

## c2

*Student:* \_\_\_\_\_

1. The inherited material an infant receives from its parents is referred to as one's
  - A. ancestral characteristics.
  - B. genotype.
  - C. self-image.
  - D. phenotype.
  
2. The way in which your genetic makeup is expressed in observable or measurable characteristics is known as your
  - A. ancestral characteristics.
  - B. genotype.
  - C. self-image.
  - D. phenotype.
  
3. An example of a phenotypic characteristic is
  - A. hair color.
  - B. the inheritance of the dominant gene for hemophilia.
  - C. to have a parent with type AB blood.
  - D. any characteristic that almost all members of a population share, such as the ability to walk upright.
  
4. The expression of the genotype is
  - A. modified by a variety of environmental factors.
  - B. not modifiable regardless of environmental factors.
  - C. not of concern to psychologists.
  - D. only known if one undergoes a sex change operation.
  
5. The smallest of all human cells is the
  - A. ovum.
  - B. sperm.
  - C. DNA.
  - D. neuron.

6. Each ovum and each sperm contains

- A. 23 pairs of chromosomes.
- B. 23 chromosomes.
- C. 46 chromosomes.
- D. no chromosomes.

7. The chromosomes contributed by the sperm are homologous to those contributed by the ovum, which means that the chromosomes contributed by the sperm

- A. contain exactly the same information as those contributed by the egg.
- B. are similar in shape and function to those contributed by the egg.
- C. are in a different order than those contributed by the egg.
- D. perform a different function than those contributed by the egg.

8. Meiosis is

- A. a process of cell replication.
- B. a process of cell division.
- C. unique to body cells such as those in the liver and lungs.
- D. the process of chromosome combination.

9. Crossing over occurs during

- A. mitosis.
- B. meiosis.
- C. intercourse.
- D. fertilization.

10. The process by which equivalent sections of chromosomes randomly switch places is known as

- A. chromosome switching.
- B. crossing over.
- C. DNA recombination.
- D. gene splicing.

11. Which of the following is a process that results in the production of diverse genetic combinations?

- A. Meiosis
- B. Mitosis
- C. Intercourse
- D. Autosomes

12. The likelihood that a man and a woman will produce two genetically identical children is

- A. nearly impossible unless they have monozygotic twins.
- B. nearly impossible unless they have dizygotic twins.
- C. greater in some parts of the world than in others.
- D. about 50%.

13. Mitosis occurs

- A. in both autosomes and sex chromosomes.
- B. only in autosomes.
- C. only in sex chromosomes.
- D. only during the embryonic period.

14. Each DNA molecule is capable of

- A. reconstructing itself.
- B. recreating a similar but not identical molecule.
- C. synthesizing carbohydrates.
- D. triggering mutations.

15. DNA

- A. is made up of nucleotides.
- B. is contained inside genes.
- C. is an autosome.
- D. contains the bases thymine, adenine, cytosine, and guanine, which can all freely combine with each other.

16. The structural substances that are synthesized as a result of genes are

- A. carbohydrates.
- B. fats.
- C. proteins.
- D. sugars.

17. Genes trigger the production of proteins

- A. only at birth.
- B. at regular intervals.
- C. any time mitosis takes place.
- D. when a particular change in the environment signals them to respond.

18. If you carry a gene for a particular disorder, whether or not that gene becomes activated may depend on
- A. hormones.
  - B. signals in the environment.
  - C. neurotransmitters in the brain.
  - D. mitosis.
19. Alternative forms of a gene are known as
- A. loci.
  - B. recessive.
  - C. heterozygous.
  - D. alleles.
20. A situation in which one allele is considered to be dominant and the other allele is recessive occurs when an individual's chromosomes are
- A. heterozygous.
  - B. homozygous.
  - C. codominant.
  - D. both heterozygous and homozygous.
21. Most serious deleterious alleles are
- A. dominant.
  - B. codominant.
  - C. recessive.
  - D. no longer a part of the gene pool.
22. If you carry alleles for blood type AB+, those alleles are
- A. recessive.
  - B. dominant.
  - C. codominant.
  - D. homozygous.
23. You and your spouse are expecting your first baby and are wondering who your baby is going to look like. You have curly, dark hair (homozygous), while your spouse has light-colored straight hair. The phenotype for your child will be
- A. curly, light-colored hair.
  - B. straight, dark hair.
  - C. curly, dark hair.
  - D. light-colored, straight hair.

24. Which of the following statements is true regarding sex chromosomes?

- A. The Y chromosome is longer than the X chromosome.
- B. The Y chromosome contains some genes not found on the X chromosome.
- C. There are some genes on the X chromosome that have no equivalent on the Y chromosome.
- D. The X and Y chromosomes differ in shape, but are the same size.

25. You have a sister who is a carrier for hemophilia, yet she has normally clotting blood. If she had children, who is most likely to be affected with this disorder?

- A. Her female children are more likely to be affected.
- B. None of her children will be affected.
- C. Any male children will have the disorder.
- D. A male child will most likely have the disorder unless he receives a gene for normally clotting blood from his father.

26. X-linked characteristics are more common in males than in females because

- A. males receive no counteracting gene from the father.
- B. the Y chromosome is really a modifier gene.
- C. male hormones trigger the release of X-linked characteristics.
- D. they are uniquely male.

27. A characteristic such as genius that results from two parents of average intelligence is influenced by

- A. heterozygotes.
- B. autosomes.
- C. gene interactions.
- D. hybrid genes.

28. Cataracts are an example of a trait that is influenced by a dominant gene and by

- A. chromosomal abnormalities.
- B. sex chromosomes.
- C. phenotype.
- D. modifier genes.

29. Phenylketonuria (PKU) results from

- A. the inability to metabolize phenylalanine.
- B. the inability to tolerate milk.
- C. a decrease of phenylpyruvic acid in the body.
- D. an excess of enzymes necessary to metabolize proteins.

30. You have just discovered that your newborn baby has PKU. What should you expect concerning your child's treatment for this disorder?
- A. There is no treatment for this disorder.
  - B. Dietary intervention beginning at birth that eliminates phenylalanine
  - C. Administering phenylalaninate at birth
  - D. Dietary intervention when the baby begins eating solid foods
31. Down syndrome is generally a result of an abnormality of
- A. the autosomes.
  - B. the Y chromosome.
  - C. chromosome 21.
  - D. amniotic fluid.
32. The increased lifespan in recent years of individuals with Down syndrome can be attributed to
- A. greater understanding of the genetic implications of the disorder.
  - B. advances in the treatment of health complications associated with Down syndrome.
  - C. a decrease in the institutionalization of individuals with Down syndrome.
  - D. earlier detection of the disorder, which can result in a reduction of various symptoms of the disorder.
33. Which of the following statements regarding Down syndrome is true?
- A. The extra chromosome usually comes from the father.
  - B. Young women are more likely than older women to have a child with Down syndrome.
  - C. The age of the father is unrelated to the incidence of Down syndrome.
  - D. The failure of the chromosome to separate occurs more frequently in older women than younger ones.
34. Through studying the history of sickle-cell anemia, one is able to
- A. understand the functioning of mutator genes.
  - B. gain an understanding of how genetic and environmental factors interact.
  - C. describe the onset and the elimination of a genetic disorder.
  - D. recognize that the same characteristics of a disorder are present in both the heterozygous and homozygous state.
35. The sickle-cell trait is said to have had survival value because it is associated with
- A. individuals who are physically stronger.
  - B. a resistance to tuberculosis.
  - C. individuals who can function with less oxygen.
  - D. a resistance to malarial infection.

36. The chromosome structure for Turner syndrome is

- A. XXX.
- B. XXY.
- C. XX.
- D. XO.

37. Most cases of Turner syndrome result from

- A. an abnormal sperm.
- B. an abnormal ovum.
- C. failure of a chromosome to split during meiosis.
- D. gene interactions.

38. Which of the following statements regarding Turner syndrome is INCORRECT?

- A. The absence of secondary sex characteristics can be remedied through the application of female hormones.
- B. With the successful use of female hormones, sterility is no longer a complication.
- C. Girls with Turner syndrome are socially immature and lacking in assertiveness.
- D. Webbed necks and unusually shaped mouths and ears are often present.

39. Which one of the following is NOT a characteristic of girls with triple-X syndrome?

- A. Normal secondary sexual development
- B. Normal physical appearance
- C. Impairments in short-term memory
- D. Abnormal secondary sexual development

40. Klinefelter syndrome manifests itself in

- A. males.
- B. females
- C. males and females.
- D. only in infancy.

