# Test Bank for Life-Span Development 19th Edition by Santrock

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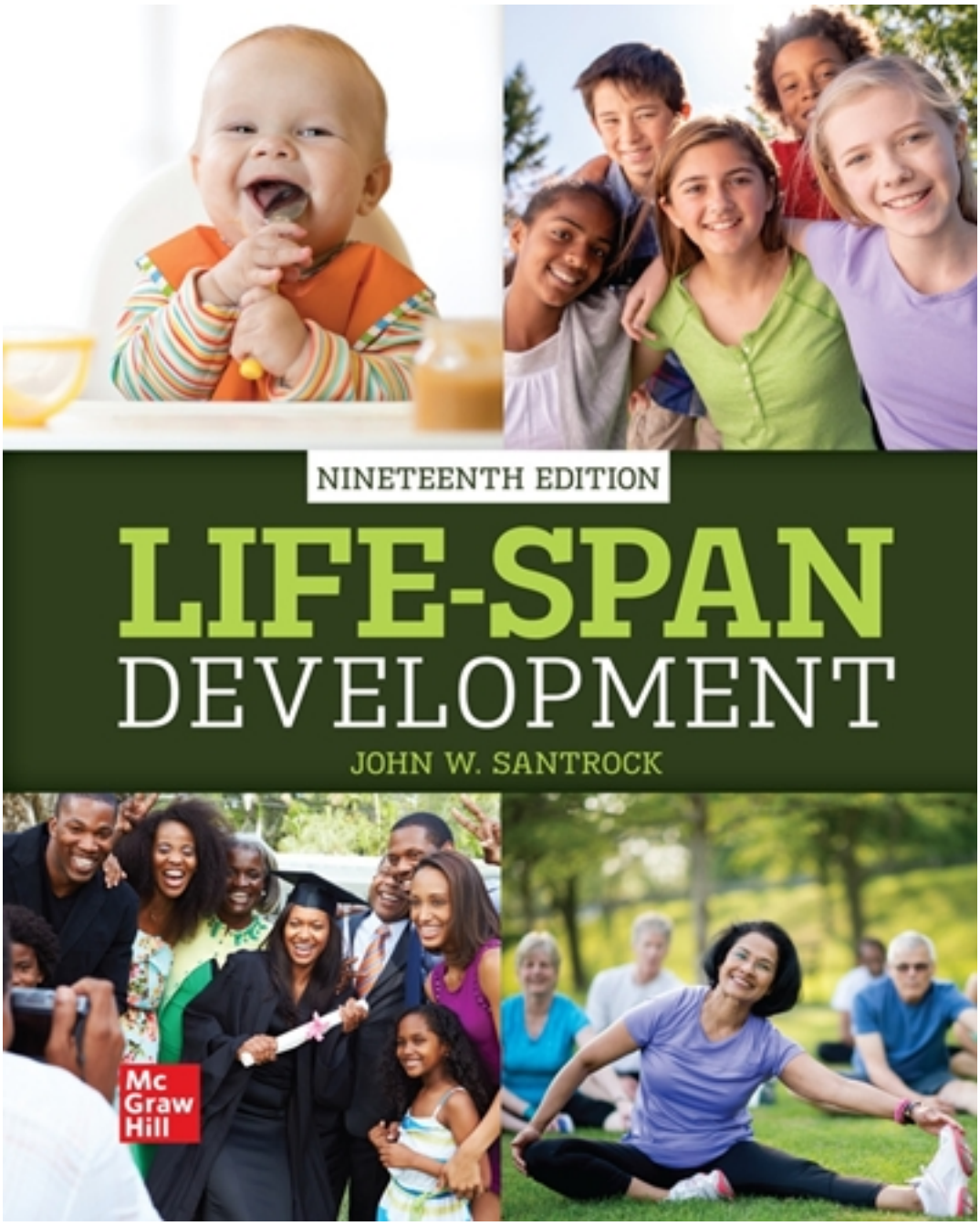


# Test Bank

# Life-Span Development Edition 19 by Santrock

CORRECT ANSWERS ARE LOCATED IN THE 2ND HALF OF THIS DOC.

**MULTIPLE CHOICE - Choose the one alternative that best completes the statement or answers the question.**

1) Red-feathered and blue-feathered birds occupy the same environment. The birds with the red feathers are better able to survive and avoid predators. This means that the population of red-feathered birds will increase in future generations. Which process is illustrated?
   A) genetic selection
   B) natural adaptation
   C) natural selection
   D) genetic survival

2) Who introduced the theory of evolution by natural selection in 1859?
   A) Sigmund Freud
   B) Charles Darwin
   C) Stephen Hawking
   D) Wilhelm Wundt

3) If a baboon learns to eat different kinds of fruit instead of relying on only one kind for its nutritive needs, we would argue that this behavior promotes its survival. Thus, the behavior is
   A) adaptive.
   B) aggressive.
   C) dominant.
   D) submissive.



4) Evolution takes place
   A) over the course of many generations.
   B) almost immediately.
   C) when a species is ready for it.
   D) because of active attempts at change on the part of a species.

5) Psychology's newest approach,_____, emphasizes the importance of adaptation, reproduction, and "survival of the fittest" in shaping behavior.
   A) behavioral psychology
   B) humanistic psychology
   C) cognitive psychology
   D) evolutionary psychology

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6) According to evolutionary developmental psychologists, many evolved psychological mechanisms apply only to a specific aspect of a person's psychological makeup. This is referred to as
   A) domain-specific.
   B) maladjusted.
   C) non-operational.
   D) unconditional.

