

## Chapter 02 Biological Beginnings

### Multiple Choice Questions

1. The evolutionary process that favors individuals of a species that are best adapted to survive and reproduce is known as

- A. gene-gene interaction.
- B. gene mutation.
- C. natural selection.**
- D. genetic imprinting.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.1: Discuss the evolutionary perspective on life-span development.*

*Topic: Natural Selection*

2. Which of the following statements is TRUE of Darwin's views on evolution?

- A. Most organisms reproduce at rates that cause an insignificant increase in their population.
- B. The constant struggle for food, water, and resources among members of a species encourages supportive behaviors among them.
- C. Behavior that promotes an organism's survival in the natural habitat differentiates between survivors and nonsurvivors.**
- D. Adaptive behaviors are purely psychological.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.1: Discuss the evolutionary perspective on life-span development.*

*Topic: Adaptive Behavior*

3. The theory of evolution by natural selection was first introduced by

- A. Charles Darwin.
- B. Stephen Jay Gould.
- C. Albert Bandura.
- D. Sandra Scarr.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.1: Discuss the evolutionary perspective on life-span development.*

*Topic: Evolutionary Psychology*

Chapter 02 - Biological Beginnings

4. In the context of natural selection, “fit” refers to behaviors that increase

- A. genetic imprinting.
- B. psychological fitness.
- C. gene-environment interaction.
- D.** reproductive success.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.1: Discuss the evolutionary perspective on life-span development.*

*Topic: Evolutionary Psychology*

Chapter 02 - Biological Beginnings

5. Evolutionary psychology, a relatively new approach to psychology, has been especially influenced by

- A.** David Buss.
- B. Sigmund Freud.
- C. Albert Bandura.
- D. Martin Seligman.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.1: Discuss the evolutionary perspective on life-span development.*

*Topic: Evolutionary Psychology*

Chapter 02 - Biological Beginnings

6. Evolutionary psychology is a relatively new approach to psychology that emphasizes the

- A. biological changes that occur in an individual throughout the lifespan.
- B.** role of adaptation, reproduction, and survival of the fittest in shaping behavior.
- C. unilateral manner in which genes determine our behavior and abilities.
- D. geographical setting of the person in explaining his or her behavior and abilities.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.1: Discuss the evolutionary perspective on life-span development.*

*Topic: Evolutionary Psychology*

7. Which of the following is TRUE with regard to the views of David Buss on evolution?

- A. The influence of evolution is restricted to the development of our unique physical features.
- B. The influence of evolution is negligible as the environment in which one grows is the sole determinant of his or her personality.
- C. The influence of evolution on our reproductive success is not sufficient to explain survival.
- D.** The influence of evolution on our decision-making abilities, levels of aggression, fears, and our mating patterns are significant.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.1: Discuss the evolutionary perspective on life-span development.*

*Topic: Evolutionary Psychology*

8. Which of the following is an idea generated and supported by evolutionary psychology?

- A. Gender roles are socially constructed as opposed to being a function of evolution.
- B. The mind is like a general-purpose device that can be applied equally to a vast array of problems because evolved psychological mechanisms are not domain-specific.
- C. All evolved mechanisms are adaptive in contemporary society.
- D.** An extended childhood period evolved in humans because they require time to develop a large brain and learn the complexity of human societies.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.1: Discuss the evolutionary perspective on life-span development.*

*Topic: Evolutionary Developmental Psychology*



9. Which of the following is TRUE with regard to the evolutionary psychology perspective?

- A. The evolutionary psychology perspective is one of the oldest applied branches of psychology.
- B. The evolutionary psychology perspective represents a bidirectional view, in which environmental and biological conditions influence each other.
- C. The evolutionary psychology perspective has been proven through successful empirical study and research.
- D.** The evolutionary psychology perspective is best evaluated through the study of specific genes and their links to traits and behaviors.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.1: Discuss the evolutionary perspective on life-span development.*

*Topic: Evolutionary Developmental Psychology*

Chapter 02 - Biological Beginnings

10. Threadlike structures that contain DNA are defined as

- A. nerves.
- B. cells.
- C. dendrites.
- D.** chromosomes.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Genes*

11. Which of the following is TRUE with regard to the genes?

- A. Each gene contains multiple chromosomes that are located on it.
- B. Genes are located variably in humans; they cannot be found at a fixed place on a chromosome.
- C. Genes are contained in complex molecules with a double helix shape called DNA.**
- D. Genes work individually to assemble proteins.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Genes*

Chapter 02 - Biological Beginnings

12. \_\_\_\_\_ are defined as units of hereditary information.

- A. Nerves
- B. Cells
- C. Genes**
- D. Engrams

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Genes*

Chapter 02 - Biological Beginnings

13. Which of the following is the smallest entity?

- A. A cell
- B. A gene**
- C. A gamete
- D. A chromosome

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Genes*

14. The findings of the Human Genome Project revealed that

- A. genes possess no fixed locations in humans.
- B.** humans have far fewer genes than estimated earlier.
- C. each gene programmed just one protein.
- D. humans appear to have far more genes than they have proteins.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Genes*

15. Which of the following statements is TRUE with regard to genes and proteins?

- A. Genes act independently to translate the genetic code they carry into an individual's phenotype or physical features that are observable.
- B. Each gene is translated, in an automatic fashion, into one and only one protein.
- C.** The translation of genes into proteins represents a collaborative process between genes and other factors within and outside the body.
- D. The Human Genome Project established the fact that humans had as many as 100,000 or more genes.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Genes*

