CHAPTER 2
GENETIC AND ENVIRONMENTAL FOUNDATIONS

MULTIPLE CHOICE

1. Christine is 5′7″ and has blue eyes. Such directly observable characteristics are called _____.
A) alleles
B) phenotypes
C) chromosomes
D) genotypes

Answer: B
Page Ref: 36
Skill Level: Apply
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Moderate

2. Phenotypes depend in part on an individual's _____.
A) cytoplasm
B) karyotype
C) genotype
D) hair color

Answer: C
Page Ref: 36
Skill Level: Remember
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Easy

3. Our _____ determine(s) our species and influences all our unique characteristics.
A) genotype
B) phenotypes
C) regulator genes
D) karyotype

Answer: A
Page Ref: 36
Skill Level: Remember
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Easy

4. The _____ is the control center of a cell in the human body.
A) genotype

B) gamete
C) autosome
D) nucleus

Answer: D
Page Ref: 36
Skill Level: Remember
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Easy

5. Chromosomes look like _____.
A) spheres
B) cones
C) rods
D) cubes

Answer: C
Page Ref: 36
Skill Level: Remember
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Easy

6. Which statement about human chromosomes is true?
A) They come in 46 matching pairs.
B) They store and transmit genetic information.
C) In females, each chromosome is inherited from the mother.
D) Each member of a pair has a different size, shape, and genetic function.

Answer: B
Page Ref: 36
Skill Level: Understand
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Moderate

7. Deoxyribonucleic acid (DNA) looks like a _____.
A) long cylinder
B) small sphere
C) twisted ladder
D) bundle of rods

Answer: C
Page Ref: 36, 37 (image)
Skill Level: Remember

Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Easy

8. A _____ is a segment of DNA along the length of the chromosome.
A) phenotype
B) genotype
C) gene
D) gamete

Answer: C
Page Ref: 36
Skill Level: Remember
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Easy

9. Protein-coding genes _____.
A) directly affect our body's characteristics
B) modify instructions given by regulator genes
C) come in 23 matching pairs
D) are formed through meiosis

Answer: A
Page Ref: 36
Skill Level: Understand
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Moderate

10. The area surrounding the cell nucleus is called the _____.
A) zygote
B) cytoplasm
C) gamete
D) gene

Answer: B
Page Ref: 36
Skill Level: Remember
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Easy

11. _____, which trigger chemical reactions throughout the body, are the biological foundation on which our characteristics are built.
A) Phenotypes

B) Proteins
C) Carbohydrates
D) Autosomes

Answer: B
Page Ref: 36–37
Skill Level: Remember
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Moderate

12. Lynn, a Canadian, and Sasha, a Russian, are about _____ percent genetically identical.
A) 46
B) 79.6
C) 95
D) 99.6

Answer: D
Page Ref: 37
Skill Level: Apply
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Easy

13. Which of the following statements about human genetic makeup is true?
A) We do not share any of our DNA with other mammals.
B) It takes changes in multiple DNA base pairs to influence human traits.
C) The species-specific genetic material responsible for human attributes is extensive.
D) Gene expression within human cells cannot be modified by environmental factors.

Answer: C
Page Ref: 37
Skill Level: Understand
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Difficult

14. The sperm and the ovum are sex cells, or _____.
A) autosomes
B) gametes
C) zygotes
D) phenotypes

Answer: B
Page Ref: 37
Skill Level: Remember

Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Easy

15. A gamete _____.
A) contains 46 chromosomes
B) is formed through mitosis
C) contains 23 chromosomes
D) is formed when the chromosomes copy themselves

Answer: C
Page Ref: 37
Skill Level: Understand
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Moderate

16. _____ halves the number of chromosomes normally present in body cells.
A) Mitosis
B) Genomic imprinting
C) Cytoplasm
D) Meiosis

Answer: D
Page Ref: 37
Skill Level: Understand
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Moderate

17. When sperm and ovum unite at conception, a(n) _____ results.
A) autosome
B) gamete
C) zygote
D) allele

Answer: C
Page Ref: 37
Skill Level: Remember
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Easy

18. The exchange of chromosome segments during meiosis results in _____.
A) severe mutations
B) an extremely low likelihood that nontwin siblings will be genetically identical

C) higher rates of fraternal twins
D) higher numbers of female zygotes than male zygotes

Answer: B
Page Ref: 37
Skill Level: Understand
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Moderate

19. A healthy man can father a child _____.
A) at any age after sexual maturity
B) until about age 30
C) until about age 50
D) until about age 70

Answer: A
Page Ref: 37
Skill Level: Understand
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Moderate

20. Autosomes are chromosomes that are _____.
A) sex cells
B) zygotes
C) not matching
D) not sex cells

Answer: D
Page Ref: 37
Skill Level: Understand
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Moderate

21. In females, the twenty-third pair of chromosomes is called _____.
A) an autosome
B) dizygotic
C) XX
D) XY

Answer: C
Page Ref: 37
Skill Level: Understand
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?