41. Which of the following conclusions can be correctly drawn from our current understanding of XYY and XXY men?

- A. XYY and XXY men are violent and assaultive individuals.
- B. XYY than XXY men have female characteristics.
- C. XYY and XXY men tend to be shorter than XY men.
- D. XYY men are no more aggressive than XY men.

42. The cause of mental retardation due to a narrowing of parts of the X chromosome is

- A. Down syndrome.
- B. Fragile X syndrome.
- C. Klinefelter syndrome.
- D. Turner syndrome.

43. Which of the following statements is true regarding diversity in the phenotypic expression of genetic disorders?

- A. Environmental factors, such as the degree to which one has a supportive environment, impact upon the phenotypical expression of the genotype.
- B. Environmental factors play little or no role in the phenotypical expression of genetic disorders.
- C. Environmental factors impact upon all types of genetic disorders equally.
- D. Environmental factors can prevent the onset of a disorder, but cannot modify the severity and symptoms of a disorder.

44. Which of the following is true of the options available to a couple who are thinking about starting a family but who are concerned about passing onto their children genetic disorders which run in their family?

- A. Adoption is probably the best option in order for the couple to be certain they do not pass on any disorders to their children.
- B. Preventive genetic counseling can allow them to be tested for defective genes before they conceive a child.
- C. Ethical controversies surrounding genetic counseling have made these procedures illegal in most states.
- D. Most genetic disorders can be prevented through early detection.

45. Which of the following is NOT an ethical concern regarding new reproductive technologies?

- A. The limitations and legal rights of sperm donors to know the children conceived with their sperm
- B. Whether or not a surrogate mother has the right to keep the child she agreed to have for another couple
- C. Controversy surrounding the genetic abnormalities frequently caused by conceiving children through in vitro fertilization
- D. Whether extra embryos not used during in vitro fertilization should be used for research

46. In which of the following situations would in vitro fertilization not be recommended?

- A. When a husband is unable to produce sperm
- B. When a husband produces an insufficient supply of sperm
- C. When a husband's sperm is not able to fertilize the wife's egg
- D. When a woman cannot produce an egg

47. A woman who had her uterus removed during a hysterectomy may be able to have some of her eggs extracted and frozen prior to the surgery. What technique would such a woman be likely to request when she would like to have a child?
- A. In vitro fertilization using a surrogate mother
  - B. In vitro fertilization using donated sperm
  - C. Amniocentesis
  - D. Embryo cloning
48. Amniocentesis is a procedure that
- A. is done during the delivery, to remove excess fluid from the amniotic sac.
  - B. is typically performed around the ninth month of pregnancy.
  - C. is done during pregnancy by removing fluid from the amniotic sac to identify genetic or developmental anomalies.
  - D. can be done at an earlier time than other prenatal tests.
49. The risks associated with amniocentesis include
- A. cognitive deficits after birth.
  - B. miscarriage.
  - C. chronic pain for the mother.
  - D. limb deformities in the fetus.
50. Chorionic villi sampling is a procedure that
- A. can be administered at the ninth or tenth week of pregnancy, considerably earlier than amniocentesis.
  - B. removes cells from the amniotic fluid for biopsy during the early months of pregnancy.
  - C. is typically performed at 16 weeks, considerably later than amniocentesis.
  - D. is typically done just before birth to detect any complications.
51. Prenatal cells can be used
- A. to look for the presence of genetic markers of particular disorders.
  - B. to remove genetic abnormalities.
  - C. only to look for the presence of physical abnormalities visible under a microscope, such as the presence of an extra chromosome.
  - D. to look for the presence of maternal hormones.
52. For which of the following diseases has a genetic marker been identified?
- A. Infertility
  - B. PKU
  - C. Cerebral palsy
  - D. Huntington disease

53. A problem associated with the alpha-fetoprotein (AFP) assay is

- A. a high rate of false positive results.
- B. a high rate of false negative results.
- C. the inability to detect risk for Down syndrome.
- D. harm to the developing fetus.

54. Women who have frequent ultrasounds during pregnancy

- A. feel more anxiety as the pregnancy progresses.
- B. feel less anxiety as the pregnancy progresses.
- C. are unlikely to suffer from any birth complications.
- D. have increased risk of miscarriage.

55. Why would the ultrasound technique be associated with ethical problems?

- A. Ultrasounds can be harmful to the developing fetus.
- B. Ultrasounds are associated with a higher rate of abortion in some cultures where male babies are preferred over female babies.
- C. Ultrasounds are related to increased anxiety during pregnancy.
- D. Mothers will change their behavior and be less concerned about their health when they know the gender of their baby.

56. Your company would like to begin genetic testing when screening for potential employees in order to know a person's risk for developing diseases such as cancer and heart disease. A valid argument against the use of these tests would be that

- A. the field of genetics has not advanced enough to be able to determine a person's risk for any type of disorder.
- B. genetic tests are painful and can cause physical damage to the person being tested.
- C. genetic testing is very expensive and would not be cost-effective.
- D. there is no way to be certain that someone would develop a disorder because some individuals who have the genes associated with a disorder may not develop that disorder.

57. Gene therapy involves

- A. the provision of therapy to those with genetic disorders.
- B. the prevention of meiosis from occurring in defective chromosomes.
- C. inserting normal alleles into patients' cells in order to compensate for defective ones.
- D. the removal of defective genes.

58. Your cousin has an immune system disorder and doctors inserted genes into her blood which would help her to produce enzymes that she previously lacked. These genes were probably inserted into her blood

- A. with viruses.
- B. with bacteria
- C. by ingesting a pill.
- D. through surgery.

59. One of the more difficult tasks of the Human Genome Project is

- A. identifying genes on the Y chromosome.
- B. determining interactions among multiple genes.
- C. identifying genes on chromosome 21.
- D. identifying diseases caused by single genes.

60. While working on the Human Genome Project, Caspi et al. (2003) have found

- A. a genetic marker for depression.
- B. a gene that prevents the antisocial behavior.
- C. individuals who carry a set of genes associated with antisocial behavior only develop problems when they are exposed to particular environmental stressors.
- D. that the genes for depression and antisocial behavior are impossible to map.

61. The process whereby the genetic factors set boundaries on an individual's possible responses to the environment is known as

- A. predetermination.
- B. discontinuity.
- C. differentiation.
- D. range of reaction.

62. When Robert is placed in an enriched environment, he flourishes and learns very quickly. When he is placed in a deprived environment he shows signs of severe developmental delays. Robert is said to have a wide

- A. canalization.
- B. range of reaction.
- C. genetic propensity.
- D. potentiality.

63. The tendency for development to be genetically restricted to a few pathways which can only be deflected by an intense environmental push is a description of

- A. canalization.
- B. a discontinuous process.
- C. differentiation.
- D. range of reaction.

64. Babbling is an example of a process that is \_\_\_\_\_, while intelligence is \_\_\_\_\_.

- A. highly canalized; not highly canalized
- B. not highly canalized; highly canalized
- C. genetically determined; environmentally determined
- D. learned; innate

65. In Gottlieb's developmental systems view, an individual's genes are part of an overall system and the expression of those genes

- A. is dependent only on the configuration of other genes in the system.
- B. becomes fixed during infancy.
- C. is predetermined by the genetic code.
- D. is affected by events at other levels of the system.

66. A fetus who is exposed to the virus that causes German measles will develop damaged hearing

- A. only if exposed at a particular stage during prenatal development.
- B. if exposed to the virus at any point while it is in the womb.
- C. only if the fetus carries a gene that puts him or her at risk for hearing loss.
- D. only if the mother is also malnourished.

67. The statement that children influence their parents is most comparable to which type of genetic-environmental interaction?

- A. Passive
- B. Evocative
- C. Active
- D. Niche picking

68. Which type of genetic-environmental interaction includes the idea that parents with certain genetic predispositions create a home environment that suits the inherited predispositions of the child?

- A. Passive
- B. Evocative
- C. Active
- D. Niche picking

69. While you were growing up, your parents often preferred staying at home on the weekends, watching television, and reading, over socializing with others outside the family. You had a tendency to be shy and introverted, so you also enjoyed these types of activities and continued these activities even as an adult. This is an example of

- A. passive genetic-environmental interaction.
- B. evocative genetic-environmental interaction.
- C. active genetic-environmental interaction.
- D. parent to child genetic-environmental interaction.

70. Niche picking refers to

- A. children relying on their parents to build a stimulating environment for them.
- B. children and adults being actively involved in identifying and/or creating an environment they find responsive and stimulating.
- C. parents following their children's innate cues in building appropriately stimulating environments.
- D. biological predispositions for traits seen in certain geographical areas.