16. The genome-wide association method is used to

- A. identify genetic variations linked to a particular disease.
- B. collect data from multiple genetic studies and analyze it.
- C. identify the influence of environmental factors on emotional development.
- D. to rule out the influence of genetics as causes for diseases.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Genes*



Chapter 02 - Biological Beginnings

17. Upon completion of the Human Genome Project, childhood obesity and cardiovascular disease have been the focus of studies using

- A. the genome-wide association method.
- B. linkage analysis.
- C. next-generation sequencing.
- D. the visual-fixation method.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Genes*

Chapter 02 - Biological Beginnings

18. Discovering the location of a gene (or genes) in relation to a marker gene (whose position is already known) is the goal of

- A. genome-wide association method.
- B. linkage analysis.**
- C. next-generation sequencing.
- D. collective sampling.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Genes*

Chapter 02 - Biological Beginnings

19. Upon the completion of the Human Genome Project, attention deficit hyperactivity disorder and autism have been the focus of studies using

- A. genome-wide association method.
- B. linkage analysis.**
- C. next-generation sequencing.
- D. dichotic listening techniques.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Genes*

Chapter 02 - Biological Beginnings

20. The vast increase in genetic data generated at a much reduced cost and in a shorter period of time is referred to as

- A. the genome-wide association method.
- B. linkage analysis.
- C. next-generation sequencing.**
- D. rapid data collection.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Genes*

Chapter 02 - Biological Beginnings

21. Which of the following was NOT one of the factors identified by researchers as external influences on the excitation or inhibition of genetic expression?

- A. Stress
- B. Radiation
- C. Temperature
- D. Intelligence**

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Genes*

Chapter 02 - Biological Beginnings

22. \_\_\_\_\_ is defined as the process by which the cell's nucleus, including the chromosomes, duplicates itself and the cell divides.

A. Accommodation

**B. Mitosis**

C. Assimilation

D. Fertilization

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Mitosis*

Chapter 02 - Biological Beginnings

23. \_\_\_\_\_ is defined as a specialized form of cell division that occurs to form gametes.

- A. Fertilization
- B. Meiosis**
- C. Gene imprinting
- D. Mitosis

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Mitosis*

Chapter 02 - Biological Beginnings

24. A single cell, known as a(n) \_\_\_\_\_, is formed during the process of fertilization.

- A. ovum
- B. embryo
- C. gamete
- D.** zygote

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Fertilization*



25. The difference between mitosis and meiosis is that

- A. meiosis takes place within body cells, while mitosis takes place within gametes.
- B.** mitosis results in the formation of two cells, while meiosis produces four cells.
- C. in mitosis the cells divide twice, while in meiosis only one division occurs.
- D. mitosis results in 23 unpaired chromosomes, while meiosis results in 23 paired chromosomes.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Meiosis*

26. Which of the following is TRUE with regard to sources of variability?

- A.** The chromosomes in the zygote are not exact copies of those in the mother's ovaries and the father's testes.
- B. Fraternal twins develop from a single zygote that splits into two genetically identical replicas.
- C. For each genotype, only a corresponding phenotype can be expressed.
- D. Identical twins develop from separate eggs and separate sperm.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Sources of Variability*

Chapter 02 - Biological Beginnings

27. A \_\_\_\_\_ gene is a permanently altered segment of DNA that can give rise to genetic variability.

- A. recessive
- B. dependent
- C. mutated**
- D. dominant

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Sources of Variability*

28. Which of the following is TRUE with regard to one's genotype?

- A. It is apparent in one's physical make-up.
- B. It refers to one's actual genetic material.**
- C. It can be observed through one's intelligence and personality.
- D. Each genotype translates into only one phenotypic expression.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Sources of Variability*

Chapter 02 - Biological Beginnings

29. Which of the following can be deciphered by observing an individual?

- A. Genetic material
- B. Phenotype**
- C. Genetic code
- D. Genetic expression

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Sources of Variability*

Chapter 02 - Biological Beginnings

30. Caroline is a beautiful baby. She has lovely blond hair and soft blue eyes. Caroline's hair and eyes are examples of her \_\_\_\_\_.

- A. genetic coding
- B. genotype
- C. gene-environment interaction
- D.** phenotype

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Sources of Variability*

31. Which of the following is TRUE with regard to the dominant-recessive genes principle?

- A. A single recessive gene has the potential to silence the other gene of the pair.
- B. A recessive gene exerts its influence only if the two genes of a pair are both recessive.**
- C. Blond hair, nearsightedness, and freckles are dominant traits.
- D. Brown hair, farsightedness, and dimples are examples of recessive traits.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Dominant-Recessive Genes*

Chapter 02 - Biological Beginnings

32. Michael carries two genes for brown hair. Lisa carries two genes for blond hair. Given this, we know that their child will have a \_\_\_\_\_ percent chance of having brown hair.

- A. 25
- B. 50
- C. 75
- D.** 100

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Dominant-Recessive Genes*



Chapter 02 - Biological Beginnings

33. In order for your children to have freckles, both you and your partner must carry the gene for freckles, because having freckles is a \_\_\_\_\_ trait.

- A. polygenic
- B. phenotypic
- C. recessive**
- D. dominant

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Dominant-Recessive Genes*

Chapter 02 - Biological Beginnings

34. Both Peggy and Bob are farsighted. If their child is nearsighted, then it follows that

- A. both Peggy and Bob lack a gene for farsightedness.
- B. only Peggy has a gene for farsightedness.
- C. only Bob lacks a gene for nearsightedness.
- D.** both Peggy and Bob have a gene for nearsightedness.