7) Which of the following statements is true of evolutionary developmental psychology?
   A) Many evolved psychological mechanisms apply only to a specific aspect of a person's psychological makeup.
   B) The mind is a general-purpose device that can be applied equally to a vast array of problems.
   C) All the behaviors that were adaptive for our prehistoric ancestors continue to serve us well today.
   D) Evolution has not impacted human development.

8) The food-scarce environment of our ancestors likely led to humans' propensity to gorge when food is available and to crave high-caloric foods, a trait that might lead to an epidemic of obesity when food is plentiful. This illustrates how
   A) socialization influences the development of behavior and cognitive skills in human beings.
   B) evolved mechanisms are not always adaptive in contemporary society.
   C) organisms pass on characteristics they acquire during their lifetime to their offspring.
   D) the benefits of evolutionary selection decrease with age.

9) Which of the following refers to the modularity of the mind view?
   A) Swiss army knife theory
   B) Darwinian theory
   C) pick-and-choose theory
   D) epigenetic theory

10) Which of the following best characterizes the modularity of the mind view?
   A) The human mind encompasses a number of independent domains or tools.
   B) Although the mind can be versatile, its different tools are difficult to employ.
   C) The mind appears far more useful than it really is in practical use.
   D) The mind has many broad domains, but few that are capable of precision.

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11) According to life-span developmentalist Paul Baltes (2003), the benefits conferred by evolutionary selection_____ with age.
A) increase
B) remain stable
C) decrease
D) fluctuate

12) In the context of evolution and life-span development, which of the following statements is true of Paul Baltes (2003)?
A) He believed natural selection weeded out all nonadaptive characteristics appearing among older adults.
B) He held that the benefits conferred by evolutionary selection increased with age.
C) He believed natural selection occurred primarily during the first half of life.
D) He held that natural selection operated on characteristics tied to mental fitness.

13) According to life-span developmentalist Paul Baltes (2003), natural selection has not weeded out many harmful conditions and nonadaptive characteristics that appear among older adults. Why?
A) Degeneration aids in the transmission of desirable traits to future generations.
B) Natural selection operates primarily on characteristics that are tied to reproductive fitness.

C) Human evolution has no effect on previous generations.
D) Evolved mechanisms are always adaptive in contemporary society.

14) According to Paul Baltes, natural selection among humans operates mainly during the_____ of life.
A) second half
B) last years
C) first half
D) first year

15) In the context of evolutionary psychology, Albert Bandura (1998) acknowledged that
A) "one-sided evolutionism" is primarily used to explain social behavior.
B) evolutionary pressures created changes in biological structures.
C) evolution dictated behavior.
D) social behavior is strictly a product of evolved biology.

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16) According to Paul Baltes, as the benefits of evolutionary selection decrease with age, the need for_____ increases.
A) environmental pressure
B) reproduction
C) job training
D) culture

17) As an alternative to the "_____ evolutionism" presented in evolutionary psychology, Albert Bandura proposed a_____ view.
A) bidirectional; unidirectional
B) one-sided; bidirectional
C) dynamic; linear
D) balanced; biased

18) A fertilized human egg cannot grow into a crocodile, duck, or fish, specifically because of
A) the social influences on human reproduction.
B) environmental influences.
C) adaptive behavior within the womb.
D) the genetic code it carries.



19) A complex molecule with a double helix shape, like a spiral staircase, and contains genetic information is called
A) RNA.
B) a chromosome.
C) DNA.
D) a ribosome.

20) _____, the units of hereditary information, are short segments of deoxyribonucleic acid (DNA). They help cells to reproduce themselves and to assemble proteins.
A) Genes
B) Chromosomes
C) RNA
D) Ribosomes

21) The nucleus of each human cell contains_____, which are threadlike structures made up of deoxyribonucleic acid (DNA).
A) mitochondria
B) ribosomes
C) chromosomes
D) mesosomes

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22) The building blocks of cells as well as the regulators that direct the body's processes are
A) genes.
B) proteins.
C) ribosomes.
D) DNA.

23) Adam, who has a cardiovascular disease, participated in a research study to identify genetic variations linked to cardiovascular disease. His DNA was obtained, along with DNA from other patients suffering from the same cardiovascular disease. For the purpose of comparison, the researchers also took DNA samples from participants who did not have the disease. Each participant's DNA was assessed to determine markers of genetic variation. The researchers found that genetic variations occurred more frequently in people who had the cardiovascular disease. This led them to pinpoint the region in the human genome linked to the disease. Which of the following approaches to gene identification and discovery did the researchers use in this study?
A) next-generation sequencing
B) linkage analysis
C) the Thousand Genomes Project
D) the genome-wide association method



24) In the context of approaches to gene identification and discovery,_____, in which the goal is to discover the location of a gene (or genes) in relation to a marker gene (whose position is already known), is often used to search for disease-related genes.
A) the Thousand Genomes Project
B) genome-wide association
C) linkage analysis
D) next-generation sequencing

25) In the context of approaches to gene identification and discovery,_____ refers to the vast increase in genetic data generated at a much reduced cost and in a much shorter period than in the past.
A) next-generation sequencing
B) linkage analysis
C) the Thousand Genomes Project
D) the genome-wide association method

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26) Which of the following statements is true regarding the activity of genes?
A) Genes are not collaborative.
B) A single gene codes for a single, specific protein.
C) Genetic expression is unaffected by environmental factors.
D) Events that occur inside of the cell can excite or inhibit genetic expression.