71. The research finding that shows certain behavioral genotypes to be more strongly shown in adolescence than in childhood supports the idea of

- A. range of reaction.
- B. canalization.
- C. niche picking.
- D. reactive processes.

72. The primary concern for human behavior geneticists is

- A. identifying single genes that cause changes in behavior.
- B. understanding chromosomal errors that contribute to gross developmental deviations.
- C. identifying the genetic material involved in transmitting personality characteristics.
- D. understanding genetic contributions to the variations in individual differences found throughout the human lifespan.

73. Which of the following is a misconception about the study of behavior genetics?

- A. Both genetic factors and environmental factors influence a child's potential.
- B. Evidence that suggests a strong genetic effect on a characteristic also indicates that environmental influences are not important.
- C. Genes affect both static characteristics and developmental changes.
- D. Genetics can influence development at any stage of the lifespan.

74. Which of the following is the focus of behavior geneticists?

- A. The biochemical basis of behavior
- B. Genetic mechanisms
- C. Genetic relatedness
- D. Reproductive processes

75. Behavior geneticists conducting family resemblance studies most frequently employ

- A. kinship studies.
- B. sibling studies.
- C. adoption and twin studies.
- D. parent-child studies.

76. When behavior geneticists conduct adoption studies, they usually compare the characteristics of adopted children to those of

- A. their biological siblings reared elsewhere.
- B. other adopted children.
- C. their adopted and biological parents.
- D. children in other families who were not adopted.

77. Twins who are created by the separation of the zygote following fertilization of a single egg by a single sperm are known as

- A. monozygotic.
- B. dizygotic.
- C. fraternal.
- D. mutants.

78. Researchers can infer that a trait is largely influenced by genes if

- A. identical twins show more resemblance in the trait than fraternal twins.
- B. fraternal twins show more resemblance in the trait than identical twins.
- C. children are more similar to their adoptive parents than their biological parents.
- D. identical twins do not show any resemblance to each other in the trait.

79. Two infants are adopted by a family. They are the same age and are adopted at the same time but are not biologically related. Research supports which of the following statements?

- A. They will be treated very differently by their parents even though they live in the same house.
- B. The two will have similar personalities because they share a similar environment.
- C. They would be more likely to have similar characteristics during early and middle childhood but will probably become less similar in adolescence due to niche picking.
- D. They will be very similar during adolescence because the environment will have strongly influenced their personalities.

80. A behavior geneticist conducted a study comparing the political values of identical and fraternal twins. He found that both sets of twins were equally similar in their political values. What can the researcher infer?

- A. Political values are more strongly influenced by genetics than by the environment.
- B. Political values are more strongly influenced by the environment than by the genetics.
- C. Neither genetics nor the environment plays a role in political values.
- D. The results are inconclusive as to whether genetics or the environment influences political values.

81. The differences in family experiences among siblings is referred to as

- A. nonshared environment.
- B. shared environment.
- C. sibling rivalry.
- D. family drift.

82. Shared environmental influences are described as

- A. differences in family experiences among siblings.
- B. common family experiences shared by siblings.
- C. nonshared experiences shared by all members of a culture.
- D. the benefits of learning to share and reciprocate the kindness of others.

83. Which of the following might explain nonshared experiences among siblings?

- A. Differences in the intelligence of the two siblings
- B. Poverty
- C. The neighborhood they lived in growing up
- D. Parental divorce

84. The correlation between intellectual functioning and genetic similarity is

- A. positive.
- B. negative.
- C. zero.
- D. inconsistent.

85. Which of the following would be the LEAST similar in intelligence?

- A. Identical twins reared apart
- B. A mother and her biological child
- C. Biological siblings reared together
- D. Cousins

86. Which of the following characteristics shows the greatest genetic influence?

- A. Sociability
- B. IQ scores
- C. Vocational interests
- D. Creativity

87. In general, studies have shown that the correlation between adoptive parents' IQs and their adopted child's IQ

- A. increases throughout childhood.
- B. decreases as the child grows older.
- C. increases throughout adolescence.
- D. does not change over time.

88. Patterns of change in IQ over the course of development

- A. tend to be more similar for identical twins than fraternal twins.
- B. do not show any similarity for identical twins.
- C. are more similar for fraternal twins than identical twins.
- D. make it difficult to conduct reliable heritability studies.

89. Although the rank orders of IQs for adopted children and their biological parents were similar, a study by Skodak and Skeels (1949) also found that

- A. adopted children's IQs were more similar to those of their adopted siblings.
- B. only the children whose biological parents had very low IQs showed an increase in IQ when placed in a more stimulating environment.
- C. adopted children had higher IQs on average than their biological parents.
- D. adopted children had lower IQs on average than their biological parents.

90. Which infants are likely to respond negatively to new situations?

- A. Difficult infants only
- B. Slow-to-warm-up infants only
- C. Both difficult and slow-to-warm-up infants
- D. Antisocial infants

91. When his mother brought him to a new day-care center, Joshua was extremely cautious. When his teacher approached him to offer him a toy, he started crying. By the time his mother picked him up at the end of the day, however, he was playing nicely with blocks. What temperament would Joshua most likely have?

- A. Difficult temperament
- B. Slow-to-warm-up temperament
- C. Easy temperament
- D. Anxious temperament

92. Researchers have found evidence that

- A. there are differences in newborn temperament among children of different ethnicities.
- B. the concept of temperament is only relevant in Western cultures.
- C. the proportion of infants in each temperament category is the same in every culture.
- D. all babies have easy temperaments in some cultures.

93. Research on parents' perceptions of infants' temperament find that

- A. parents in different cultures tend to interpret infants' behavior very similarly.
- B. parents in different cultures provide different opportunities for learning depending on their assumptions about temperament.
- C. cultural beliefs about temperament differ across cultures, but these beliefs do not impact the behavior of the children.
- D. children with difficult temperaments are treated less favorably in all cultures.

94. Kristen and Amanda both have difficult temperaments. Kristen's mother is flexible and accepting and enjoys her daughter. Amanda's mother finds her infant's behavior irritating and is often angry and punitive. Which of the following is most likely?

- A. Kristen and Amanda are equally likely to develop behavior problems because both have difficult temperaments.
- B. Kristen is more likely to develop behavior problems because of her mother's behavior.
- C. Amanda is more likely to develop behavior problems because of her mother's behavior.
- D. Neither Kristen nor Amanda is likely to develop behavior problems.

95. Which of the following statements is NOT true?

- A. Children who were difficult infants are likely to have difficulty adapting to environmental demands.
- B. Children who were difficult infants are likely to elicit negative responses from parents.
- C. Children who were difficult infants are likely to receive little attention from their parents.
- D. Children who were difficult infants are likely to develop behavior disorders.

96. Based on the goodness-of-fit model,

- A. only parents of easy children can adjust their parenting style to fit with their children's personality.
- B. parental strategies that use gentle discipline will work better for fearful children.
- C. parental strategies that use gentle discipline will work better for fearless children.
- D. parental strategies that use harsh and punitive discipline will work better for a difficult child.

97. Based on current theory and research, what course of action would you recommend for the parents of a difficult infant?

- A. Develop more flexibility and alter your behavior to help moderate the behavior of the temperamentally difficult child.
- B. Accept the child's behavior because the child's temperament is genetically determined and is not likely to change.
- C. Wait patiently because an infant's temperamental characteristics have little relationship to her later behavior.
- D. Develop strong controls over the child's behavior because the child will only respond to very harsh discipline.

98. Research suggests that one of the following is likely to occur when mothers experience stress.

- A. They will form extremely strong bonds of attachment with their infants because they turn to the infants for affection.
- B. They will focus intense effort on responding to their child in a positive way.
- C. They will show increased irritability, especially to slow-to-warm children.
- D. They will show increased irritability, especially to difficult children.

99. Which of the following is NOT one of the three most heritable dimensions of personality?

- A. Emotionality
- B. Arousal
- C. Activity
- D. Sociability

100. Describe the composition of DNA.

101. What is the difference between codominance of alleles versus dominant and recessive alleles? Give an example of each.

102. Why are males susceptible to X-linked recessive disorders?

103. Discuss three genetic causes of developmental disorders and give an example of each.

104. Explain three ways in which genotypes shape the environment.

105. Why do psychologists conduct adoption and twin studies?

106. What parental factors contribute to developmental problems in children who were described as difficult babies?

107. Describe the differences in transmission between PKU and sickle cell disease.

108. Your sister and her husband are planning on adopting an infant and are concerned about how intelligent the child will be. Based upon current research, what information can you provide them?

109. What relevance does behavioral genetics have for developmental psychology?

110. How do sex chromosome abnormalities vary between males and females?

## c2 Key

1. (p. 37) The inherited material an infant receives from its parents is referred to as one's
- A. ancestral characteristics.
  - B. genotype.**
  - C. self-image.
  - D. phenotype.