Topic: Genetic Foundations
Difficulty Level: Easy

22. Taylor's twenty-third pair of chromosomes is XY. Taylor is _____.
A) male
B) a fraternal twin
C) female
D) an identical twin

Answer: A
Page Ref: 37
Skill Level: Apply
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Moderate

23. Patsy and Terry are fraternal twins. This type of twinning results from _____.
A) a zygote that duplicates and separates into two clusters of cells
B) the fertilization of one ovum by two Y-bearing sperm
C) the release and fertilization of two ova
D) the fertilization of one ovum by two X-bearing sperm

Answer: C
Page Ref: 37
Skill Level: Apply
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Moderate

24. Fraternal twins are _____.
A) genetically identical
B) no more alike than ordinary siblings
C) less common than other types of multiple offspring
D) less likely with each additional birth

Answer: B
Page Ref: 37
Skill Level: Understand
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Moderate

25. In industrialized nations, fraternal twinning occurs _____.
A) less often among older women
B) more often among women with poor diets
C) more often among women of slight body build

D) more often among women taking fertility drugs

Answer: D
Page Ref: 37–38
Skill Level: Remember
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Moderate

26. A zygote that separates into two clusters of cells instead of just one produces _____.
A) identical twins
B) dizygotic twins
C) triplets
D) homozygous offspring

Answer: A
Page Ref: 38
Skill Level: Understand
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Moderate

27. Animal research shows that a variety of environmental influences prompt monozygotic twinning, including _____.
A) early fertilization of the ovum
B) young maternal age
C) variation in oxygen levels
D) poor diet

Answer: C
Page Ref: 38
Skill Level: Understand
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?
Topic: Genetic Foundations
Difficulty Level: Moderate

28. During their early years, children of single births _____ than twins.
A) develop more slowly
B) are healthier
C) have more shrill cries
D) are more sickly

Answer: B
Page Ref: 38
Skill Level: Understand
Objective: 2.1 What are genes, and how are they transmitted from one generation to the next?

Topic: Genetic Foundations
Difficulty Level: Moderate

29. In dominant–recessive inheritance, the one allele that affects the child's characteristics is called _____.
A) dominant–recessive
B) dominant
C) recessive
D) a carrier

Answer: B
Page Ref: 38
Skill Level: Remember
Objective: 2.2 Describe various patterns of gene–gene interaction.
Topic: Genetic Foundations
Difficulty Level: Easy

30. Phil has blond hair. This means that Phil inherited a _____ pair of _____ alleles for hair color.
A) homozygous; recessive
B) heterozygous; dominant
C) homozygous; dominant
D) heterozygous; recessive

Answer: A
Page Ref: 38
Skill Level: Apply
Objective: 2.2 Describe various patterns of gene–gene interaction.
Topic: Genetic Foundations
Difficulty Level: Difficult

31. Eric is more likely than his sister to be negatively affected by X-linked disorders because _____.
A) males are more likely than females to inherit harmful recessive alleles
B) the Y chromosome is much longer than the X chromosome
C) the Y chromosome lacks many corresponding genes to override those on the X chromosome
D) his sex chromosomes match

Answer: C
Page Ref: 39
Skill Level: Apply
Objective: 2.2 Describe various patterns of gene–gene interaction.
Topic: Genetic Foundations
Difficulty Level: Difficult

32. Which of the following is true about sex differences?
A) Rates of miscarriage and birth defects are higher for girls.

B) Rates of learning disabilities and behavior disorders are higher for girls.
C) Boys are less likely than girls are to inherit hemophilia.
D) Worldwide, a greater number of boys are conceived and born than girls.

Answer: D
Page Ref: 39
Skill Level: Understand
Objective: 2.2 Describe various patterns of gene–gene interaction.
Topic: Genetic Foundations
Difficulty Level: Moderate

33. In which disease or disorder does genomic imprinting operate on the sex chromosomes?
A) fragile X syndrome
B) hemophilia
C) sickle cell anemia
D) phenylketonuria (PKU)

Answer: A
Page Ref: 40
Skill Level: Understand
Objective: 2.2 Describe various patterns of gene–gene interaction.
Topic: Genetic Foundations
Difficulty Level: Moderate

34. Which of the following statements about mutation is true?
A) Some mutations occur spontaneously, simply by chance.
B) Mutations cannot be caused by environmental agents.
C) The process of mutation depends on the interaction of many genes.
D) Germline mutations show us that each of us has a single, permanent genotype.