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Dominant-Recessive Genes*

Chapter 02 - Biological Beginnings

35. According to your text, what are the essential ingredients required to translate one's genotype into one's phenotype?

- A. Proteins
- B. RNA
- C. Amino acids
- D.** All of these

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Sources of Variability*

36. According to your text, \_\_\_\_\_ are the building blocks of one's phenotype.

- A. proteins**
- B. vitamins
- C. bones
- D. calories

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Sources of Variability*

37. Studies that focus on the interdependence of two or more genes are studying gene-gene

- A. interaction.
- B. correlation.
- C. confusion.
- D. disruption.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Polygenic Inheritance*

38. Studies examining gene-gene interaction have documented gene-gene interaction in all of the following EXCEPT:

- A. Diabetes
- B. Asthma
- C. Immune system functioning
- D. Cancer

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Polygenic Inheritance*

39. Which of the following is caused by faulty genetic imprinting?

- A.** Beckwith-Wiedemann syndrome
- B. Klinefelter syndrome
- C. Turner syndrome
- D. Down syndrome

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Genetic Imprinting*

Chapter 02 - Biological Beginnings

40. Height is a simple characteristic that is determined by

- A. a single gene.
- B.** the interaction of many genes and environmental factors.
- C. the manifestation of an altered X-linked gene.
- D. the action of a specific pair of genes.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Polygenic Inheritance*



41. Which of the following genetic disorders is caused by the presence of an extra copy of chromosome 21?

- A.** Down syndrome
- B. Turner syndrome
- C. Sickle-cell anemia
- D. Phenylketonuria

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Down syndrome*

42. Jerry was born with a round face, flattened skull, short limbs, and retardation of motor and mental abilities. The doctors told Jerry's parents that this is because he has an extra copy of chromosome 21. Which of the following chromosomal abnormalities does Jerry have?

- A. Phenylketonuria
- B. Turner syndrome
- C. Sickle-cell anemia
- D.** Down syndrome

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Down syndrome*

43. Which of the following is TRUE with regard to Down syndrome?

- A. Down syndrome afflicts only males.
- B. No remedial measures can be used to improve the quality of life and adaptive capacity of children with Down syndrome.
- C.** The risk of having a child with Down syndrome is a function of too low or high a maternal age.
- D. Down syndrome is a sex-linked chromosomal abnormality.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Down syndrome*

Chapter 02 - Biological Beginnings

44. Which of the following is a characteristic feature of Klinefelter syndrome?

- A. a protruding tongue
- B. a webbed neck
- C. undeveloped testes**
- D. an extra fold of skin over the eyelids

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Sex-Linked Chromosomal Abnormalities*

Chapter 02 - Biological Beginnings

45. Which of the following genetic disorders affects only males?

- A. Phenylketonuria
- B. Sickle-cell anemia
- C. Klinefelter syndrome**
- D. Down syndrome

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Sex-Linked Chromosomal Abnormalities*

46. Which of the following genetic disorders can be classified as a sex-linked chromosomal abnormality?

- A. Phenylketonuria
- B. Sickle-cell anemia
- C. Klinefelter syndrome**
- D. Down syndrome

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Sex-Linked Chromosomal Abnormalities*

Chapter 02 - Biological Beginnings

47. Which of the following pairs of genetic disorders is caused by the presence of an extra chromosome?

- A. Down syndrome and Turner syndrome
- B. Turner syndrome and sickle-cell anemia
- C. Klinefelter syndrome and Down syndrome**
- D. Phenylketonuria and XYY syndrome

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Sex-Linked Chromosomal Abnormalities*

48. Which of the following is TRUE with regard to fragile X syndrome?

- A. The physical appearance of children with fragile X syndrome is markedly altered.
- B. Mental abilities are relatively normal in individuals with fragile X syndrome.
- C. This disorder occurs more frequently in males than in females.**
- D. This disorder is caused by the missing X chromosome in humans.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Sex-Linked Chromosomal Abnormalities*



49. Which of the following genetic disorders affects only females?

- A.** Turner syndrome
- B. Sickle-cell anemia
- C. Klinefelter syndrome
- D. Down syndrome

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Sex-Linked Chromosomal Abnormalities*

Chapter 02 - Biological Beginnings

50. Which of the following genetic disorders is characterized by the X chromosome being missing or incomplete in females?

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

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Sex-Linked Chromosomal Abnormalities*

51. Nancy has recently undergone a surgery to correct her webbed neck. This is one of the many difficulties she faces as a result of being born with a missing X chromosome. She is also very short and overweight. Doctors have informed her parents that hormone therapy is an option to treat her condition though reproductive sterility is a big possibility. Nancy's school performance is fairly average; she encounters problems with mathematics but has good verbal skills. Which of the following chromosomal disorders does Nancy have?

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

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Sex-Linked Chromosomal Abnormalities*

52. The XYY syndrome is characterized by the

- A.** male having an extra Y chromosome.
- B. female having an extra Y chromosome.
- C. males having an extra X chromosome.
- D. female having a missing X chromosome.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Sex-Linked Chromosomal Abnormalities*

53. Which of the following genetic disorders is characterized by the inability of individuals to properly metabolize a particular amino acid?