*Difficulty: Easy*

*Learning Objective: 1*

*Parke - Chapter 02 #1*

*Type: Factual*

2. (p. 37) The way in which your genetic makeup is expressed in observable or measurable characteristics is known as your
- A. ancestral characteristics.
  - B. genotype.
  - C. self-image.
  - D. phenotype.**

*Difficulty: Easy*

*Learning Objective: 1*

*Parke - Chapter 02 #2*

*Type: Factual*

3. (p. 37) An example of a phenotypic characteristic is
- A. hair color.**
  - B. the inheritance of the dominant gene for hemophilia.
  - C. to have a parent with type AB blood.
  - D. any characteristic that almost all members of a population share, such as the ability to walk upright.

*Difficulty: Moderate*

*Learning Objective: 1*

*Parke - Chapter 02 #3*

*Type: Conceptual*

4. (p. 37-38) The expression of the genotype is
- A.** modified by a variety of environmental factors.
  - B. not modifiable regardless of environmental factors.
  - C. not of concern to psychologists.
  - D. only known if one undergoes a sex change operation.

*Difficulty: Moderate*  
*Learning Objective: 1*  
*Parke - Chapter 02 #4*  
*Type: Conceptual*

5. (p. 38) The smallest of all human cells is the
- A. ovum.
  - B.** sperm.
  - C. DNA.
  - D. neuron.

*Difficulty: Easy*  
*Learning Objective: 1*  
*Parke - Chapter 02 #5*  
*Type: Factual*

6. (p. 38) Each ovum and each sperm contains
- A. 23 pairs of chromosomes.
  - B.** 23 chromosomes.
  - C. 46 chromosomes.
  - D. no chromosomes.

*Difficulty: Easy*  
*Learning Objective: 1*  
*Parke - Chapter 02 #6*  
*Type: Factual*

7. (p. 38) The chromosomes contributed by the sperm are homologous to those contributed by the ovum, which means that the chromosomes contributed by the sperm
- A. contain exactly the same information as those contributed by the egg.
  - B.** are similar in shape and function to those contributed by the egg.
  - C. are in a different order than those contributed by the egg.
  - D. perform a different function than those contributed by the egg.

*Difficulty: Difficult*  
*Learning Objective: 1*  
*Parke - Chapter 02 #7*  
*Type: Factual*

8. (p. 38) Meiosis is
- A. a process of cell replication.
  - B.** a process of cell division.
  - C. unique to body cells such as those in the liver and lungs.
  - D. the process of chromosome combination.

*Difficulty: Moderate*  
*Learning Objective: 1*  
*Parke - Chapter 02 #8*  
*Type: Factual*

9. (p. 38) Crossing over occurs during
- A. mitosis.
  - B.** meiosis.
  - C. intercourse.
  - D. fertilization.

*Difficulty: Moderate*  
*Learning Objective: 1*  
*Parke - Chapter 02 #9*  
*Type: Factual*

10. (p. 38-39) The process by which equivalent sections of chromosomes randomly switch places is known as
- A. chromosome switching.
  - B.** crossing over.
  - C. DNA recombination.
  - D. gene splicing.

*Difficulty: Moderate*  
*Learning Objective: 1*  
*Parke - Chapter 02 #10*  
*Type: Factual*

11. (p. 38) Which of the following is a process that results in the production of diverse genetic combinations?
- A.** Meiosis
  - B. Mitosis
  - C. Intercourse
  - D. Autosomes

*Difficulty: Difficult*  
*Learning Objective: 1*  
*Parke - Chapter 02 #11*  
*Type: Conceptual*

12. (p. 38) The likelihood that a man and a woman will produce two genetically identical children is A. nearly impossible unless they have monozygotic twins.  
B. nearly impossible unless they have dizygotic twins.  
C. greater in some parts of the world than in others.  
D. about 50%.

*Difficulty: Easy*  
*Learning Objective: 1*  
*Parke - Chapter 02 #12*  
*Type: Conceptual*

13. (p. 39) Mitosis occurs A. in both autosomes and sex chromosomes.  
B. only in autosomes.  
C. only in sex chromosomes.  
D. only during the embryonic period.

*Difficulty: Moderate*  
*Learning Objective: 1*  
*Parke - Chapter 02 #13*  
*Type: Conceptual*

14. (p. 40-41) Each DNA molecule is capable of A. reconstructing itself.  
B. recreating a similar but not identical molecule.  
C. synthesizing carbohydrates.  
D. triggering mutations.

*Difficulty: Difficult*  
*Learning Objective: 1*  
*Parke - Chapter 02 #14*  
*Type: Factual*

15. (p. 40-41) DNA A. is made up of nucleotides.  
B. is contained inside genes.  
C. is an autosome.  
D. contains the bases thymine, adenine, cytosine, and guanine, which can all freely combine with each other.

*Difficulty: Moderate*  
*Learning Objective: 1*  
*Parke - Chapter 02 #15*  
*Type: Factual*

16. (p. 40-41) The structural substances that are synthesized as a result of genes are

- A. carbohydrates.
- B. fats.
- C. proteins.**
- D. sugars.

*Difficulty: Easy*

*Learning Objective: 1*

*Parke - Chapter 02 #16*

*Type: Factual*

17. (p. 40-41) Genes trigger the production of proteins

- A. only at birth.
- B. at regular intervals.
- C. any time mitosis takes place.
- D. when a particular change in the environment signals them to respond.**

*Difficulty: Moderate*

*Learning Objective: 1*

*Parke - Chapter 02 #17*

*Type: Factual*

18. (p. 41) If you carry a gene for a particular disorder, whether or not that gene becomes activated may depend on

- A. hormones.
- B. signals in the environment.**
- C. neurotransmitters in the brain.
- D. mitosis.

*Difficulty: Difficult*

*Learning Objective: 1*

*Parke - Chapter 02 #18*

*Type: Applied*

19. (p. 41) Alternative forms of a gene are known as

- A. loci.
- B. recessive.
- C. heterozygous.
- D. alleles.**

*Difficulty: Easy*

*Learning Objective: 2*

*Parke - Chapter 02 #19*

*Type: Factual*

20. (p. 41) A situation in which one allele is considered to be dominant and the other allele is recessive occurs when an individual's chromosomes are
- A. heterozygous.
  - B. homozygous.
  - C. codominant.
  - D. both heterozygous and homozygous.

*Difficulty: Moderate*  
*Learning Objective: 2*  
*Parke - Chapter 02 #20*  
*Type: Conceptual*

21. (p. 42) Most serious deleterious alleles are
- A. dominant.
  - B. codominant.
  - C. recessive.
  - D. no longer a part of the gene pool.

*Difficulty: Moderate*  
*Learning Objective: 2*  
*Parke - Chapter 02 #21*  
*Type: Factual*

22. (p. 41-42) If you carry alleles for blood type AB+, those alleles are
- A. recessive.
  - B. dominant.
  - C. codominant.
  - D. homozygous.

*Difficulty: Moderate*  
*Learning Objective: 2*  
*Parke - Chapter 02 #22*  
*Type: Applied*

23. (p. 42) You and your spouse are expecting your first baby and are wondering who your baby is going to look like. You have curly, dark hair (homozygous), while your spouse has light-colored straight hair. The phenotype for your child will be
- A. curly, light-colored hair.
  - B. straight, dark hair.
  - C. curly, dark hair.
  - D. light-colored, straight hair.

*Difficulty: Difficult*  
*Learning Objective: 2*  
*Parke - Chapter 02 #23*  
*Type: Applied*

24. (p. 43-44) Which of the following statements is true regarding sex chromosomes?
- A. The Y chromosome is longer than the X chromosome.
  - B. The Y chromosome contains some genes not found on the X chromosome.
  - C.** There are some genes on the X chromosome that have no equivalent on the Y chromosome.
  - D. The X and Y chromosomes differ in shape, but are the same size.

*Difficulty: Moderate*  
*Learning Objective: 2*  
*Parke - Chapter 02 #24*  
*Type: Factual*

25. (p. 43) You have a sister who is a carrier for hemophilia, yet she has normally clotting blood. If she had children, who is most likely to be affected with this disorder?
- A. Her female children are more likely to be affected.
  - B. None of her children will be affected.
  - C. Any male children will have the disorder.
  - D.** A male child will most likely have the disorder unless he receives a gene for normally clotting blood from his father.