Answer: A
Page Ref: 40
Skill Level: Understand
Objective: 2.2 Describe various patterns of gene–gene interaction.
Topic: Genetic Foundations
Difficulty Level: Moderate

35. In _____, normal body cells mutate, an event that can occur at any time of life.
A) somatic mutation
B) germline mutation
C) polygenic inheritance
D) genomic imprinting

Answer: A
Page Ref: 40
Skill Level: Remember

Objective: 2.2 Describe various patterns of gene–gene interaction.
Topic: Genetic Foundations
Difficulty Level: Easy

36. Terrace is 6′2″ and weighs 165 pounds, while his brother, Jayquan, is 5′9″ and weighs 210 pounds. These traits are due to _____.
A) dominant–recessive inheritance
B) polygenic inheritance
C) somatic mutation
D) germline mutation

Answer: B
Page Ref: 40
Skill Level: Apply
Objective: 2.2 Describe various patterns of gene–gene interaction.
Topic: Genetic Foundations
Difficulty Level: Moderate

37. Most chromosomal defects result from _____.
A) X-linked disorders
B) somatic mutation
C) mistakes occurring during meiosis
D) recessive disorders

Answer: C
Page Ref: 40
Skill Level: Understand
Objective: 2.3 Describe major chromosomal abnormalities, and explain how they occur.
Topic: Genetic Foundations
Difficulty Level: Moderate

38. As a result of a failure of the twenty-first pair of chromosomes to separate during meiosis, Aziz received three of these chromosomes rather than the normal two. Aziz has _____ syndrome.
A) XYY
B) Klinefelter
C) Turner
D) Down

Answer: D
Page Ref: 40–41
Skill Level: Apply
Objective: 2.3 Describe major chromosomal abnormalities, and explain how they occur.
Topic: Genetic Foundations
Difficulty Level: Difficult

39. About 70 percent of individuals with Down syndrome who live past age 40 show symptoms of _____ disease.
A) Tay-Sachs
B) Huntington's
C) Alzheimer's
D) kidney

Answer: C
Page Ref: 41
Skill Level: Remember
Objective: 2.3 Describe major chromosomal abnormalities, and explain how they occur.
Topic: Genetic Foundations
Difficulty Level: Easy

40. Research on sex chromosome disorders shows that _____.
A) males with XYY syndrome are more aggressive and antisocial than XY males
B) verbal difficulties are common among females who are missing an X chromosome
C) females who are missing an X chromosome often have trouble with spatial relationships
D) most children with these disorders suffer from intellectual disability

Answer: C
Page Ref: 41
Skill Level: Understand
Objective: 2.3 Describe major chromosomal abnormalities, and explain how they occur.
Topic: Genetic Foundations
Difficulty Level: Moderate

41. Manny inherited an extra X chromosome. If he is like many boys with Klinefelter syndrome, Manny will have difficulty _____.
A) reading
B) drawing pictures
C) following travel directions
D) managing aggression

Answer: A
Page Ref: 41
Skill Level: Apply
Objective: 2.3 Describe major chromosomal abnormalities, and explain how they occur.
Topic: Genetic Foundations
Difficulty Level: Difficult

42. Which of the following is true about genetic counseling?
A) It involves medical procedures that permit detection of developmental problems before birth.
B) It helps couples assess their chances of giving birth to a baby with a hereditary disorder.
C) It is not useful for individuals who know that genetic problems exist in their families.
D) Genetic markers for autism are found in a majority of affected people.

Answer: B
Page Ref: 41
Skill Level: Understand
Objective: 2.4 What procedures can assist prospective parents in having healthy children?
Topic: Reproductive Choices
Difficulty Level: Moderate

43. If a family history of intellectual disabilities, psychological disorders, physical defects, or inherited diseases exists, a genetic counselor prepares a _____, which identifies affected relatives in a couple's family tree.
A) pedigree
B) genetic marker
C) maternal blood analysis
D) preimplantation genetic diagnosis

Answer: A
Page Ref: 42
Skill Level: Remember
Objective: 2.4 What procedures can assist prospective parents in having healthy children?
Topic: Reproductive Choices
Difficulty Level: Easy

44. Which statement about donor insemination is true?
A) It is commonly used to overcome female reproductive difficulties.
B) It involves giving a woman hormones that stimulate the ripening of several ova.
C) It permits women without a male partner to become pregnant.
D) It is used to treat women whose fallopian tubes are permanently damaged.

Answer: C
Page Ref: 42 Box: SOCIAL ISSUES: HEALTH: The Pros and Cons of Reproductive Technologies
Skill Level: Understand
Objective: 2.4 What procedures can assist prospective parents in having healthy children?
Topic: Reproductive Choices
Difficulty Level: Moderate

45. Usually, in vitro fertilization _____.
A) is increasingly successful with age.
B) poses less risk to infant survival than natural conception
C) is used to treat women whose fallopian tubes are permanently damaged
D) involves the wealthy as contractors for infants

Answer: C
Page Ref: 42 Box: SOCIAL ISSUES: HEALTH: The Pros and Cons of Reproductive Technologies
Skill Level: Understand
Objective: 2.4 What procedures can assist prospective parents in having healthy children?