- A.** Phenylketonuria
- B. Sickle-cell anemia
- C. Turner syndrome
- D. Fragile X syndrome

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Gene-Linked Chromosomal Abnormalities*

54. When Wendy was a baby, she was diagnosed with a gene-linked abnormality that left her unable to metabolize an important amino acid. Because her condition was diagnosed early, the doctors recommended that her parents put her on a diet that prevents an excess accumulation of the concerned amino acid in her body. This diet has helped her deal with the disorder successfully without experiencing any of the major disturbances of development this disorder is associated with. Wendy is likely to be suffering from \_\_\_\_\_.

- A. phenylketonuria
- B. hemophilia
- C. Turner syndrome
- D. fragile X syndrome

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Gene-Linked Chromosomal Abnormalities*

Chapter 02 - Biological Beginnings

55. \_\_\_\_\_ occurs most commonly in African Americans.

- A. Down syndrome
- B. Turner syndrome
- C. Sickle-cell anemia**
- D. Phenylketonuria

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Gene-Linked Chromosomal Abnormalities*

56. Which of the following is a consequence of sickle-cell anemia?

- A. Inability to metabolize an amino acid called phenylalanine
- B. Limited oxygen supply to body's cells**
- C. Delayed blood clotting causes internal and external bleeding
- D. Limited production of insulin

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Gene-Linked Chromosomal Abnormalities*



57. At age six, Joe underwent a minor dental procedure that was followed by prolonged bleeding. When the bleeding could not be controlled by any common means, Joe was hospitalized, and later, diagnosed with a condition that can make simple injuries, bruises, or cuts extremely threatening because of prolonged bleeding. His parents were informed that in case the problem continued or worsened, Joe would require frequent blood transfusions and medical care. Joe is suffering from \_\_\_\_\_.

- A. phenylketonuria
- B. hemophilia**
- C. spina bifida
- D. diabetes

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Gene-Linked Chromosomal Abnormalities*

Chapter 02 - Biological Beginnings

58. \_\_\_\_\_ is a gene-linked abnormality that is caused by a glandular dysfunction that interferes with mucus production.

- A. Sickle-cell anemia
- B. Tay-Sachs disease
- C. Diabetes
- D.** Cystic fibrosis

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Gene-Linked Abnormalities*

Chapter 02 - Biological Beginnings

59. Which of the following is a neural tube disorder that can be treated with corrective surgery at birth?

- A. Huntington's disease
- B. Tay-Sachs disease
- C. Spina bifida**
- D. Diabetes

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Gene-Linked Abnormalities*

Chapter 02 - Biological Beginnings

60. Ultrasound sonography uses \_\_\_\_\_ to conduct prenatal diagnosis.

- A. a strong magnetic field
- B. strong ultraviolet waves
- C. high frequency infrared waves
- D.** high frequency sound waves

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Ultrasound Sonography*

61. The first fetal screening procedure that Holly Brook underwent revealed potential abnormalities in her baby. Subsequently, she underwent another procedure in which a powerful magnetic field and radio images were used to generate detailed images of the baby's organs and structure. This prenatal diagnostic test, which showed more clearly that her baby has certain abnormalities in the central nervous system, is called \_\_\_\_\_.

- A. amniocentesis
- B. fetal MRI**
- C. noninvasive prenatal diagnosis
- D. ultrasound sonography

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Fetal MRI*

62. Which of the following prenatal diagnostic tests uses a sample of the placenta to detect genetic and chromosomal abnormalities in the fetus?

- A. Amniocentesis
- B. Chorionic villus sampling**
- C. Noninvasive prenatal diagnosis
- D. Ultrasound sonography

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Chorionic Villus Sampling*

63. Which of the following prenatal diagnostic tests is used during amniocentesis to locate the precise point for drawing a sample?

- A. Maternal blood screening
- B. Noninvasive prenatal diagnosis
- C. Chorionic villus sampling
- D.** Ultrasound sonography

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Amniocentesis*

64. In the 17th week of her pregnancy, Penny Wills was asked to take the triple screen test as she had a family history of birth defects. Her doctor assured her that the test would take very little time and posed no risks to her baby. Which of the following prenatal diagnostic tests has the doctor asked her to undergo?

- A. Maternal blood screening
- B. Noninvasive prenatal diagnosis
- C. Chorionic villus sampling
- D. Ultrasound sonography

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Maternal Blood Screening*



65. Which of the following prenatal diagnostic tests is characterized by the isolation and examination of fetal cells circulating in the mother's blood?

- A. Fetal MRI
- B. Ultrasound sonography
- C. Noninvasive prenatal diagnosis**
- D. Amniocentesis

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Noninvasive Prenatal Diagnosis (NIPD)*

Chapter 02 - Biological Beginnings

66. In the United States, \_\_\_\_\_ is by far the most commonly used assisted reproduction technique.

- A. surrogate mothering
- B. gamete intrafallopian transfer
- C. artificial insemination
- D.** in vitro fertilization

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Infertility and Reproductive Technology*

67. Norah and Bob are elated as they have just brought their twins home. After trying to have a baby of their own for eight years, they opted for fertility treatment a year ago. Their gametes were harvested and fertilized artificially; the successfully fertilized eggs were placed back in Norah's uterus. The pregnancy was fairly uneventful after that though Norah had to go for frequent medical checks and take many precautionary measures. Norah and Bob used the \_\_\_\_\_ technique of assisted reproduction.