*Difficulty: Difficult*  
*Learning Objective: 2*  
*Parke - Chapter 02 #25*  
*Type: Applied*

26. (p. 43) X-linked characteristics are more common in males than in females because
- A.** males receive no counteracting gene from the father.
  - B. the Y chromosome is really a modifier gene.
  - C. male hormones trigger the release of X-linked characteristics.
  - D. they are uniquely male.

*Difficulty: Difficult*  
*Learning Objective: 2*  
*Parke - Chapter 02 #26*  
*Type: Factual*

27. (p. 43-44) A characteristic such as genius that results from two parents of average intelligence is influenced by
- A. heterozygotes.
  - B. autosomes.
  - C.** gene interactions.
  - D. hybrid genes.

*Difficulty: Difficult*  
*Learning Objective: 2*  
*Parke - Chapter 02 #27*  
*Type: Factual*

28. (p. 44) Cataracts are an example of a trait that is influenced by a dominant gene and by
- A. chromosomal abnormalities.
  - B. sex chromosomes.
  - C. phenotype.
  - D. modifier genes.**

*Difficulty: Difficult*  
*Learning Objective: 2*  
*Parke - Chapter 02 #28*  
*Type: Factual*

29. (p. 44) Phenylketonuria (PKU) results from
- A. the inability to metabolize phenylalanine.**
  - B. the inability to tolerate milk.
  - C. a decrease of phenylpyruvic acid in the body.
  - D. an excess of enzymes necessary to metabolize proteins.

*Difficulty: Moderate*  
*Learning Objective: 3*  
*Parke - Chapter 02 #29*  
*Type: Factual*

30. (p. 44) You have just discovered that your newborn baby has PKU. What should you expect concerning your child's treatment for this disorder?
- A. There is no treatment for this disorder.
  - B. Dietary intervention beginning at birth that eliminates phenylalanine**
  - C. Administering phenylalaninate at birth
  - D. Dietary intervention when the baby begins eating solid foods

*Difficulty: Moderate*  
*Learning Objective: 3*  
*Parke - Chapter 02 #30*  
*Type: Applied*

31. (p. 47) Down syndrome is generally a result of an abnormality of
- A. the autosomes.
  - B. the Y chromosome.
  - C. chromosome 21.**
  - D. amniotic fluid.

*Difficulty: Easy*  
*Learning Objective: 3*  
*Parke - Chapter 02 #31*  
*Type: Factual*

32. (p. 48) The increased lifespan in recent years of individuals with Down syndrome can be attributed to
- A. greater understanding of the genetic implications of the disorder.
  - B.** advances in the treatment of health complications associated with Down syndrome.
  - C. a decrease in the institutionalization of individuals with Down syndrome.
  - D. earlier detection of the disorder, which can result in a reduction of various symptoms of the disorder.

*Difficulty: Moderate*  
*Learning Objective: 3*  
*Parke - Chapter 02 #32*  
*Type: Factual*

33. (p. 47) Which of the following statements regarding Down syndrome is true?
- A. The extra chromosome usually comes from the father.
  - B. Young women are more likely than older women to have a child with Down syndrome.
  - C. The age of the father is unrelated to the incidence of Down syndrome.
  - D.** The failure of the chromosome to separate occurs more frequently in older women than younger ones.

*Difficulty: Moderate*  
*Learning Objective: 3*  
*Parke - Chapter 02 #33*  
*Type: Factual*

34. (p. 48-49, Box 3-1) Through studying the history of sickle-cell anemia, one is able to
- A. understand the functioning of mutator genes.
  - B.** gain an understanding of how genetic and environmental factors interact.
  - C. describe the onset and the elimination of a genetic disorder.
  - D. recognize that the same characteristics of a disorder are present in both the heterozygous and homozygous state.

*Difficulty: Moderate*  
*Learning Objective: 3*  
*Parke - Chapter 02 #34*  
*Type: Conceptual*

35. (p. 48-49, Box 3-1) The sickle-cell trait is said to have had survival value because it is associated with
- A. individuals who are physically stronger.
  - B. a resistance to tuberculosis.
  - C. individuals who can function with less oxygen.
  - D.** a resistance to malarial infection.

*Difficulty: Easy*  
*Learning Objective: 3*  
*Parke - Chapter 02 #35*  
*Type: Factual*

36. (p. 54) The chromosome structure for Turner syndrome is

- A. XXX.
- B. XXY.
- C. XX.
- D. XO.**

*Difficulty: Easy*

*Learning Objective: 3*

*Parke - Chapter 02 #36*

*Type: Factual*

37. (p. 50) Most cases of Turner syndrome result from

- A. an abnormal sperm.**
- B. an abnormal ovum.
- C. failure of a chromosome to split during meiosis.
- D. gene interactions.

*Difficulty: Moderate*

*Learning Objective: 3*

*Parke - Chapter 02 #37*

*Type: Factual*

38. (p. 50) Which of the following statements regarding Turner syndrome is INCORRECT?

- A. The absence of secondary sex characteristics can be remedied through the application of female hormones.
- B. With the successful use of female hormones, sterility is no longer a complication.**
- C. Girls with Turner syndrome are socially immature and lacking in assertiveness.
- D. Webbed necks and unusually shaped mouths and ears are often present.

*Difficulty: Difficult*

*Learning Objective: 3*

*Parke - Chapter 02 #38*

*Type: Conceptual*

39. (p. 50) Which one of the following is NOT a characteristic of girls with triple-X syndrome?

- A. Normal secondary sexual development
- B. Normal physical appearance
- C. Impairments in short-term memory
- D. Abnormal secondary sexual development**

*Difficulty: Moderate*

*Learning Objective: 3*

*Parke - Chapter 02 #39*

*Type: Factual*

40. (p. 50) Klinefelter syndrome manifests itself in

- A.** males.
- B. females
- C. males and females.
- D. only in infancy.

*Difficulty: Easy*

*Learning Objective: 3*

*Parke - Chapter 02 #40*

*Type: Factual*

41. (p. 50) Which of the following conclusions can be correctly drawn from our current understanding of XYY and XXY men?

- A. XYY and XXY men are violent and assaultive individuals.
- B. XYY than XXY men have female characteristics.
- C. XYY and XXY men tend to be shorter than XY men.
- D.** XYY men are no more aggressive than XY men.

*Difficulty: Moderate*

*Learning Objective: 3*

*Parke - Chapter 02 #41*

*Type: Factual*

42. (p. 50) The cause of mental retardation due to a narrowing of parts of the X chromosome is

- A. Down syndrome.
- B.** Fragile X syndrome.
- C. Klinefelter syndrome.
- D. Turner syndrome.

*Difficulty: Easy*

*Learning Objective: 3*

*Parke - Chapter 02 #42*

*Type: Factual*

43. (p. 50-51) Which of the following statements is true regarding diversity in the phenotypic expression of genetic disorders?

- A.** Environmental factors, such as the degree to which one has a supportive environment, impact upon the phenotypical expression of the genotype.
- B. Environmental factors play little or no role in the phenotypical expression of genetic disorders.
- C. Environmental factors impact upon all types of genetic disorders equally.
- D. Environmental factors can prevent the onset of a disorder, but cannot modify the severity and symptoms of a disorder.

*Difficulty: Difficult*

*Learning Objective: 3*

*Parke - Chapter 02 #43*

*Type: Factual*

44. (p. 51) Which of the following is true of the options available to a couple who are thinking about starting a family but who are concerned about passing onto their children genetic disorders which run in their family?
- A. Adoption is probably the best option in order for the couple to be certain they do not pass on any disorders to their children.
  - B. Preventive genetic counseling can allow them to be tested for defective genes before they conceive a child.**
  - C. Ethical controversies surrounding genetic counseling have made these procedures illegal in most states.
  - D. Most genetic disorders can be prevented through early detection.

*Difficulty: Moderate*  
*Learning Objective: 4*  
*Parke - Chapter 02 #44*  
*Type: Applied*

45. (p. 52-53, Box 3-2) Which of the following is NOT an ethical concern regarding new reproductive technologies?
- A. The limitations and legal rights of sperm donors to know the children conceived with their sperm
  - B. Whether or not a surrogate mother has the right to keep the child she agreed to have for another couple
  - C. Controversy surrounding the genetic abnormalities frequently caused by conceiving children through in vitro fertilization**
  - D. Whether extra embryos not used during in vitro fertilization should be used for research

*Difficulty: Difficult*  
*Learning Objective: 4*  
*Parke - Chapter 02 #45*  
*Type: Conceptual*

46. (p. 52-53, Box 3-2) In which of the following situations would in vitro fertilization not be recommended?
- A. When a husband is unable to produce sperm
  - B. When a husband produces an insufficient supply of sperm**
  - C. When a husband's sperm is not able to fertilize the wife's egg
  - D. When a woman cannot produce an egg

*Difficulty: Difficult*  
*Learning Objective: 4*  
*Parke - Chapter 02 #46*  
*Type: Applied*

47. (p. 52-53, Box 3-2) A woman who had her uterus removed during a hysterectomy may be able to have some of her eggs extracted and frozen prior to the surgery. What technique would such a woman be likely to request when she would like to have a child?