Topic: Reproductive Choices
Difficulty Level: Moderate

46. Which statement about children conceived through reproductive technologies is true?
A) The limited studies completed thus far have shown that children born through a surrogate arrangement are generally poorly adjusted.
B) Compared with their naturally conceived counterparts, caregiving is somewhat warmer for young children conceived through donor insemination or in vitro fertilization.
C) Most in vitro procedures result in the birth of twins.
D) Adolescents conceived through donor insemination tend to be less well-adjusted than naturally conceived children.

Answer: B
Page Ref: 42 Box: SOCIAL ISSUES: HEALTH: The Pros and Cons of Reproductive Technologies
Skill Level: Understand
Objective: 2.4 What procedures can assist prospective parents in having healthy children?
Topic: Reproductive Choices
Difficulty Level: Moderate

47. To detect developmental problems before birth, doctors use _____.
A) prenatal diagnostic methods
B) genomic imprinting
C) gene therapy
D) genomewide testing methods

Answer: A
Page Ref: 43
Skill Level: Remember
Objective: 2.4 What procedures can assist prospective parents in having healthy children?
Topic: Reproductive Choices
Difficulty Level: Easy

48. Except for _____, prenatal diagnosis should not be used routinely because of injury risk to the developing organism.
A) amniocentesis
B) fetoscopy
C) chorionic villus sampling
D) maternal blood analysis

Answer: D
Page Ref: 43–44
Skill Level: Understand
Objective: 2.4 What procedures can assist prospective parents in having healthy children?
Topic: Reproductive Choices
Difficulty Level: Moderate

49. _____ is the most widely used prenatal diagnostic method.
A) Amniocentesis
B) Chorionic villus sampling
C) Ultrafast magnetic resonance imaging
D) Fetoscopy

Answer: A
Page Ref: 44
Skill Level: Remember
Objective: 2.4 What procedures can assist prospective parents in having healthy children?
Topic: Reproductive Choices
Difficulty Level: Easy

50. Which prenatal diagnostic method is used after in vitro fertilization but before implantation?
A) chorionic villus sampling
B) ultrafast magnetic resonance imaging
C) fetal surgery
D) preimplantation genetic diagnosis

Answer: D
Page Ref: 44
Skill Level: Understand
Objective: 2.4 What procedures can assist prospective parents in having healthy children?
Topic: Reproductive Choices
Difficulty Level: Moderate

51. The modification of gene-specified proteins involved in biological aging and disease is known as _____.
A) fetoscopy
B) amniocentesis
C) proteomics
D) genetic counseling

Answer: C
Page Ref: 44
Skill Level: Understand
Objective: 2.4 What procedures can assist prospective parents in having healthy children?
Topic: Reproductive Choices
Difficulty Level: Moderate

52. Adopted children and adolescents tend to _____.
A) almost immediately develop feelings of trust and affection toward their adoptive parents
B) fare better if they are adopted in their birth country after infancy and toddlerhood
C) develop less favorably than institutionalized agemates who remain in their birth country
D) have more learning and emotional difficulties than other children

Answer: D
Page Ref: 44–45
Skill Level: Understand
Objective: 2.4 What procedures can assist prospective parents in having healthy children?
Topic: Reproductive Choices
Difficulty Level: Moderate

53. Most adopted children _____.
A) fare well, despite the risks
B) have persistent social problems
C) are less intelligent than their biological relatives
D) have persistent cognitive problems

Answer: A
Page Ref: 44–45
Skill Level: Understand
Objective: 2.4 What procedures can assist prospective parents in having healthy children?
Topic: Reproductive Choices
Difficulty Level: Moderate

54. When Erin and Brooke cooperate, their parents are likely to be warm and gentle in the future. This is an example of a(n) _____ influence between parents and their children.
A) direct
B) coparenting
C) maladaptive
D) indirect

Answer: A
Page Ref: 45–46
Skill Level: Apply
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Moderate

55. Amelia and Andrew praise and stimulate their children, and they mutually support each other's parenting behaviors. Amelia and Andrew engage in effective _____.
A) induction
B) permissive parenting
C) coparenting
D) niche-picking

Answer: C
Page Ref: 46
Skill Level: Apply

Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Moderate

56. Young people today are more likely to have _____ than at any time in history.
A) older relatives
B) married parents
C) living siblings
D) unemployed parents

Answer: A
Page Ref: 46
Skill Level: Understand
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Moderate

57. People who work in skilled and semiskilled manual occupations tend to _____ than people in professional and technical occupations.
A) marry later
B) have more children
C) talk to their children more
D) verbally praise their children more

Answer: B
Page Ref: 47
Skill Level: Understand
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Moderate

58. When asked about personal qualities they desire for their children, higher-SES parents are more likely to emphasize _____.
A) obedience
B) politeness
C) happiness
D) cleanliness

Answer: C
Page Ref: 47
Skill Level: Understand
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.