- A. artificial insemination
- B. in vivo fertilization
- C. in vitro fertilization**
- D. gamete intrafallopian transfer

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Infertility and Reproductive Technology*

Chapter 02 - Biological Beginnings

68. One of the consequences of fertility treatments is a(n)

- A. increase in birth weight of babies.
- B. decrease in genetic disorders.
- C. increase in postterm pregnancies.
- D.** increase in multiple births.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Infertility and Reproductive Technology*

Chapter 02 - Biological Beginnings

69. Research on adoption has identified an increased risk for adoptees in all of the following areas EXCEPT:

- A. Aggression
- B. Depression
- C. ADHD
- D. Asthma**

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Adoption*

70. Jennifer was adopted at an early age, while Jasmine grew up in the foster care program. Based on research presented in your text, what can we predict about their respective cognitive development?

- A. Jennifer's cognitive abilities will be below Jasmine's cognitive abilities.
- B. Jennifer's cognitive abilities will be above Jasmine's cognitive abilities.**
- C. There will be little noticeable differences between the girls' cognitive abilities.
- D. Research on adoption and foster care has not focused on cognitive development.

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Adoption*

Chapter 02 - Biological Beginnings

71. Conclusions from recent studies on adoption suggest that a(n) \_\_\_\_\_ adoption led to better adjustment for adolescents and emerging adults.

- A. closed
- B. open**
- C. classified
- D. secret

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Adoption*

Chapter 02 - Biological Beginnings

72. Jorge, an adoptee and an emerging adult, has never met his biological mother or father. Jorge's adoption would be considered a(n) \_\_\_\_\_ adoption.

- A.** closed
- B. open
- C. abnormal
- D. cultural

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Adoption*



Chapter 02 - Biological Beginnings

73. According to research, who seems to benefit from open adoptions?

- A. Child
- B. Biological parents
- C. Adoptive parents
- D.** All of these

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Adoption*

Chapter 02 - Biological Beginnings

74. Which of the following adoptees is least likely to have adjustment difficulties?

- A. A toddler adoptee
- B. An adolescent adoptee
- C. An infant adoptee**
- D. A preschooler adoptee

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Adoption*

Chapter 02 - Biological Beginnings

75. \_\_\_\_\_ is the field that seeks to discover the influence of heredity and environment on individual differences in human traits and development.

- A. Eugenics
- B. Behavior genetics**
- C. Genomics
- D. Genetic engineering

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Remember*

*Difficulty: Easy*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Behavior Genetics*

76. One of the issues that complicates the interpretation of twin studies is that

- A. fraternal twins are usually perceived as a “set” and play together more often than identical twins do.
- B. identical twins represent a more active type of genotype-environment correlation.
- C.** the environments of identical twins are more similar than those of fraternal twins.
- D. fraternal twins are rarely studied in comparison to identical twins.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Behavior Genetics*

77. Which of the following statements concerning adoption studies is correct?

- A. Adoption studies involve studying the behavioral similarity of identical twins raised together.
- B.** Adoption studies compare children's traits with their adoptive and biological parents' traits.
- C. Adoption studies cannot be conducted on single children or siblings who are neither identical nor fraternal twins.
- D. Adoption studies clearly show that environment is more important than heredity.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Behavior Genetics*

78. Passive genotype–environment correlations occur when

- A. children grow up in a rearing environment provided by the biological parents.
- B. children’s characteristics elicit certain types of physical and social environments.
- C. children seek out environments they find compatible and stimulating.
- D. children follow their own inherited predispositions despite being adopted by different families.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom’s Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Passive Genotype-Environment Correlations*

Chapter 02 - Biological Beginnings

79. According to Dr. Lynn Perlman, identity formation or developing a sense of uniqueness is especially difficult for

- A. males.
- B. females.
- C. twins.**
- D. only children.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Behavior Genetics*

Chapter 02 - Biological Beginnings

80. Joan and Jane are identical twins in their teenage years. It is likely that the two girls are

- A. very happy being perceived as “one” person.
- B.** are in the midst of trying to form unique personalities.
- C. still dressing in the same outfits.
- D. share the same exact pattern of beliefs and values that they have since childhood.

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Behavior Genetics*



Chapter 02 - Biological Beginnings

81. Evocative genotype–environment correlations occur when
- A. biological parents provide a rearing environment for the child.
  - B.** children’s characteristics elicit certain types of physical and social environments.
  - C. children find a setting that is suited to their abilities.
  - D. children make active selections of environment in relation to their particular genotype.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom’s Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Evocative Genotype-Environment Correlations*

82. Niche-picking genotype–environment correlations occur when

- A. biological parents provide a rearing environment for the child.
- B. children seek out environments that they find compatible and stimulating.**
- C. children behave in ways that elicit certain types of environment.
- D. children behave in ways that reflect the inherited disposition of their biological parents.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Active Genotype-Environment Correlations*

83. Because Juno's parents are athletic, they tend to take her to all types of athletic events and activities such as mountain biking, roller blading, and skiing. As a result, Juno has many opportunities to practice her athletic skills. This is an example of a(n) \_\_\_\_\_.

- A. suppressive genotype-environment correlation
- B. active genotype-environment correlation
- C. passive genotype-environment correlation**
- D. evocative genotype-environment correlation

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Passive Genotype-Environment Correlations*

84. Rick is a toddler with an easy temperament and active nature. People are often seen stopping to talk to him in supermarkets and parks where his mother takes him in the evenings because he smiles willingly at other children and adults. This aspect of Rick's behavior most likely reflects a(n) \_\_\_\_\_.