27) Scientists have found that certain genes are turned on or off as a result of exercise, mainly through a process called_____, in which tiny molecules attached themselves to the outside of a gene.
A) genotyping
B) methylation
C) glycolysis
D) hydroxylation

28) Recent research indicates that the process of methylation may be involved in which of the following?
A) Parkinson disease
B) baldness
C) colorectal cancer
D) bulimia



29) Meiosis is a specialized form of cell division that occurs to form
A) split zygotes.
B) extra chromosomes.
C) somatic cells.
D) eggs and sperm.

30) A stage in reproduction whereby an egg and a sperm fuse to create a single cell is called
A) fertilization.
B) osmosis.
C) meiosis.
D) mitosis.

31) During the process of_____, a cell's nucleus—including the chromosomes—duplicates itself and the cell divides, resulting in the formation of two cells.
A) meiosis
B) osmosis
C) fertilization
D) mitosis

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32) A cell that contains 46 chromosomes arranged in 23 pairs undergoes the process of_____ to produce two new cells, each containing the same DNA as the original cell, arranged in the same 23 pairs of chromosomes.
A) mitosis
B) osmosis
C) meiosis
D) fertilization

33) Which of the following is true of mitosis?
A) Mitosis is the cellular reproduction that occurs to form the sperm and the egg cells.
B) Mitosis results in the formation of four new cells.
C) Mitosis results in the formation of two new cells with 23 pairs of chromosomes.
D) Mitosis results in the formation of three new cells.

34) A cell that contains 23 pairs of chromosomes divides by mitosis to form two new cells. How many pairs of chromosomes does each new cell contain?
A) 6
B) 12
C) 23
D) 48



35) Except for the sperm and the egg, all cells in the human body have how many chromosomes?
A) 10
B) 23
C) 32
D) 46

36) During this process, a cell of the testes in men or ovaries in women duplicates its chromosomes and then divides twice, thus forming four cells, each of which has only half the genetic material of the parent cell.
A) meiosis
B) mitosis
C) osmosis
D) fertilization

37) In human beings, by the end of meiosis, each egg or sperm has how many chromosomes?
A) 23 unpaired
B) 46 paired
C) 23 paired
D) 46 unpaired

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38) During fertilization, an egg and a sperm fuse to create a single cell called a
A) blastocyst.
B) fetus.
C) gamete.
D) zygote.

39) Sasha's 23rd chromosome pair contains two X chromosomes. This indicates that Sasha
A) has Down syndrome.
B) has fragile X syndrome.
C) is female.
D) is male.

40) Jules's 23rd chromosome pair consists of an X chromosome and a Y chromosome. This indicates that Jules
A) has Down syndrome.
B) has XYY syndrome.
C) is female.
D) is male.

41) Combining the genes of two parents in offspring increases_____ in the population, which is valuable for a species because it provides more characteristics for natural selection to operate on.
A) the number of males
B) the number of females
C) genetic variability
D) genetic uniformity

42) These develop from a single zygote that splits into two genetically matching replicas, each of which becomes a person.
A) triplets
B) identical twins
C) fraternal twins
D) quadruplets

43) Melody and Harmony are identical twins. This means that they developed from
A) a single egg that was fertilized by a single sperm.
B) a single egg that was fertilized by two different sperms.
C) two eggs that were fertilized by a single sperm.
D) two eggs that were fertilized by two different sperms.

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44) Jerome and Tyrone are fraternal twins. This means that they developed from
A) a single egg that was fertilized by a single sperm.
B) a single egg that was fertilized by two different sperms.
C) two eggs that were fertilized by a single sperm.
D) two eggs that were fertilized by two different sperms.

45) A mistake by the cellular machinery, or damage from an environmental agent such as radiation, may produce a_____, which is a permanently altered segment of DNA.
A) susceptibility gene
B) vulnerability gene
C) longevity gene
D) mutated gene

46) Which genes are those that make an individual more vulnerable to specific diseases or accelerated aging?
A) susceptibility
B) longevity
C) vulnerability
D) mutated



47) Ethel is 50 years old but appears much more aged. Most of Ethel's relatives have not lived past the age of 60. Which of the following genes are responsible for the accelerated aging observed in Ethel and Ethel's family members?
A) susceptibility genes
B) longevity genes
C) vulnerability genes
D) mutated genes

48) Which genes are those that make an individual less vulnerable to certain diseases and more likely to live to an older age?
A) susceptibility
B) longevity
C) vulnerability
D) mutated

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49) Erin, a 90-year-old, is healthy and leads an active lifestyle. Most of Erin's relatives have lived to an old age. Researchers have found that Erin's family carries genes related to stress resistance, immunity, and metabolism that help extend life by repairing and protecting body tissues. In this scenario, which of the following genes is most likely responsible for Erin living to an old age?
A) susceptibility genes
B) longevity genes
C) complimentary genes
D) mutated genes

50) Carla is diagnosed with breast cancer and informs the doctor that her mother and her grandmother have also had breast cancer. The doctor explains to Carla that she has specific genes that make her more vulnerable to breast cancer and that she is genetically predisposed to develop the disease. In this scenario, these genes are known as
A) susceptibility genes.
B) conditional lethal genes.
C) complementary genes.
D) duplicate genes.

51) While studying a sample for height differences, researchers observed that the height of the participants varied significantly regardless of whether the participants' parents were short or tall. This suggests that the physical characteristic of height is most likely an example of
A) niche-picking.
B) X-linked inheritance.
C) genetic imprinting.
D) polygenic inheritance.