- A.** In vitro fertilization using a surrogate mother
- B. In vitro fertilization using donated sperm
- C. Amniocentesis
- D. Embryo cloning

*Difficulty: Difficult*  
*Learning Objective: 4*  
*Parke - Chapter 02 #47*  
*Type: Applied*

48. (p. 51) Amniocentesis is a procedure that

- A. is done during the delivery, to remove excess fluid from the amniotic sac.
- B. is typically performed around the ninth month of pregnancy.
- C.** is done during pregnancy by removing fluid from the amniotic sac to identify genetic or developmental anomalies.
- D. can be done at an earlier time than other prenatal tests.

*Difficulty: Moderate*  
*Learning Objective: 4*  
*Parke - Chapter 02 #48*  
*Type: Factual*

49. (p. 51) The risks associated with amniocentesis include

- A. cognitive deficits after birth.
- B.** miscarriage.
- C. chronic pain for the mother.
- D. limb deformities in the fetus.

*Difficulty: Moderate*  
*Learning Objective: 4*  
*Parke - Chapter 02 #49*  
*Type: Factual*

50. (p. 52) Chorionic villi sampling is a procedure that

- A.** can be administered at the ninth or tenth week of pregnancy, considerably earlier than amniocentesis.
- B. removes cells from the amniotic fluid for biopsy during the early months of pregnancy.
- C. is typically performed at 16 weeks, considerably later than amniocentesis.
- D. is typically done just before birth to detect any complications.

*Difficulty: Moderate*  
*Learning Objective: 4*  
*Parke - Chapter 02 #50*  
*Type: Factual*

51. (p. 52) Prenatal cells can be used

- A.** to look for the presence of genetic markers of particular disorders.
- B. to remove genetic abnormalities.
- C. only to look for the presence of physical abnormalities visible under a microscope, such as the presence of an extra chromosome.
- D. to look for the presence of maternal hormones.

*Difficulty: Moderate*  
*Learning Objective: 4*  
*Parke - Chapter 02 #51*  
*Type: Factual*

52. (p. 53) For which of the following diseases has a genetic marker been identified?

- A. Infertility
- B. PKU
- C. Cerebral palsy
- D.** Huntington disease

*Difficulty: Easy*  
*Learning Objective: 4*  
*Parke - Chapter 02 #52*  
*Type: Factual*

53. (p. 53) A problem associated with the alphafetoprotein (AFP) assay is

- A.** a high rate of false positive results.
- B. a high rate of false negative results.
- C. the inability to detect risk for Down syndrome.
- D. harm to the developing fetus.

*Difficulty: Moderate*  
*Learning Objective: 4*  
*Parke - Chapter 02 #53*  
*Type: Factual*

54. (p. 53-54) Women who have frequent ultrasounds during pregnancy

- A. feel more anxiety as the pregnancy progresses.
- B.** feel less anxiety as the pregnancy progresses.
- C. are unlikely to suffer from any birth complications.
- D. have increased risk of miscarriage.

*Difficulty: Moderate*  
*Learning Objective: 4*  
*Parke - Chapter 02 #54*  
*Type: Factual*

55. (p. 53-54) Why would the ultrasound technique be associated with ethical problems?

- A. Ultrasounds can be harmful to the developing fetus.
- B.** Ultrasounds are associated with a higher rate of abortion in some cultures where male babies are preferred over female babies.
- C. Ultrasounds are related to increased anxiety during pregnancy.
- D. Mothers will change their behavior and be less concerned about their health when they know the gender of their baby.

*Difficulty: Moderate*

*Learning Objective: 4*

*Parke - Chapter 02 #55*

*Type: Factual*

56. (p. 54) Your company would like to begin genetic testing when screening for potential employees in order to know a person's risk for developing diseases such as cancer and heart disease. A valid argument against the use of these tests would be that

- A. the field of genetics has not advanced enough to be able to determine a person's risk for any type of disorder.
- B. genetic tests are painful and can cause physical damage to the person being tested.
- C. genetic testing is very expensive and would not be cost-effective.
- D.** there is no way to be certain that someone would develop a disorder because some individuals who have the genes associated with a disorder may not develop that disorder.

*Difficulty: Moderate*

*Learning Objective: 4*

*Parke - Chapter 02 #56*

*Type: Conceptual*

57. (p. 54-55) Gene therapy involves

- A. the provision of therapy to those with genetic disorders.
- B. the prevention of meiosis from occurring in defective chromosomes.
- C.** inserting normal alleles into patients' cells in order to compensate for defective ones.
- D. the removal defective genes.

*Difficulty: Moderate*

*Learning Objective: 4*

*Parke - Chapter 02 #57*

*Type: Factual*

58. (p. 55) Your cousin has an immune system disorder and doctors inserted genes into her blood which would help her to produce enzymes that she previously lacked. These genes were probably inserted into her blood
- A.** with viruses.
  - B. with bacteria
  - C. by ingesting a pill.
  - D. through surgery.

*Difficulty: Moderate*  
*Learning Objective: 4*  
*Parke - Chapter 02 #58*  
*Type: Factual*

59. (p. 56-57, Box 2-3) One of the more difficult tasks of the Human Genome Project is
- A. identifying genes on the Y chromosome.
  - B.** determining interactions among multiple genes.
  - C. identifying genes on chromosome 21.
  - D. identifying diseases caused by single genes.

*Difficulty: Easy*  
*Learning Objective: 34*  
*Parke - Chapter 02 #59*  
*Type: Conceptual*

60. (p. 56-57, Box 2-3) While working on the Human Genome Project, Caspi et al. (2003) have found
- A. a genetic marker for depression.
  - B. a gene that prevents the antisocial behavior.
  - C.** individuals who carry a set of genes associated with antisocial behavior only develop problems when they are exposed to particular environmental stressors.
  - D. that the genes for depression and antisocial behavior are impossible to map.

*Difficulty: Moderate*  
*Learning Objective: 4*  
*Parke - Chapter 02 #60*  
*Type: Factual*

61. (p. 56) The process whereby the genetic factors set boundaries on an individual's possible responses to the environment is known as
- A. predetermination.
  - B. discontinuity.
  - C. differentiation.
  - D.** range of reaction.

*Difficulty: Moderate*  
*Learning Objective: 5*  
*Parke - Chapter 02 #61*  
*Type: Factual*

62. (p. 56) When Robert is placed in an enriched environment, he flourishes and learns very quickly. When he is placed in a deprived environment he shows signs of severe developmental delays. Robert is said to have a wide
- A. canalization.
  - B. range of reaction.**
  - C. genetic propensity.
  - D. potentiality.

*Difficulty: Moderate*  
*Learning Objective: 5*  
*Parke - Chapter 02 #62*  
*Type: Applied*

63. (p. 58) The tendency for development to be genetically restricted to a few pathways which can only be deflected by an intense environmental push is a description of
- A. canalization.**
  - B. a discontinuous process.
  - C. differentiation.
  - D. range of reaction.

*Difficulty: Moderate*  
*Learning Objective: 5*  
*Parke - Chapter 02 #63*  
*Type: Factual*

64. (p. 58) Babbling is an example of a process that is \_\_\_\_\_, while intelligence is \_\_\_\_\_.
- A. highly canalized; not highly canalized**
  - B. not highly canalized; highly canalized
  - C. genetically determined; environmentally determined
  - D. learned; innate

*Difficulty: Moderate*  
*Learning Objective: 5*  
*Parke - Chapter 02 #64*  
*Type: Factual*

65. (p. 58-59) In Gottlieb's developmental systems view, an individual's genes are part of an overall system and the expression of those genes
- A. is dependent only on the configuration of other genes in the system.
  - B. becomes fixed during infancy.
  - C. is predetermined by the genetic code.
  - D. is affected by events at other levels of the system.**

*Difficulty: Moderate*  
*Learning Objective: 5*  
*Parke - Chapter 02 #65*  
*Type: Conceptual*

66. (p. 58-59) A fetus who is exposed to the virus that causes German measles will develop damaged hearing
- A.** only if exposed at a particular stage during prenatal development.
  - B. if exposed to the virus at any point while it is in the womb.
  - C. only if the fetus carries a gene that puts him or her at risk for hearing loss.
  - D. only if the mother is also malnourished.