- A. active genotype–environment interaction
- B. suppressive genotype–environment interaction
- C. passive genotype–environment interaction
- D. evocative genotype–environment interaction**

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Evocative Genotype-Environment Correlations*

85. Robert's parents are fairly social and enjoy an evening out with their friends. His older sister, Martha, reflects their social interests; she is often seen conducting church events, planning parties with her friends, and stopping to speak to friends and acquaintances warmly. Unlike them, Robert spends all his free time reading books and surfing the Internet to learn about a host of things that interest him. His need for learning most likely reflects a(n)

- A. active genotype–environment interaction.
- B. suppressive genotype–environment interaction.
- C. passive genotype–environment interaction.
- D. evocative genotype–environment interaction.

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Active Genotype-Environment Correlations*

86. According to Sandra Scarr, which of the following plays a more important role during the periods of infancy and early childhood?

- A. Suppressive genotype–environment interaction
- B. Active genotype–environment interaction
- C. Passive genotype–environment interaction**
- D. Evocative genotype–environment interaction

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Passive Genotype-Environment Correlations*

87. Which of the following is an example of a shared environmental experience of siblings?

- A. Parents' personalities
- B. Peer groups
- C. Classroom experiences
- D. School teachers

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Shared Environmental Influences*

88. Parents' intellectual orientation is an example of siblings having \_\_\_\_\_.

- A. differential familial experiences
- B. a shared environmental experience**
- C. nonshared extrafamilial experiences
- D. nonshared environmental experiences

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Shared Environmental Influences*



89. Eric and Scott are identical twins, while Ann, their younger sister, is two years younger. When Eric and Scott were 12 years old, their father, who ran a restaurant, was shot dead by a drunk customer. This incident changed their family life completely. Which of the following is TRUE with regard to Eric, Scott, and Ann?

- A. Their father's death is a nonshared experience for Eric, Scott, and Ann.
- B. Their father's death was a shared experience only for Eric and Scott.
- C. Their father's death was a shared experience for all three of them.**
- D. Their father's death was a nonshared extrafamilial experience Eric, Scott, and Ann.

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Shared Environmental Influences*

90. Horace was an extremely authoritarian parent. He believed in raising his children with discipline, order, and respect for authority. His wife, on the other hand, felt that their children should be given the freedom to make their choices within the limits they imposed as parents. She encouraged their twins, Lauren and Ben, to do new things and seek novel experiences. Horace and his wife treated both their children equally without favoring Ben because he was a boy.

From the information provided, which of the following conclusions can be drawn?

- A. Birth order was a major contributing factor to the individual differences seen in Ben and Lauren.
- B. Differential parental treatment owing to their genders is a shared experience for Ben and Lauren.
- C. Horace's authoritarian parenting style is a nonshared experience for Ben and Lauren.
- D.** The two different parenting styles they both experienced represent a shared experience for Ben and Lauren.

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Shared Environmental Influences*

Chapter 02 - Biological Beginnings

91. Which of the following is an example of a nonshared environmental experience of siblings?

- A. Family composition
- B. Family's socioeconomic status
- C. Neighborhood
- D.** Peer influences

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Nonshared Environmental Influences*

92. Though Katie and Wendy were identical twins, Katie always felt that her sister was given the best opportunities when they were growing up. Katie went to a public school, while Wendy was allowed to attend a prestigious private school. Katie was not given the freedom that Wendy enjoyed and took for granted. Which of the following is a nonshared experience for Katie and Wendy?

- A. Birth order
- B. Gender
- C. Genetic material
- D.** Parental treatment

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Nonshared Environmental Influences*

93. Behavioral geneticist Robert Plomin has found that

- A. parents tend to treat all their children the same, thus minimizing the effect of nonshared environments on siblings.
- B. all factors operating within the family environment impact children equally.
- C. the effect of shared and the nonshared environmental influences can be discerned only in identical twins.
- D.** the existence of a shared environment accounts for little of the variation in children's personalities or interests.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Nonshared Environmental Influences*

94. Dora has recently started working on a research study that hypothesizes that people who have a defect in a specific gene may have a predisposition to depression. As a second hypothesis, the researcher is studying the impact of a significant lack of social support in triggering the onset of depression in such people. Dora's research is an example of \_\_\_\_\_ research.

- A. gene-gene interaction
- B. gene x environment**
- C. eugenics
- D. genetic engineering

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Gene X Environment Interaction*

95. Dora has recently started working on a research study that hypothesizes that people who have a defect in a specific gene may have a predisposition to depression. As a second hypothesis in the study, the researcher is studying the impact of a significant lack of social support in triggering the onset of depression in such people. If Dora's research successfully validates both hypotheses, which of the following conclusion may be drawn?

- A. A defect in the gene Dora is studying is directly linked to depression.
- B. A lack of social support always leads to clinically significant levels of depression.
- C.** The defective gene and lack of social support produce a heightened risk of depression.
- D. The defective is recessive and depression is a result of polygenic inheritance.