52) Sandra and Abba are identical twins who were adopted by different families a few weeks after their birth. Although genetically identical, they grew up with different physical and psychological characteristics. For example, though both inherited a tendency to grow large, Abba was slim and athletic because of the active lifestyle practiced in her adoptive family. This variability can be explained by how
A) each zygote is unique.
B) longevity genes can make an individual less vulnerable to certain diseases.
C) for each genotype, a range of phenotypes can be expressed.
D) mutated genes can be a source of genetic variability.

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53) A person's genetic heritage comprising the person's actual genetic material makes up the
A) phenotype.
B) metabolome.
C) genotype.
D) proteome.

54) What is the way an individual's genotype is expressed in observed and measurable characteristics?
A) RNA
B) DNA
C) a phenotype
D) a stereotype

55) Marly describes a friend Gina as having blond hair, green eyes, and fair skin with freckles. Marly has described Gina's
A) genotype.
B) genetic imprint.
C) phenotype.
D) X-linked inheritance.



56) Phenotypes include which characteristics?
A) physical; environmental
B) conscious; subconscious
C) biological; ecological
D) physical; psychological

57) For each genotype, a range of_____ can be expressed, thus providing a source of variability.
A) genetic imprints
B) phenotypes
C) karyotypes
D) monotypes

58) In some cases of genotypic expression, one gene of a pair always exerts its effects, overriding the potential influence of the other gene. This is the_____ principle.
A) sex-linked genes
B) dominant-recessive genes
C) genetic imprinting
D) polygenic inheritance

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59) Clark's eyes are brown in color. However, both Clark's parents have eyes that are blue in color. According to the dominant-recessive genes principle, the most likely reason for Clark's eyes being brown in color is that
A) Clark's grandparents had brown-colored eyes.
B) Clark has a mutation in his genotype, resulting in a change in eye color.
C) Clark's family, as would be seen in a family history, has a dominant gene for brown-colored eyes.
D) Clark's parents are carriers of genes contributing to brown eyes.

60) Carla has brown hair, and her husband also has brown hair. However, Carla's son is born with blond hair. This most likely indicates that Carla's son
A) inherited the dominant genes for blond hair.
B) inherited the recessive genes for blond hair.
C) has a susceptibility gene.
D) has a longevity gene.

61) Carrie's parents have brown hair. However, Carrie gets genes for blond hair from both parents, and as a result has blond hair. This indicates that the gene for blond hair is a
A) recessive gene.
B) dominant gene.
C) susceptibility gene.
D) longevity gene.



62) A(n)_____ gene overrides the potential influence of a recessive gene.
A) longevity
B) dominant
C) susceptible
D) aggressive

63) A recessive gene exerts its influence only if both genes of a pair are
A) recessive.
B) complementary.
C) conditional lethals.
D) dominant.

64) Females who have one abnormal copy of a mutated gene on the X chromosome are known as
A) inhibitors.
B) patients.
C) carriers.
D) promoters.

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65) Most individuals who have X-linked diseases are males, because
- A) males have only one copy of the X chromosome.
- B) the diseases are triggered by the male sex hormone, testosterone.
- C) males have an extra Y chromosome.
- D) males have an extra X chromosome, making them XXY.

66) Which of the following conditions is due to an X-linked inheritance?
- A) Beckwith-Wiedemann syndrome
- B) hemophilia
- C) Wilms tumor
- D) diabetes

67) What occurs when the expression of a gene has different effects depending on whether the mother or the father passed on the gene?
- A) polygenic inheritance
- B) X-linked inheritance
- C) genetic imprinting
- D) Y-linked inheritance

68) Beckwith-Wiedemann syndrome is a growth disorder that is most likely a result of_____ gone awry.

- A) genetic imprinting
- B) polygenic inheritance
- C) sex-linked genes
- D) chromosomes

69) Genetic testing has found that Gary, Ben, Tara, and Matt all carry a copy of a gene for hemophilia. However, Tara, who is the only female of the four, does not show any signs of the disease, whereas Gary, Ben, and Matt have developed the disease. In this scenario, it can be inferred that hemophilia is most likely a(n)
- A) X-linked disease.
- B) sex-linked chromosomal abnormality.
- C) gene-linked abnormality.
- D) autosomal dominant disorder.

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70) Which of the following is an example of a chromosomal abnormality that occurs when whole chromosomes do not separate properly during meiosis?
A) Down syndrome
B) hemophilia
C) Huntington disease
D) sickle-cell anemia

71) Jason, a 4-year-old, has an intellectual disability and has shorter limbs than other children his age. His pediatrician observes that Jason has a protruding tongue and an extra fold of skin over his eyelids. Jason's mother informs the pediatrician that she was 30 at the time of Jason's birth and that he was born with a flat skull. From this information, the pediatrician will most likely diagnose Jason with
A) Turner syndrome.
B) Klinefelter syndrome.
C) Down syndrome.
D) XYY syndrome.

72) Which of the following is true of Down syndrome?
A) It primarily occurs in African American children.
B) It occurs when genetic imprinting goes awry.
C) Its symptoms include retardation of motor and mental abilities.
D) It is caused by the presence of an extra copy of the Y chromosome.