Topic: Environmental Contexts for Development
Difficulty Level: Moderate

59. Of all Western nations, _____ has the highest percentage of extremely poor children.
A) the United States
B) Canada
C) Germany
D) France

Answer: A
Page Ref: 48
Skill Level: Remember
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Easy

60. Nearly 10 percent of _____ children live in deep poverty.
A) Canadian
B) U.S.
C) Norwegian
D) Swedish

Answer: B
Page Ref: 48
Skill Level: Remember
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Easy

61. In several studies, affluent teenagers were _____ likely than youths in general to _____.
A) less; engage in alcohol and drug use
B) more; report high levels of anxiety and depression
C) less; commit delinquent acts
D) more; have physically and emotionally available parents

Answer: B
Page Ref: 48
Skill Level: Understand
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Moderate

62. An experimental study of neighborhood mobility found that compared with peers who remained in poverty-stricken areas, children and youths who moved into low-poverty neighborhoods and remained there for several years showed _____.
A) more mental health problems
B) better school achievement
C) more physical health problems
D) more social problems

Answer: B
Page Ref: 48–49
Skill Level: Remember
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Easy

63. Neighborhood resources _____.
A) play little or no role in children's development
B) have a greater impact on adults than on children and youths
C) are not important in late adulthood because most elders are homebound
D) have a greater impact on economically disadvantaged than on well-to-do young people

Answer: D
Page Ref: 49
Skill Level: Understand
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Moderate

64. Longitudinal follow-up research on the Better Beginnings, Better Futures Project of Ontario, Canada, revealed a(n) _____.
A) reduction in children's social adjustment
B) increase in adolescent delinquency
C) improved sense of community connection
D) reduction in children's academic achievement

Answer: C
Page Ref: 49
Skill Level: Remember
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Easy

65. Well-educated adults tend to have _____ than adults with less education.

A) smaller social networks
B) access to more social support
C) less life satisfaction
D) less school contact

Answer: B
Page Ref: 49
Skill Level: Understand
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Moderate

66. One reason that the American people have been reluctant to accept the idea of publicly supported child care is that _____.
A) few mothers of very young children work outside the home
B) it is widely believed that child care is harmful to young children
C) most grandparents provide regular child care
D) American values emphasize independence and self-reliance

Answer: D
Page Ref: 50
Skill Level: Understand
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Difficult

67. In _____, people hold different beliefs and customs from those held by the larger culture.
A) microsystems
B) subcultures
C) macrosystems
D) collectivist societies

Answer: B
Page Ref: 50
Skill Level: Remember
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Easy

68. Which of the following is true about extended-family households?
A) Active, involved extended families are not typical among Asian and Native-American subcultures.
B) In extended-family households, caregiving is diminished for children and older adults.
C) In Hispanic extended families, grandparents are unlikely to share in rearing young children.

D) Extended-family households are a vital feature of black family life that has promoted resilience in its members.

Answer: D
Page Ref: 50
Skill Level: Understand
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Moderate

69. In cultures that emphasize collectivism, people value _____ more.
A) independence
B) personal achievement
C) collaborative endeavors
D) choice in relationships

Answer: C
Page Ref: 50
Skill Level: Understand
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Moderate

70. The United States is more _____ than most Western European countries, which place greater weight on _____.
A) collectivistic; individualism
B) individualistic; independence
C) collectivistic; interdependence
D) individualistic; collectivism

Answer: D
Page Ref: 50
Skill Level: Remember
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Moderate

71. In the United States, public policies safeguarding _____ lag behind policies for _____.
A) older adults; children and youths
B) children and youths; older adults
C) older adults; extended families
D) school-age children; preschool children

Answer: B
Page Ref: 50
Skill Level: Remember
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Easy

72. _____ does not rank well on any key measure of children's health and well-being.
A) Sweden
B) Spain
C) Australia
D) The United States

Answer: D
Page Ref: 50–51
Skill Level: Remember
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Moderate

73. A comparison of the United States with other nations on indicators of children's health and well-being shows that the United States _____.
A) has a higher infant death rate than Canada
B) has a lower teenage birth rate than Poland
C) spends more public funds on education than Sweden
D) spends more public funds on early childhood education than Germany

Answer: A
Page Ref: 51
Skill Level: Remember
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Moderate

74. Which statement about affordable child care in the United States is true?
A) Much of it is mediocre to poor in quality.
B) It is guaranteed by law.
C) National standards ensure quality care.
D) Publicly funded child care is easily available.