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Gene X Environment Interaction*

96. Studies involving gene x environment interactions have identified a short version of a gene labeled 5-HTTLPR (a gene involving the neurotransmitter serotonin) which when combined with a stressful environment can elevate the risks of developing

- A. depression.
- B. intelligence.
- C. cancer.
- D. Type-2 diabetes.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Gene X Environment Interaction*



Chapter 02 - Biological Beginnings

97. According to studies examining the gene x environment interaction, individuals who possess the longer version of the gene 5-HTTLPR (a gene involving the neurotransmitter serotonin)

- A. are more likely to develop depression.
- B. are more likely to have difficult temperaments.
- C.** seem to show more resilience in the face of stressful environments.
- D. are less likely to be evaluated positively by their peers.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Gene X Environment Interaction*

98. According to your text, conclusions from studies examining the gene x environment interaction

- A. have been replicated by many researchers, each verifying the conclusions.
- B. are nearly always correct with the exception of the studies that focused on dopamine.
- C. are now considered the most persuasive of all studies from the behavior genetics field.
- D.** have been difficult to replicate and verify.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Gene X Environment Interaction*

99. Critics of studies examining the gene x environment interaction have had difficulty

- A. finding subjects to participate in the research project.
- B. finding topics that adapt to the area of study.
- C.** replicating the results of previous studies.
- D. finding the money to pay subjects.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Gene X Environment Interaction*

100. Resilience, or the ability to overcome stressful environments, appears to be connected to the

- A. longer version of the gene 5-HTTLPR (a gene involving the neurotransmitter serotonin).
- B. shorter version of the gene 5-HTTLPR (a gene involving the neurotransmitter serotonin).
- C. longer version of the gene Ap04.
- D. shorter version of the gene Ap04.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Gene X Environment Interaction*

### **Short Answer Questions**

101. What kind of success does natural selection particularly emphasize? Give a few examples of adaptive behavior.

Students' answers may vary.

Natural selection emphasizes reproductive success. Natural selection is the evolutionary process by which those individuals of a species that are best adapted are the ones that survive and reproduce.

Examples of adaptive behavior include:

*APA LO: 1.3*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.1: Discuss the evolutionary perspective on life-span development.*

*Topic: Natural Selection*

102. Describe any three ways in which evolutionary developmental psychologists believe that human development may have been affected by evolution over time.

Students' answers may vary.

A few ways in which evolutionary developmental psychologists believe that human development may have been affected by evolution over time are given below.

*APA LO: 1.2*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.1: Discuss the evolutionary perspective on life-span development.*

*Topic: Evolutionary Developmental Psychology*

103. Mention a few salient features of the Human Genome Project.

Students' answers may vary.

The Human Genome Project has completed a preliminary map of the human genome—the complete set of developmental instructions for creating proteins that initiate the making of a human organism.

Scientists had thought that humans have 100,000 or more genes, but the Human Genome Project reported that humans have only about 30,000 genes.

Scientists also believed that each gene corresponded to only one protein but the Human Genome Project's estimate of genes shows that humans have a lot more proteins than they have genes. This implies that each gene is not translated to just one protein. Rather, genes collaborate with each other and with nongenetic factors inside and outside the body to manifest their effect.

*APA LO: 1.2*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Genes*

104. Describe any two sources of variability that the human genetic process creates.

Students' answers may vary.

*APA LO: 1.2*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Sources of Variability*

105. Describe the relationship between genotypes and phenotypes.

All of a person's genetic material makes up his or her genotype. However, not all of the genetic material is apparent in our observed and measurable characteristics. A phenotype consists of observable characteristics. Phenotypes include physical characteristics (such as height, weight, and hair color) and psychological characteristics (such as personality and intelligence). For each genotype, a range of phenotypes can be expressed, providing another source of variability. An individual can inherit the genetic potential to grow very large, for example, but good nutrition, among other things, will be essential to achieving that potential.

*APA LO: 1.2*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Sources of Variability*

106. Describe any two genetic principles.

Students' answers may vary.

Following are two genetic principles:

**Dominant-recessive genes principle:** There are certain gene pairs (dominant-recessive pairs) where the observable effects are always due to one gene of the pair (the dominant gene) when both genes are present in an individual. For the recessive gene's effects to be visible, both genes of the pair in a person should be of the recessive kind.

**Sex-linked genes:** Genes that are located on the X or Y chromosomes (sex chromosomes) are known as sex-linked genes and their inheritance is sex-linked (sex-linked inheritance). For instance, if a gene on the X chromosome gets mutated into a disease-causing form then a male carrying that chromosome will always have the X-linked disease because males carry only one copy of the X chromosome. A female might have the disease (if she has the altered gene on both X chromosomes) or she might be a carrier (if she has the altered gene on only one X chromosome). Similarly, a mutated, disease-causing gene on the Y chromosome will affect only males.

*APA LO: 1.2*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Genes*



107. What is genetic imprinting? How is it achieved? Discuss its implications for development.

Students' answers may vary.

Genetic imprinting occurs when genes have differing effects depending on whether they are inherited from the mother or the father. A chemical process “silences” one member of the gene pair. For example, as a result of imprinting, only the maternally derived copy of a gene might be active, while the paternally derived copy of the same gene is silenced—or vice versa. Genetic imprinting has important implications for development and faulty imprinting may lead to abnormal development and disorders such as the Beckwith-Wiedemann syndrome, a growth disorder, and Wilms tumor, a type of cancer.

*APA LO: 1.2*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Genetic Imprinting*

108. Choose any two chromosome or gene-linked abnormalities and discuss the ways in which they can be treated or managed.

Students' answers may vary.

*APA LO: 1.2*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Gene-Linked Chromosomal Abnormalities*

109. Describe two chromosomal abnormalities that affect only males.

Students' answers may vary.

*APA LO: 1.2*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Sex-Linked Chromosomal Abnormalities*

110. Describe any one chromosomal abnormality and gene-linked abnormality.

Students' answers may vary.