73) When imprinting goes awry, development is disturbed, as in the case of
A) cancer.
B) schizophrenia.
C) spina bifida.
D) Prader-Willi syndrome

74) Which of the following women has the highest probability of giving birth to a child with Down syndrome?
A) Sarah, a 21-year-old Asian woman
B) Jane, a 41-year-old Euro-American woman
C) Ella, a 27-year-old African American woman
D) Destiny, a 38-year-old African American woman

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75) Human embryos must possess_____ to be viable.
A) at least one X chromosome
B) two Y chromosomes
C) at least one Y chromosome
D) three Y chromosomes

76) Timothy's wife is having trouble conceiving a child, despite reports of her reproductive fitness being normal. However, on examining Timothy, the doctor determines that his testes are undeveloped, and that he has enlarged breasts. He also observes that Timothy is unusually tall, although his parents and grandparents are of short stature. The doctor informs Timothy that these symptoms are due to Timothy having an extra X chromosome, making him XXY instead of XY. Timothy most likely suffers from
A) Down syndrome.
B) fragile X syndrome.
C) Klinefelter syndrome.
D) Turner syndrome.

77) A child has a genetic disorder that results in having an intellectual disability. The child's mother informs the pediatrician that the child has an extremely short attention span for any task. Based on these symptoms, the pediatrician is most likely to diagnose the child with
A) fragile X syndrome.

B) XYY syndrome.
C) Turner syndrome.
D) Tay-Sachs disease.

78) Which of the following is true of fragile X syndrome?
A) It occurs more frequently in males than in females.
B) It occurs only in females.
C) It makes a female XO instead of XX.
D) It results in XXY males.

79) An autistic child has a short attention span for any task. The child's intellectual abilities are much lower than other children the same age. The child's paediatrician reveals that the child has a genetic disorder due to an abnormality in his X chromosome, which has become constricted. The child most likely suffers from
A) Turner syndrome.
B) fragile X syndrome.
C) XYY syndrome.
D) Klinefelter syndrome.

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80) A female has a short stature, although everyone else in the girls's family is tall. Unlike the family members and relatives, this girl has a webbed neck. The girl dislikes mathematics and has difficulty understanding the subject. However, the girl takes part in and enjoys activities that require verbal communication. The girl's doctor confirms that the girl is missing an X chromosome, making the girl XO instead of XX. The symptoms and the cause of the symptoms most likely indicate that this girl has
A) fragile X syndrome.
B) XYY syndrome.
C) Klinefelter syndrome.
D) Turner syndrome.

81) Sienna excels in reading and spelling but struggles with mathematics. She is shorter than her peers and has a webbed neck. The child's doctor has determined that she has one X chromosome missing. Sienna most likely has
A) XYY syndrome.
B) fragile X syndrome.
C) Turner syndrome.
D) XXO syndrome.

82) Which of the following statements about Turner syndrome is true?

A) Turner syndrome occurs exclusively in females.
B) People with Turner syndrome have extremely poor verbal ability.
C) Males with Turner syndrome are short in stature and have webbed necks.
D) Turner syndrome occurs in approximately 1 of every 25,000 live female births.

83) Which of the following is the most likely characteristic among persons with Klinefelter syndrome?
A) undeveloped testes
B) short stature
C) small breasts
D) an extra fold of skin over the eyelids

84) A person goes to a doctor who specializes in identifying genetic flaws to help prevent the risk of abnormalities. This doctor is called a
A) genealogist.
B) genetic counselor.
C) chromosomal advisor.
D) physiologist.

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85) Phenylketonuria (PKU) is a genetic disorder in which an individual cannot properly metabolize_____, an amino acid.
A) phenylamine
B) phenylalanine
C) phenylacetylene
D) phenylacetamide

86) Which of the following is true of phenylketonuria?
A) It results from a recessive gene.
B) It is a chromosomal disorder.
C) It typically results in death by the age of 5.
D) It is caused by an accumulation of lipids in the nervous system.

87) Mateo, an infant, is on a special diet, as his parents are aware that he has a genetic disorder in which he cannot metabolize phenylalanine, an amino acid. Mateo's parents are also aware of the importance of this diet and that excess phenylalanine buildup in the infant will produce intellectual disability and hyper-activity. This genetic disorder results from a
A) dominant gene.
B) recessive gene.
C) complementary gene.
D) longevity gene.



88) Which of the following is a gene-linked abnormality?
A) Down syndrome
B) phenylketonuria (PKU)
C) Turner syndrome
D) Klinefelter syndrome

89) Tamara, a Black American, is born with a genetic disorder that causes her body's red blood cells to become hook shaped instead of being disk shaped, impairing the normal oxygen-carrying capacity of the cells. The doctors explain to Tamara's parents that this condition, however, makes her resistant to malaria. Which of the following disorders is Tamara most likely suffering from?
A) Tay-Sachs disease
B) sickle-cell anemia
C) leukemia
D) Huntington disease

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90) What is a genetic abnormality in which delayed blood clotting causes internal and external bleeding?
A) hemophilia
B) phenylketonuria
C) sickle-cell anemia
D) Tay-Sachs disease

91) Paul has a gene-linked abnormality, and as a result he suffers from an X-linked inheritance disease. Because of this disease, Paul suffers from internal and external bleeding due to delayed blood clotting. Which of the following will effectively treat Paul's condition?
A) hydroxyurea
B) blood transfusions
C) anticoagulants
D) blood irradiation therapy

92) Samantha is diagnosed with a genetic disorder. She suffers from a glandular dysfunction that hinders mucus production. She has difficulty breathing, and her digestion is hampered. She also has frequent lung infections and suffers from shortness of breath. In this scenario, which of the following genetic disorders is Samantha most likely suffering from?
A) cystic fibrosis
B) Huntington disease
C) phenylketonuria
D) Tay-Sachs disease





93) What is a gene-linked abnormality in which the central nervous system deteriorates, producing problems in muscle coordination and mental deterioration?
A) cystic fibrosis
B) phenylketonuria
C) Huntington disease
D) Tay-Sachs disease