*Difficulty: Moderate*  
*Learning Objective: 5*  
*Parke - Chapter 02 #66*  
*Type: Factual*

67. (p. 60) The statement that children influence their parents is most comparable to which type of genetic-environmental interaction?
- A. Passive
  - B.** Evocative
  - C. Active
  - D. Niche picking

*Difficulty: Difficult*  
*Learning Objective: 5*  
*Parke - Chapter 02 #67*  
*Type: Conceptual*

68. (p. 60) Which type of genetic-environmental interaction includes the idea that parents with certain genetic predispositions create a home environment that suits the inherited predispositions of the child?
- A.** Passive
  - B. Evocative
  - C. Active
  - D. Niche picking

*Difficulty: Difficult*  
*Learning Objective: 5*  
*Parke - Chapter 02 #68*  
*Type: Factual*

69. (p. 60) While you were growing up, your parents often preferred staying at home on the weekends, watching television, and reading, over socializing with others outside the family. You had a tendency to be shy and introverted, so you also enjoyed these types of activities and continued these activities even as an adult. This is an example of

- A.** passive genetic-environmental interaction.
- B. evocative genetic-environmental interaction.
- C. active genetic-environmental interaction.
- D. parent to child genetic-environmental interaction.

*Difficulty: Difficult*  
*Learning Objective: 5*  
*Parke - Chapter 02 #69*  
*Type: Conceptual*

70. (p. 60) Niche picking refers to

- A. children relying on their parents to build a stimulating environment for them.
- B.** children and adults being actively involved in identifying and/or creating an environment they find responsive and stimulating.
- C. parents following their children's innate cues in building appropriately stimulating environments.
- D. biological predispositions for traits seen in certain geographical areas.

*Difficulty: Moderate*  
*Learning Objective: 5*  
*Parke - Chapter 02 #70*  
*Type: Factual*

71. (p. 60) The research finding that shows certain behavioral genotypes to be more strongly shown in adolescence than in childhood supports the idea of

- A. range of reaction.
- B. canalization.
- C.** niche picking.
- D. reactive processes.

*Difficulty: Difficult*  
*Learning Objective: 5*  
*Parke - Chapter 02 #71*  
*Type: Conceptual*

72. (p. 61) The primary concern for human behavior geneticists is

- A. identifying single genes that cause changes in behavior.
- B. understanding chromosomal errors that contribute to gross developmental deviations.
- C. identifying the genetic material involved in transmitting personality characteristics.
- D.** understanding genetic contributions to the variations in individual differences found throughout the human lifespan.

*Difficulty: Moderate*  
*Learning Objective: 6*  
*Parke - Chapter 02 #72*  
*Type: Conceptual*

73. (p. 61) Which of the following is a misconception about the study of behavior genetics?

- A. Both genetic factors and environmental factors influence a child's potential.
- B.** Evidence that suggests a strong genetic effect on a characteristic also indicates that environmental influences are not important.
- C. Genes affect both static characteristics and developmental changes.
- D. Genetics can influence development at any stage of the lifespan.

*Difficulty: Moderate*  
*Learning Objective: 6*  
*Parke - Chapter 02 #73*  
*Type: Conceptual*

74. (p. 62) Which of the following is the focus of behavior geneticists?

- A. The biochemical basis of behavior
- B. Genetic mechanisms
- C.** Genetic relatedness
- D. Reproductive processes

*Difficulty: Moderate*  
*Learning Objective: 6*  
*Parke - Chapter 02 #74*  
*Type: Factual*

75. (p. 62) Behavior geneticists conducting family resemblance studies most frequently employ

- A. kinship studies.
- B. sibling studies.
- C.** adoption and twin studies.
- D. parent-child studies.

*Difficulty: Easy*  
*Learning Objective: 6*  
*Parke - Chapter 02 #75*  
*Type: Factual*

76. (p. 62) When behavior geneticists conduct adoption studies, they usually compare the characteristics of adopted children to those of

- A. their biological siblings reared elsewhere.
- B. other adopted children.
- C. their adopted and biological parents.**
- D. children in other families who were not adopted.

*Difficulty: Moderate*  
*Learning Objective: 6*  
*Parke - Chapter 02 #76*  
*Type: Factual*

77. (p. 62) Twins who are created by the separation of the zygote following fertilization of a single egg by a single sperm are known as

- A. monozygotic.**
- B. dizygotic.
- C. fraternal.
- D. mutants.

*Difficulty: Easy*  
*Learning Objective: 6*  
*Parke - Chapter 02 #77*  
*Type: Factual*

78. (p. 62-63) Researchers can infer that a trait is largely influenced by genes if

- A. identical twins show more resemblance in the trait than fraternal twins.**
- B. fraternal twins show more resemblance in the trait than identical twins.
- C. children are more similar to their adoptive parents than their biological parents.
- D. identical twins do not show any resemblance to each other in the trait.

*Difficulty: Moderate*  
*Learning Objective: 6*  
*Parke - Chapter 02 #78*  
*Type: Conceptual*

79. (p. 63) Two infants are adopted by a family. They are the same age and are adopted at the same time but are not biologically related. Research supports which of the following statements?

- A. They will be treated very differently by their parents even though they live in the same house.
- B. The two will have similar personalities because they share a similar environment.
- C.** They would be more likely to have similar characteristics during early and middle childhood but will probably become less similar in adolescence due to niche picking.
- D. They will be very similar during adolescence because the environment will have strongly influenced their personalities.

*Difficulty: Moderate*  
*Learning Objective: 6*  
*Parke - Chapter 02 #79*  
*Type: Applied*

80. (p. 62-63) A behavior geneticist conducted a study comparing the political values of identical and fraternal twins. He found that both sets of twins were equally similar in their political values. What can the researcher infer?

- A. Political values are more strongly influenced by genetics than by the environment.
- B.** Political values are more strongly influenced by the environment than by the genetics.
- C. Neither genetics nor the environment plays a role in political values.
- D. The results are inconclusive as to whether genetics or the environment influences political values.

*Difficulty: Difficult*  
*Learning Objective: 6*  
*Parke - Chapter 02 #80*  
*Type: Applied*

81. (p. 62-63) The differences in family experiences among siblings is referred to as

- A.** nonshared environment.
- B. shared environment.
- C. sibling rivalry.
- D. family drift.

*Difficulty: Easy*  
*Learning Objective: 6*  
*Parke - Chapter 02 #81*  
*Type: Factual*

82. (p. 62-63) Shared environmental influences are described as
- A. differences in family experiences among siblings.
  - B.** common family experiences shared by siblings.
  - C. nonshared experiences shared by all members of a culture.
  - D. the benefits of learning to share and reciprocate the kindness of others.

*Difficulty: Easy*  
*Learning Objective: 6*  
*Parke - Chapter 02 #82*  
*Type: Factual*

83. (p. 63) Which of the following might explain nonshared experiences among siblings?
- A.** Differences in the intelligence of the two siblings
  - B. Poverty
  - C. The neighborhood they lived in growing up
  - D. Parental divorce

*Difficulty: Moderate*  
*Learning Objective: 6*  
*Parke - Chapter 02 #83*  
*Type: Conceptual*

84. (p. 63-64) The correlation between intellectual functioning and genetic similarity is
- A.** positive.
  - B. negative.
  - C. zero.
  - D. inconsistent.

*Difficulty: Difficult*  
*Learning Objective: 6*  
*Parke - Chapter 02 #84*  
*Type: Factual*

85. (p. 63-65) Which of the following would be the LEAST similar in intelligence?
- A. Identical twins reared apart
  - B. A mother and her biological child
  - C. Biological siblings reared together
  - D.** Cousins

*Difficulty: Easy*  
*Learning Objective: 6*  
*Parke - Chapter 02 #85*  
*Type: Factual*

86. (p. 65) Which of the following characteristics shows the greatest genetic influence?

- A. Sociability
- B. IQ scores**
- C. Vocational interests
- D. Creativity

*Difficulty: Moderate*  
*Learning Objective: 6*  
*Parke - Chapter 02 #86*  
*Type: Factual*

87. (p. 65) In general, studies have shown that the correlation between adoptive parents' IQs and their adopted child's IQ

- A. increases throughout childhood.
- B. decreases as the child grows older.**
- C. increases throughout adolescence.
- D. does not change over time.

*Difficulty: Moderate*  
*Learning Objective: 6*  
*Parke - Chapter 02 #87*  
*Type: Factual*

88. (p. 63-65) Patterns of change in IQ over the course of development

- A. tend to be more similar for identical twins than fraternal twins.**
- B. do not show any similarity for identical twins.
- C. are more similar for fraternal twins than identical twins.
- D. make it difficult to conduct reliable heritability studies.