**Down syndrome:** An individual with Down syndrome has a round face, a flattened skull, an extra fold of skin over the eyelids, a protruding tongue, short limbs, and retardation of motor and mental abilities. The syndrome is caused by the presence of an extra copy of chromosome 21. African American children are rarely born with Down syndrome.

**Sickle-cell anemia:** It occurs most often in African Americans. It is a genetic disorder that impairs the body's red blood cells. In sickle-cell anemia, a recessive gene causes the red blood cells to become hook-shaped "sickles" that cannot carry oxygen properly and die quickly. As a result, the body's cells do not receive adequate oxygen, causing anemia and early death.

*APA LO: 1.2*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Gene-Linked Chromosomal Abnormalities*

111. Describe a chromosomal abnormality that affects only females.

Turner syndrome is a chromosomal disorder in females in which either an X chromosome is missing, making the person XO instead of XX, or part of one X chromosome is deleted. Females with Turner syndrome are short in stature and have a webbed neck. They might be infertile and have difficulty in mathematics, but their verbal ability often is quite good.

*APA LO: 1.2*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Sex-Linked Chromosomal Abnormalities*

112. Discuss some circumstances that might lead a couple wanting to become parents to seek genetic counseling.

Students' answers may vary.

Following are a few circumstances that might lead a couple wanting to become parents to seek genetic counseling:

*APA LO: 1.3*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.2: Describe the mechanisms of heredity in normal and abnormal development.*

*Topic: Gene-Linked Chromosomal Abnormalities*

113. Describe any two prenatal diagnostic procedures that can be used to diagnose structural abnormalities in the fetus.

Students' answers may vary.

Following are two of the less invasive types of prenatal tests:

*APA LO: 1.2*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Prenatal Diagnostic Tests*

114. Briefly describe any two prenatal diagnostic procedures that are “more invasive” than ultrasound sonography and fetal MRI.

Following are two of the more invasive types of prenatal tests:

*APA LO: 1.2*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Prenatal Diagnostic Tests*

115. What is NIPD? What are the advantages and concerns associated with it?

Noninvasive prenatal diagnosis (NIPD) mainly focuses on the isolation and examination of fetal cells circulating in the mother's blood and analysis of cell-free fetal DNA in maternal plasma.

Advantages of NIPD: Because it is noninvasive in nature, it is increasingly being explored as an alternative to invasive procedures such as chorionic villus sampling and amniocentesis to reduce the risk to the growing fetus. Another advantage of NIPD is the very early detection of disorders such as Down syndrome and a fetus's sex (as early as five weeks after conception).

Concerns about NIPD: One concern about NIPD is the technical challenge of efficiently separating out the fetal cells, which comprise only about one of every million cells in a mother's blood. Another concern about NIPD is associated with its ability to detect an offspring's sex and to identify various diseases and defects so early. This raises ethical concerns about the couples' motivation to terminate a pregnancy.

*APA LO: 1.2*

*Bloom's Taxonomy: Understand*

*Difficulty: Medium*

*Learning Objective: 2.3: Identify some important reproductive challenges and choices.*

*Topic: Noninvasive Prenatal Diagnosis (NIPD)*

116. Describe some factors in childhood that could influence identical twins separated at birth to become quite different from each other.

Students' answers may vary.

Following are some of the factors in childhood that could influence identical twins separated at birth to become quite different from each other:

*APA LO: 1.3*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Behavior Genetics*

117. Describe the three ways in which heredity and environment may be correlated.

Behavior geneticist Sandra Scarr described three ways in which heredity and environment are correlated.

*APA LO: 1.2*

*Bloom's Taxonomy: Remember*

*Difficulty: Medium*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Behavior Genetics*

118. Ramona, an eight-year-old with autistic characteristics, exhibits many difficulties in the area of social communication. She is high-functioning academically and enjoys activities involving repetitive movements and math calculations. Her teachers were concerned that Ramona would have difficulty participating and completing activities in a regular classroom. Ramona would sob, cover her ears, and rock in her chair when there was too much visual and auditory stimuli or when she did not know an answer to a question. When the teacher asked her to complete a math facts worksheet, the entire class was amazed to see that Ramona completed the math problems within a minute. From that point forward, Ramona became the “math” leader of the class, which not only increased her self-confidence but increased her social interaction with peers as well. What is Ramona’s niche in the following scenario?

Ramona’s high math ability was her niche. Ramona’s success demonstrates an active (niche-picking) genotype-environment correlation which occurs when children seek out environments that they find compatible and stimulating.

*APA LO: 1.3*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Heredity and Environment Interaction*

119. Give examples of nonshared environmental experiences that siblings can have even when they are raised within the same family.

Students' answers may vary.

Following are a few nonshared environmental experiences that siblings can have even when they are raised within the same family:

*APA LO: 1.3*

*Bloom's Taxonomy: Apply*

*Difficulty: Hard*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Nonshared Environmental Experiences*

*Topic: Shared Environmental Experiences*

120. Describe the epigenetic view of development.

The epigenetic view states that development is the result of an ongoing, bidirectional interchange between heredity and the environment. Heredity and environment operate together—or collaborate—to produce various observable traits of a person.

*APA LO: 1.2*

*Bloom's Taxonomy: Remember*

*Difficulty: Medium*

*Learning Objective: 2.4: Explain how heredity and environment interact in human development.*

*Topic: Epigenetic View*