0 d= 86 r = .36
Module 9.1

9. There is a relationship between reliability and validity. Which of the following is true?
a. A test cannot be valid unless it is reliable.
b. A test cannot be reliable unless it is valid
c. A test can be valid but not reliable.
d. Reliability and validity are not related.

Answer a % correct 30 a= 30 b= 50 c= 20 d= 0 r = .44
Module 9.1

10. Which of these is one of Howard Gardner's multiple intelligences?
a. poetic
b. naturalistic
c. creative
d. digital

Answer b % correct 71 a= 2 b= 71 c= 24 d= 3 r = .33
Module 9.2

11. A committee has been set up to identify young people who are likely to become great Olympics skaters. In addition to physical skills, the committee believes that an understanding of one's emotions is a plus because it will help the skaters through training and competitions. Using Howard Gardner's types of intelligences, which two should be the focus of their search?
a. bodily kinesthetic and intrapersonal
b. logical/mathematical and visual/spatial
c. visual/spatial and interpersonal
d. verbal/linguistic and logical/mathematical

Answer a % correct 79 a= 79 b= 2 c= 16 d= 2 r = .43
Module 9.2

12. The theory of multiple intelligences was proposed by _____.
a. Gardner
b. Sternberg
c. Thurstone
d. Spearman

Answer a % correct 39 a= 39 b= 23 c= 30 d= 8 r = .08
Module 9.2

13. Which of these is one of Howard Gardner's multiple intelligences?
a. poetic
b. naturalistic
c. digital
d. creative

Answer b % correct 77 a= 1 b= 77 c= 1 d= 22 r = .40
Module 9.2

14. Sal is being evaluated as a possible candidate for the space program. On which of Howard Gardner's multiple intelligences would we expect him to excel if he is a good candidate?
a. spatial reasoning
b. interpersonal
c. naturalist
d. intrapersonal

Answer a % correct 63 a= 63 b= 10 c= 17 d= 8 r = .32
Module 9.2

15. The ability to produce work that is both novel and appropriate is called
a. insight.
b. heuristics.
c. creativity.
d. latent learning.

Answer c % correct 65 a= 11 b= 7 c= 65 d= 17 r = .40
Module 9.2, 12.3, 17.3

16. Estrogen is to _____ as testosterone is to _____.
a. gonads; testes
b. testes; ovaries
c. ovaries; testes
d. ovaries; gonads

Answer c % correct 89 a= 2 b= 1 c= 89 d= 8 r = .41
Module 9.3