94) Which of the following would be an appropriate course of treatment for a person diagnosed with cystic fibrosis?
A) medication for pain, antibiotics, blood transfusions, and hydroxyurea
B) insulin treatment
C) blood transfusions/injection
D) physical and oxygen therapy, synthetic enzymes, and antibiotics

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95) Mary and Jim are expecting a child. During prenatal diagnostic testing, the doctor confirms that the fetus has a genetic abnormality that will lead to a neural tube disorder, causing brain and spine abnormalities. He also tells the parents that the baby will most likely have protruding tissue, especially from the lower back, and that the abnormality can be treated with corrective surgery at birth, orthopedic devices, and physical or medical therapy. Which of the following disorders is Mary and Jim's child suffering from?
A) spina bifida
B) Tay-Sachs disease
C) phenylketonuria
D) Huntington disease

96) A person's body does not produce enough insulin, causing abnormal metabolism of sugar. This person is receiving insulin treatments. This person has
A) spina bifida.
B) hemophilia.
C) phenylketonuria.
D) diabetes.

97) Joshua, a 2-year-old, has been diagnosed with_____, a blood disorder that limits the body's oxygen supply and can cause joint swelling and heart and kidney failure. This genetic disorder can be treated through penicillin, pain medication, antibiotics, blood transfusions, and hydroxyurea.
A) spina bifida
B) Tay-Sachs disease
C) sickle-cell anemia
D) Huntington disease

98) Benny has been diagnosed with a gene-linked abnormality characterized by deceleration of mental and physical development caused by an accumulation of lipids in the nervous system. He has been put on medication and a special diet, but his family has been told that he will probably not live beyond the age of 5. Benny is suffering from
A) spina bifida.
B) Tay-Sachs disease.
C) phenylketonuria.
D) Huntington disease.

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99) Gwendolyn is pregnant and is undergoing a prenatal medical procedure in which her doctor directs high-frequency sound waves into her abdomen to create a visual representation of the fetus's inner structures. The doctor informs her that the procedure will reveal the number of fetuses she is carrying, detect abnormalities in the fetus, and give clues as to the sex of the baby. In this scenario, which of the following prenatal medical procedures is Gwendolyn most likely undergoing?

A) chorionic villus sampling
B) triple screen
C) amniocentesis
D) ultrasound sonography

100) What refers to an abnormally small brain in a fetus, which can lead to intellectual disability?

A) spina bifida
B) Klinefelter syndrome
C) Hemophilia
D) microencephaly

101) What uses a powerful magnet and radio images to generate detailed images of the body's organs and structures?

A) triple screen
B) MRI
C) ultrasound sonography
D) amniocentesis



102) Esperanza, who is in the 11th week of her pregnancy, is undergoing a prenatal diagnostic test that involves the removal of a small sample of the placenta. The doctor informs her that the test may detect any genetic defects and chromosomal abnormalities in the fetus and that she will have to wait for at least 10 days for the diagnosis. In this scenario, which of the following prenatal medical procedures is Esperanza most likely undergoing?

A) chorionic villus sampling (CVS)
B) amniocentesis
C) noninvasive prenatal diagnosis (NIPD)
D) triple screen

103) Which of the following is the vascular organ that links the fetus to the mother's uterus?

A) the fallopian tube
B) the ovary
C) the placenta
D) the cervix

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104) Which of the following is a risk related to the use of chorionic villus sampling (CVS) as a prenatal diagnostic test?
A) limb deformity
B) spina bifida
C) Down syndrome
D) mental retardation

105) Recent advances in molecular genetics and DNA sequencing allow accurate and noninvasive testing for some genetic abnormalities, using
A) cell-free fetal DNA.
B) amniotic fluid.
C) ultrasonic measurements.
D) fetal blood sampling.

106) Which of the following does amniocentesis bring a small risk of?
A) mental retardation
B) limb deformity
C) miscarriage
D) Down syndrome



107) Which of the following statements regarding chorionic villus sampling (CVS) and amniocentesis is true?
A) Both CVS and amniocentesis provide valuable information about the presence of birth defects.
B) Both CVS and amniocentesis increase the risk of miscarriage.
C) Both CVS and amniocentesis increase the risk of limb deformities in the fetus.
D) Amniocentesis allows a decision on abortion to be made sooner than CVS.

108) The current maternal blood screening test is called the triple screen because
A) it is performed three times.
B) it diagnoses three diseases.
C) it measures three substances in the mother's blood.
D) it is the third prenatal diagnostic test performed in a pregnancy.

109) A couple is trying to conceive a baby. How long should they wait before they suspect infertility?
A) 3 months
B) 12 months
C) 18 months
D) 24 months

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110) Which of the following is most likely to be a cause of infertility in a woman?
A) unblocked fallopian tubes
B) increased muscle mass
C) eggs lacking motility
D) a disease that hinders the implantation of the embryo into the uterus

111) By far the most common high-tech assisted reproduction technique used is
A) artificial insemination.
B) in vitro fertilization.
C) spermatogenesis.
D) in vivo fertilization.