*Difficulty: Easy*  
*Learning Objective: 6*  
*Parke - Chapter 02 #88*  
*Type: Factual*

89. (p. 63-65) Although the rank orders of IQs for adopted children and their biological parents were similar, a study by Skodak and Skeels (1949) also found that

- A. adopted children's IQs were more similar to those of their adopted siblings.
- B. only the children whose biological parents had very low IQs showed an increase in IQ when placed in a more stimulating environment.
- C. adopted children had higher IQs on average than their biological parents.**
- D. adopted children had lower IQs on average than their biological parents.

*Difficulty: Easy*  
*Learning Objective: 6*  
*Parke - Chapter 02 #89*  
*Type: Factual*

90. (p. 66) Which infants are likely to respond negatively to new situations?

- A. Difficult infants only
- B. Slow-to-warm-up infants only
- C. Both difficult and slow-to-warm-up infants**
- D. Antisocial infants

*Difficulty: Easy*  
*Learning Objective: 6*  
*Parke - Chapter 02 #90*  
*Type: Factual*

91. (p. 66) When his mother brought him to a new day-care center, Joshua was extremely cautious. When his teacher approached him to offer him a toy, he started crying. By the time his mother picked him up at the end of the day, however, he was playing nicely with blocks. What temperament would Joshua most likely have?

- A. Difficult temperament
- B. Slow-to-warm-up temperament**
- C. Easy temperament
- D. Anxious temperament

*Difficulty: Easy*  
*Learning Objective: 6*  
*Parke - Chapter 02 #91*  
*Type: Applied*

92. (p. 67) Researchers have found evidence that

- A. there are differences in newborn temperament among children of different ethnicities.**
- B. the concept of temperament is only relevant in Western cultures.
- C. the proportion of infants in each temperament category is the same in every culture.
- D. all babies have easy temperaments in some cultures.

*Difficulty: Moderate*  
*Learning Objective: 6*  
*Parke - Chapter 02 #92*  
*Type: Factual*

93. (p. 67) Research on parents' perceptions of infants' temperament find that

- A. parents in different cultures tend to interpret infants' behavior very similarly.
- B. parents in different cultures provide different opportunities for learning depending on their assumptions about temperament.**
- C. cultural beliefs about temperament differ across cultures, but these beliefs do not impact the behavior of the children.
- D. children with difficult temperaments are treated less favorably in all cultures.

*Difficulty: Difficult*  
*Learning Objective: 6*  
*Parke - Chapter 02 #93*  
*Type: Factual*

94. (p. 67) Kristen and Amanda both have difficult temperaments. Kristen's mother is flexible and accepting and enjoys her daughter. Amanda's mother finds her infant's behavior irritating and is often angry and punitive. Which of the following is most likely?

- A. Kristen and Amanda are equally likely to develop behavior problems because both have difficult temperaments.
- B. Kristen is more likely to develop behavior problems because of her mother's behavior.
- C.** Amanda is more likely to develop behavior problems because of her mother's behavior.
- D. Neither Kristen nor Amanda is likely to develop behavior problems.

*Difficulty: Moderate*  
*Learning Objective: 6*  
*Parke - Chapter 02 #94*  
*Type: Applied*

95. (p. 67) Which of the following statements is NOT true?

- A. Children who were difficult infants are likely to have difficulty adapting to environmental demands.
- B. Children who were difficult infants are likely to elicit negative responses from parents.
- C.** Children who were difficult infants are likely to receive little attention from their parents.
- D. Children who were difficult infants are likely to develop behavior disorders.

*Difficulty: Moderate*  
*Learning Objective: 6*  
*Parke - Chapter 02 #95*  
*Type: Factual*

96. (p. 67) Based on the goodness-of-fit model,

- A. only parents of easy children can adjust their parenting style to fit with their children's personality.
- B.** parental strategies that use gentle discipline will work better for fearful children.
- C. parental strategies that use gentle discipline will work better for fearless children.
- D. parental strategies that use harsh and punitive discipline will work better for a difficult child.

*Difficulty: Moderate*  
*Learning Objective: 6*  
*Parke - Chapter 02 #96*  
*Type: Conceptual*

97. (p. 67) Based on current theory and research, what course of action would you recommend for the parents of a difficult infant?

- A.** Develop more flexibility and alter your behavior to help moderate the behavior of the temperamentally difficult child.
- B. Accept the child's behavior because the child's temperament is genetically determined and is not likely to change.
- C. Wait patiently because an infant's temperamental characteristics have little relationship to her later behavior.
- D. Develop strong controls over the child's behavior because the child will only respond to very harsh discipline.

*Difficulty: Difficult*  
*Learning Objective: 6*  
*Parke - Chapter 02 #97*  
*Type: Applied*

98. (p. 67) Research suggests that one of the following is likely to occur when mothers experience stress.

- A. They will form extremely strong bonds of attachment with their infants because they turn to the infants for affection.
- B. They will focus intense effort on responding to their child in a positive way.
- C.** They will show increased irritability, especially to slow-to-warm children.
- D. They will show increased irritability, especially to difficult children.

*Difficulty: Moderate*  
*Learning Objective: 6*  
*Parke - Chapter 02 #98*  
*Type: Factual*

99. (p. 68) Which of the following is NOT one of the three most heritable dimensions of personality?

- A. Emotionality
- B.** Arousal
- C. Activity
- D. Sociability

*Difficulty: Moderate*  
*Learning Objective: 7*  
*Parke - Chapter 02 #99*  
*Type: Factual*

100. (p. 39-41) Describe the composition of DNA.

Describe nucleotides; references to genes and chromosomes possible

*Difficulty: Moderate*  
*Learning Objective: 2*  
*Parke - Chapter 02 #100*  
*Type: Conceptual*

101. (p. 41-43) What is the difference between codominance of alleles versus dominant and recessive alleles? Give an example of each.

Define codominance, dominant, and recessive, and give examples.

*Difficulty: Difficult*  
*Learning Objective: 2*  
*Parke - Chapter 02 #101*  
*Type: Conceptual*

102. (p. 42) Why are males susceptible to X-linked recessive disorders?

Explain dominant and recessive genes using disorders as examples.

*Difficulty: Difficult*  
*Learning Objective: 3*  
*Parke - Chapter 02 #102*  
*Type: Conceptual*

103. (p. 44-51) Discuss three genetic causes of developmental disorders and give an example of each.

Explain three examples of disorders including principles of dominant, recessive, and codominant genes.

*Difficulty: Difficult*  
*Learning Objective: 3*  
*Parke - Chapter 02 #103*  
*Type: Conceptual*

104. (p. 60) Explain three ways in which genotypes shape the environment.

Explain range of reactions, passive, active, and evocation genetic-environmental interactions.

*Difficulty: Difficult*  
*Learning Objective: 5*  
*Parke - Chapter 02 #104*  
*Type: Conceptual*

105. (p. 62-65) Why do psychologists conduct adoption and twin studies?

Explain genetic-environmental interactions and research using data collected from monozygotic and dizygotic twins raised together and apart that helps tease out genetic-environmental interactions.

*Difficulty: Difficult*  
*Learning Objective: 6*  
*Parke - Chapter 02 #105*  
*Type: Conceptual*

106. (p. 65-68) What parental factors contribute to developmental problems in children who were described as difficult babies?

Discuss temperaments and goodness of fit.

*Difficulty: Difficult*  
*Learning Objective: 6*  
*Parke - Chapter 02 #106*  
*Type: Applied*

107. (p. 44-49) Describe the differences in transmission between PKU and sickle cell disease.

Explain how each disease is carried, comparing and contrasting the genetic underpinnings.

*Difficulty: Difficult*  
*Learning Objective: 3*  
*Parke - Chapter 02 #107*  
*Type: Conceptual*

108. (p. 51-55) Your sister and her husband are planning on adopting an infant and are concerned about how intelligent the child will be. Based upon current research, what information can you provide them?

Answer should include information on genetic counseling, reproductive technology, and ethical considerations.

*Difficulty: Difficult*  
*Learning Objective: 4*  
*Parke - Chapter 02 #108*  
*Type: Applied*

109. (p. 41-51) What relevance does behavioral genetics have for developmental psychology?

Answer should include information on genetic-environmental interactions and heritability.

*Difficulty: Difficult*

*Learning Objective: 5*

*Parke - Chapter 02 #109*

*Type: Applied*

110. (p. 42-44) How do sex chromosome abnormalities vary between males and females?

Answer should include information on sex chromosomes and X-linked genetic disorders.

*Difficulty: Difficult*

*Learning Objective: 3*

*Parke - Chapter 02 #110*

*Type: Applied*

## c2 Summary

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