Answer: A
Page Ref: 51
Skill Level: Understand

Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Moderate

75. One reason that public policies safeguarding children are slow to emerge in the United States is that _____.
A) such government policies have failed in other Western countries
B) cultural values in the U.S. emphasize interdependence
C) children cannot vote or speak out to protect their own interests
D) the United States already ranks at the top on key measures of children's health and well-being

Answer: C
Page Ref: 51
Skill Level: Understand
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Difficult

76. Which statement about Medicare is true?
A) Medicare extends government-supported health insurance to all children in low-income families.
B) About two-thirds of older adults' health expenditures are covered by Medicare.
C) Medicare covers the income needs of retired citizens who contributed to society through prior employment.
D) Along with Social Security, Medicare ensures that all older Americans live above the poverty line.

Answer: B
Page Ref: 51–52
Skill Level: Understand
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Moderate

77. Which of the following is true about the minimum income guaranteed to Americans age 65 and older from Social Security?
A) It was initiated earlier in the United States than in most other Western nations.
B) The guaranteed amount is usually adequate as a sole source of retirement income.
C) The guaranteed amount is below the poverty line.
D) The guaranteed amount is about 20 percent above the poverty line.

Answer: C
Page Ref: 51–52
Skill Level: Understand

Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Moderate

78. Senior citizens in the United States today are _____.
A) less likely than seniors in other Western nations to be poverty-stricken
B) more likely than other age groups to be among the "near poor"
C) less likely than children to attract the support of politicians
D) less likely to be healthy and independent than in the past

Answer: B
Page Ref: 52
Skill Level: Understand
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Moderate

79. The Children's Defense Fund is a nonprofit organization that _____.
A) provides free legal services to low-income families of children with disabilities
B) lobbies for increased government benefits of all kinds for older adults
C) is devoted to the well-being of children and older adults in poverty
D) engages in public education and partners with other organizations to improve policies for children

Answer: D
Page Ref: 52
Skill Level: Remember
Objective: 2.5 Describe family functioning from the perspective of ecological systems theory, along with aspects of the environment that support family well-being and development.
Topic: Environmental Contexts for Development
Difficulty Level: Easy

80. Behavioral genetics is a(n) _____.
A) medical procedure that permits detection of developmental problems before birth
B) ambitious international research program aimed at deciphering genomes
C) field devoted to uncovering the contributions of nature and nurture to human diversity
D) biochemical process triggered by certain experiences that alter gene expression

Answer: C
Page Ref: 53
Skill Level: Remember
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Easy

81. A growing number of researchers regard the question of how much heredity and environment each contribute to differences among people as _____.
A) unanswerable
B) answered mainly by DNA
C) unimportant
D) answered easily with kinship studies

Answer: A
Page Ref: 53
Skill Level: Remember
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Moderate

82. Dr. Rudy wants to compare the characteristics of family members. Which type of research would you recommend that Dr. Rudy use?
A) kinship study
B) case study
C) structured observation
D) experimental design

Answer: A
Page Ref: 53
Skill Level: Apply
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Moderate

83. Currently, most kinship findings support a _____ role for heredity in _____.
A) strong; intelligence
B) moderate; intelligence
C) strong; anxiety
D) weak; personality

Answer: B
Page Ref: 53
Skill Level: Understand
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Moderate

84. Heritability estimates are _____.

A) likely to exaggerate the role of the environment
B) difficult to misapply
C) not useful for studying complex traits, such as intelligence and personality
D) likely to exaggerate the role of heredity

Answer: D
Page Ref: 53–54
Skill Level: Understand
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Moderate

85. The concept of _____ means that because of their genetic makeup, individuals differ in their responsiveness to qualities of the environment.
A) gene–environment interaction
B) niche-picking
C) passive correlation
D) evocative correlation

Answer: A
Page Ref: 54–55
Skill Level: Remember
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Easy

86. According to the concept of gene–environment correlation, _____.
A) people respond similarly to the same qualities of the environment
B) heredity restricts the development of some characteristics to one outcome
C) our genes influence the environments to which we are exposed
D) the environment can alter gene expression without changing the DNA sequence

Answer: C
Page Ref: 55
Skill Level: Understand
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Moderate

87. The child has no control over _____ correlation.
A) passive
B) evocative
C) active

D) gene–environment

Answer: A
Page Ref: 55
Skill Level: Understand
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Moderate

88. Bart and Nadia are gymnasts. Their 4-year-old son, Dylan, participates in children's gymnastics. This is an example of _____.
A) methylation
B) evocative correlation
C) active correlation
D) passive correlation

Answer: D
Page Ref: 55
Skill Level: Apply
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Moderate

89. A gene–environment correlation is evocative when _____.
A) parents provide environments influenced by their own heredity
B) children extend their experiences beyond the immediate family
C) children actively seek environments that fit with their genetic tendencies
D) a child's heredity influences responses that strengthen the child's original style