112) A couple is seeking help for infertility. Under their physician's guidance, they decide to undergo a procedure in which the woman's eggs are combined in a laboratory dish with her husband's sperms. What is this procedure called?
A) gamete transfer
B) intracytoplasmic sperm injection
C) zygote intrafallopian transfer
D) in vitro fertilization

113) Recently a high level of_____ has been linked to male infertility.
A) oxidative stress
B) fitness
C) meat consumption
D) emotional detachment

114) Which of the following is the main risk factor that a couple must be aware of when undergoing fertility treatments?
A) high birth weight in babies conceived through such treatments
B) an increase in the possibility of multiple births
C) negative psychological impact on children conceived through such treatments
D) significant differences in developmental outcomes

115) What is a social and legal process by which a parent-child relationship is established between persons unrelated at birth?
A) kinship care
B) rebirthing
C) guardianship
D) adoption

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116) Which of the following statements is true regarding adopted children?
A) Nonadopted children are more likely to experience school-related problems than adopted children.
B) Children who are adopted early in life are more likely to have positive outcomes than those adopted later in life.
C) Adopted children should never be allowed to meet their birth parents.
D) Most adopted children struggle with school, peer relationships, and self-esteem.

117) The field that seeks to discover the influence of heredity and environment on individual differences in human traits and development is behavior
A) influence.
B) therapy.
C) genetics.
D) development.

118) In twin studies, it is most common to
A) assess the behavioral similarity of identical twins compared with the behavioral similarity of non-twin siblings.
B) determine the behavioral similarity of identical twins compared with the behavioral similarity of fraternal twins.
C) conduct genetic studies of the difference between identical twins in their genetic makeup.
D) compare adopted fraternal twins with each other.

119) Rachel loves to read books, and she has encouraged her daughter to read by regularly taking her to the local library and buying her lots of books. Rachel's daughter is now an avid reader. This reflects a(n)_____ correlation.
A) passive genotype-environment
B) evocative genotype-environment
C) influential genotype-environment
D) active (niche-picking) genotype-environment

120) Tracy's parents are avid sports fans. Since Tracy was small, they have taken her to numerous baseball and football games, and Tracy has regularly watched the sports channel with her dad. When Tracy was old enough, her parents signed her up for the little league team at her school, and she performed well. This is an example of a(n)
A) evocative genotype-environment correlation.
B) active (niche-picking) genotype-environment correlation.
C) passive genotype-environment correlation.
D) gene-gene correlation.

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121) Which of the following correlations occur because a child's genetically influenced characteristics elicit certain types of environments?
A) passive genotype-environment
B) evocative genotype-environment
C) influential genotype-environment
D) active (niche-picking) genotype-environment

122) Charlie is a cooperative, attentive child and is a favorite at home and at school; he receives positive, instructive responses from adults. This is indicative of a(n)
A) passive genotype-environment correlation.
B) evocative genotype-environment correlation.
C) influential genotype-environment correlation.
D) active (niche-picking) genotype-environment correlation.

123) Timothy is a shy 6-year-old who is usually withdrawn in class. He is always distracted and refuses to cooperate with other students during class activities. He does not volunteer to answer questions, and as his teachers find it difficult to elicit any response from him, they choose to ignore him. He is not liked by his classmates, as he never shares his belongings. As a result, he mostly plays by himself. According to Sandra Scarr's description of the three ways that heredity and environment can be correlated, which of the following correlations is most likely exhibited in this scenario?

A) passive genotype-environment correlation
B) active genotype-environment correlation
C) niche-picking genotype-environment correlation
D) evocative genotype-environment correlation

124) Brad is an athletic child, and he is in every sports team in school, as he enjoys sports immensely. He regularly practices football, tennis, and basketball and hopes to become the captain of one of the sports teams. This scenario most likely reflects a(n)_____ correlation, the type that occurs when children seek out environments that they find compatible and stimulating.
A) passive genotype-environment
B) evocative genotype-environment
C) active (niche-picking) genotype-environment
D) influential genotype-environment

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125) According to Sandra Scarr's description of the three ways that heredity and environment can be correlated, passive genotype-environment correlations occur because
A) biological parents provide a rearing environment for a child.
B) children seek out environments that are stimulating.
C) a child's genetically influ-enced characteristics elicit certain types of environments.
D) certain genes evoke environmental support.

126) Which of the following is an example of a passive genotype-environment correlation?
A) Uncooperative, distractible children receive more unpleasant and disciplinary action from parents and teachers.
B) Outgoing children tend to seek out social contexts in which to interact with people.
C) Parents who have a genetic predisposition to be musically inclined encourage their children to learn how to play a musical instrument.
D) Infants who smile more receive more attention from the individuals in their social environment.

127) Which view states that development is the result of an ongoing, bidirectional interchange between heredity and the environment?
A) epigenetic
B) biosocial
C) sociogenic
D) congenital



128) What is the interaction of a specific measured variation in DNA and a specific measured aspect of the environment?
A) heredity-environment correlation
B) evocative genotype-environment correlation
C) gene × environment (G × E) interaction
D) passive genotype-environment interaction

129) While birth fathers are often less likely to be included in open adoption, a recent study indicates that they would like to be part of the
A) open adoption triad.
B) adoption-for-pay scheme.
C) open sperm donation model.
D) foreign adoption program.

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**FILL IN THE BLANK. Write the word or phrase that best completes each statement or answers the question.**

130) Charles Darwin was the theorist who published *On the Origin of Species*, in 1859, which outlined his theory of natural_____.

131) An organism survives in its natural habitat through_____ behavior.

132) The field of_____ psychology emphasizes the importance of adaptation, reproduction, and "survival of the fittest" in shaping human behavior.

133) What is the abbreviation for the complex molecule that has a double helix shape and contains genetic information?

134) What are the short segments of DNA that are located on the chromosomes and considered to be the basic units of hereditary information?

135) Cell division occurs in the eggs and sperm. A cell duplicates its chromosomes and divides twice. This leads to the formation of four cells that contain only half the genetic material of the parent cell. What is this process called?

136) During the early stages of a pregnancy, a single zygote splits into two genetically identical replicas. The genetically identical replicas of the single zygote indicate that the pregnant person will have identical, or_____, twins.