Answer: D
Page Ref: 55
Skill Level: Understand
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Moderate

90. Angela, a cooperative and attentive child, receives more patient and sensitive interactions from her parents than Carlos, who is inattentive and hyperactive. This is an example of a(n) _____ gene–environment correlation.
A) active
B) evocative
C) dynamic
D) passive

Answer: B
Page Ref: 55
Skill Level: Apply
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Moderate

91. Identical twins evoke _____.
A) only moderately similar parental treatment in terms of negativity
B) only moderately similar parental treatment in terms of warmth
C) similar maternal treatment in warmth and negativity because of their identical heredity
D) varied maternal treatment because mothers in particular respond to each child's unique genetic makeup

Answer: C
Page Ref: 55
Skill Level: Understand
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Moderate

92. _____ gene–environment correlation becomes common at older ages.
A) Passive
B) Active
C) Evocative
D) Stagnant

Answer: B
Page Ref: 55
Skill Level: Understand
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Easy

93. Anthony, a well-coordinated and muscular boy, decides to play high school football. This is an example of _____ gene–environment correlation.
A) active
B) passive
C) dynamic
D) evocative

Answer: A
Page Ref: 55

Skill Level: Apply
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Moderate

94. Emma, an intellectually curious child, is a familiar patron at her local library. This is an example of _____.
A) passive correlation
B) niche-picking
C) evocative correlation
D) methylation

Answer: B
Page Ref: 55
Skill Level: Apply
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Moderate

95. Which age group is likely to do more niche-picking?
A) adolescents
B) preschoolers
C) infants
D) toddlers

Answer: A
Page Ref: 55
Skill Level: Understand
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Moderate

96. _____ explains why pairs of identical twins reared apart during childhood and later reunited may find that they have similar hobbies, food preferences, and vocations.
A) Passive correlation
B) Methylation
C) Evocative correlation
D) Niche-picking

Answer: D
Page Ref: 55
Skill Level: Understand

Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Moderate

97. Which statement is true of the influence of parents and other caring adults on gene expression?
A) Regardless of the experiences they provide, they cannot modify their children's expression of hereditary tendencies.
B) They can uncouple unfavorable gene–environment correlations by providing children with positive experiences.
C) They can do little to alter genetic tendencies, which cause children to receive, evoke, or seek certain experiences.
D) They cannot protect aggressive children from a spiraling, antisocial course of development.

Answer: B
Page Ref: 56
Skill Level: Understand
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Difficult

98. Which concept emphasizes development resulting from ongoing bidirectional exchanges between heredity and all levels of the environment?
A) gene–environment interaction
B) gene–environment correlation
C) epigenesis
D) niche-picking

Answer: C
Page Ref: 56
Skill Level: Remember
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Moderate

99. _____ help explain why identical twins, though precisely the same in DNA sequencing, sometimes display strikingly different phenotypes with age.
A) Heredity estimates
B) Passive correlations
C) Evocative correlations
D) Methylation levels

Answer: D
Page Ref: 56

Skill Level: Remember
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Moderate

100. Environmental modification of gene expression _____.
A) may be possible in the future
B) cannot occur until after puberty
C) can occur at any age, even prenatally
D) happens in other mammals, but not humans

Answer: C
Page Ref: 56
Skill Level: Understand
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Moderate

101. Parental post-traumatic stress disorder (PTSD) is _____.
A) a strong predictor of child PTSD
B) not correlated with child PTSD
C) unrelated to GR methylation
D) weakly associated with child PTSD

Answer: A
Page Ref: 57 Box: BIOLOGY AND ENVIRONMENT: The Tutsi Genocide and Epigenetic Transmission of Maternal Stress to Children
Skill Level: Remember
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Moderate

102. In a study of Tutsi women who were pregnant during the genocide of 1994, in comparison with non-exposed mothers, mothers who witnessed the genocidal carnage had _____.
A) higher PTSD and depression scores, but their children displayed weaker GR methylation
B) substantially higher PTSD and depression scores, and their children displayed stronger GR methylation
C) higher PTSD scores and lower depression scores, and their children did not show GR methylation
D) similar PTSD and depression scores, but their children displayed stronger GR methylation

Answer: B
Page Ref: 57 Box: BIOLOGY AND ENVIRONMENT: The Tutsi Genocide and Epigenetic Transmission of Maternal Stress to Children
Skill Level: Remember

Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Moderate

103. Development is best understood as _____.
A) genetically determined
B) environmentally influenced
C) a series of complex exchanges between nature and nurture
D) an unsolvable puzzle

Answer: C
Page Ref: 58
Skill Level: Understand
Objective: 2.6 Explain the various ways heredity and environment may combine to influence complex traits.
Topic: Understanding the Relationship Between Heredity and Environment
Difficulty Level: Moderate

ESSAY

104. Define dizygotic and monozygotic twins. Summarize the genetic and environmental factors that increase the chances of giving birth to both types.

Answer: Dizygotic, or fraternal, twins are the most common type of multiple offspring. They result from the release and fertilization of two ova. Genetically, they are no more alike than ordinary siblings. Older maternal age, fertility drugs, and in vitro fertilization are major causes of the dramatic rise in fraternal twinning and other multiple births in industrialized nations over the past several decades. Currently, fraternal twins account for 1 in about every 33 births in the United States. Monozygotic, or identical, twins are created when a zygote that has started to duplicated separates into two clusters of cells that develop into two individuals. The frequency of identical twins is the same around the world—about 1 in every 350 to 400 births. Environmental influences that prompt monozygotic twinning include temperature changes, variation in oxygen levels, and late fertilization of the ovum.
Page Ref: 37–38

105. Explain X-linked inheritance and how it affects both males and females.

Answer: When a harmful allele is carried on the X chromosome, X-linked inheritance applies. Males are more likely to be affected because their sex chromosomes do not match. In females, any recessive allele on one X chromosome has a good chance of being suppressed by a dominant allele on the other X. But the Y chromosome is only about one-third as long and therefore lacks many corresponding genes to override those on the X. A well-known example is hemophilia, a disorder in which the blood fails to clot normally. There is a greater likelihood of inheritance by male children whose mothers carry the abnormal allele.
Page Ref: 39

106. How do contemporary researchers view the family? Describe direct and indirect influences on the family, and provide examples of each.

Answer: Contemporary researchers view the family as a network of interdependent relationships. Bidirectional influences exist in which the behaviors of each family member affect those of others. These influences operate both directly and indirectly. Kind, patient communication evokes cooperative, harmonious responses, whereas harshness and impatience engender angry, resistive behavior. Each of these reactions, in turn, forges a new link in the interactive chain. In the first instance, a positive message tends to follow; in the second, a negative or avoidant one is likely. When parents are firm but warm, children tend to comply with their requests. And when children cooperate, their parents are likely to be warm and gentle in the future. Furthermore, third parties indirectly influence the family. Interaction between any two family members is affected by others present in the setting. Third parties can serve as supports for or barriers to development. For example, when a marital relationship is warm and considerate, mothers and fathers are more likely to engage in effective coparenting. Effective coparenting, in turn, fosters a positive marital relationship.
Page Ref: 45–46

107. Why are so many affluent youths troubled?

Answer: Despite their advanced education and great material wealth, affluent parents—those in prestigious and high-paying occupations—too often fail to engage in family interaction and parenting that promote favorable development. Compared with better-adjusted counterparts, poorly adjusted affluent young people report less emotional closeness, less supervision, and fewer serious consequences for misbehaviors from their parents, who lead professionally and socially demanding lives. As a group, wealthy parents are nearly as physically and emotionally unavailable to their youngsters as parents coping with serious financial strain. At the same time, these parents often make excessive demands for achievement. Adolescents whose parents value their accomplishments more than their character are more likely to have academic and emotional problems.
Page Ref: 48

108. Describe kinship studies, and explain how they are used in the field of developmental science.

Answer: Kinship studies compare the characteristics of family members. The most common type of kinship study compares identical twins, who share all their genes, with fraternal twins, who, on average, share only half. If people who are genetically more alike are also more similar in intelligence and personality, then the researcher assumes that heredity plays an important role. Kinship studies are used in the field of developmental science to help determine which traits and behaviors have a genetic link. For example, kinship studies of intelligence provide some of the most controversial findings in the field. Some experts claim a strong genetic influence, whereas others believe that heredity is barely involved. Currently, most kinship findings support a moderate role for heredity. Heritability research also reveals that genetic factors are important in personality. Unlike intelligence, however, heritability of personality does not increase over the lifespan.
Page Ref: 53

109. Describe the concept of gene–environment correlation, including passive, evocative, and active types. Define niche-picking.

Answer: A major problem in trying to separate heredity and environment is that they are often correlated. According to the concept of gene–environment correlation, our genes influence the environments to which we are exposed. At younger ages, two types of gene–environment correlation are common. In passive correlation, the child has no control over the connection. Parents provide environments influenced by their own heredity. For example, musically inclined parents enroll their children in music lessons. In evocative correlation, children evoke responses that are influenced by the child's heredity, and these responses strengthen the child's original style. For example, a cooperative, attentive child is likely to receive more patient and sensitive interactions from parents than an inattentive, distractible child. At older ages, active correlation becomes common. Children seek environments that fit with their genetic tendencies. For example, the musically talented child joins the school choir. Niche-picking is the tendency to actively choose environments that complement our heredity. Infants and young children cannot do much niche-picking because adults select environments for them. However, older children, adolescents, and adults are increasingly in charge of their environments.
Page Ref: 55