137) Xiomarra is tall with dark, curly hair and brown eyes. She is outgoing and friendly. The way that Xiomarra's genotype is expressed in these observable characteristics is referred to as her_____.

138) Sherry, a 3-year-old, has an extra copy of chromosome 21. She is often made fun of by other children because of her unusual looks: She has a round face and her skull is flat; she has a protruding tongue; and she finds it difficult to play because of her short limbs. Her parents find that her mental abilities are impaired when compared with other children her age. Sherry is most likely suffering from a chromosomal abnormality called_____ syndrome.

139) Identify the prenatal medical procedure in which a sample of amniotic fluid is withdrawn by a syringe and tested for chromosomal or metabolic disorders.

140) Deshawn believes that development is the result of an ongoing, bidirectional interchange between heredity and environment. He has most likely adopted the _____ view.

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**SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.**

141) Explain the genome-wide association method and how it has been used to help identify genetic variations of diseases.

142) List the four genetic principles. In your opinion, which do you think is the most serious, and why?

143) List four sex-linked chromosomal abnormalities.



144) List five gene-linked abnormalities.

145) Name and describe three prenatal diagnostic tests.

146) What are some of the possible causes of infertility in women and men? Identify two strategies that can be used to overcome infertility.

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147) Differentiate between open and closed adoption. Analyze the effect of open adoption on the overall development of the adopted child.

148) What are some problems adopted children face at different points of development (infancy, early childhood, middle and late childhood, and adolescence)?

149) Identify and describe the two common types of studies used by behavior geneticists to investigate the influence of heredity on behavior.



150) What are the three ways that heredity and environment are correlated, as described by behavior geneticist Sandra Scarr?

151) Assume that in the case study of the Jim and Jim twins, it was found that their similar development trajectories were a result of similar temperament and interests, which caused them to seek out similar environments that were compatible and stimulating to them. Which heredity-environment correlation is reflected in this scenario?

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152) Define gene × environment (G × E) interaction. Give an example of a study (either your own or one from the book) that could illustrate the interaction between genes and the environment.

153) Violet, who is in the 11th week of pregnancy, is undergoing a prenatal medical procedure to detect genetic defects and chromosomal abnormalities in the fetus. During the procedure, her obstetrician removes a small sample of the placenta for analysis. Name the prenatal medical procedure that Violet is undergoing.



154) Yelena is an outgoing person, and as a result, people naturally tend to like her and find her personable. According to Sandra Scarr, which genotype-environment interaction does this best represent?

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## Answer Key

Test name: Chapter 02

1) C
2) B
3) A
4) A
5) D
6) A
7) A
8) B
9) A
10) A
11) C
12) C
13) B
14) C
15) B
16) D
17) B
18) D
19) C
20) A
21) C
22) B
23) D
24) C
25) A
26) D
27) B
28) C
29) D
30) A
31) D
32) A
33) C
34) C
35) D
36) A
37) A

38) D
39) C
40) D
41) C
42) B
43) A
44) D
45) D
46) A
47) A
48) B
49) B
50) A
51) D
52) C
53) C
54) C
55) C
56) D
57) B
58) B
59) D
60) B
61) A
62) B
63) A
64) C
65) A
66) B
67) C
68) A
69) A
70) A
71) C
72) C
73) D
74) B
75) A
76) C
77) A

78) A
79) B
80) D
81) C
82) A
83) A
84) B
85) B
86) A
87) B
88) B
89) B
90) A
91) B
92) A
93) C
94) D
95) A
96) D
97) C
98) B
99) D
100) D
101) B
102) A
103) C
104) A
105) A
106) C
107) A
108) C
109) B
110) D
111) B
112) D
113) A
114) B
115) D
116) B
117) C

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118) B
119) A
120) C
121) B
122) B
123) D
124) C
125) A
126) C
127) A
128) C
129) A
130) selection
131) adaptive
132) evolutionary
133) DNA
134) genes
135) meiosis
136) monozygotic
137) phenotype
138) Down

139) amniocentesis
140) epigenetic
141) Short Answer
Researchers obtained DNA from those who had the disease (such as glaucoma or Alzheimer disease) and those who did not have the disease. Then, they purified the DNA and determined markers of genetic variation. If the genetic variation was more frequent in those with the disease, then that would point to the region in the genome connected to that disease.

142) Short Answer
Students' answers will vary. The four genetic principles are the dominant-recessive genes principle, sex-linked genes (X-linked inheritance), genetic imprinting, and polygenic inheritance.

143) Short Answer
Klinefelter syndrome, fragile X syndrome, Turner syndrome, and XYY syndrome are all sex-linked chromosomal abnormalities.

144) Short Answer
The gene-linked abnormalities include cystic fibrosis, diabetes, hemophilia, Huntington disease, sickle-cell anemia, spina bifida, Tay-Sachs disease, and phenylketonuria (PKU).

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145) Short Answer
Prenatal diagnostic tests include the following:
1) Ultrasound sonography, where high-frequency sound waves are directed into the pregnant woman's abdomen and the echo from the sounds is transformed into a visual representation of the fetus's inner structures
2) Fetal magnetic resonance imaging (MRI), where a powerful magnet and radio images are used to generate detailed images of the body's organs and structures
3) Chorionic villus sampling (CVS), where a small sample of the placenta is removed to test for genetic defects and chromosomal abnormalities

146) Short Answer
Lack of ovulation, producing abnormal ova, blocked fallopian tubes, and diseases that prevent implantation of an embryo into the uterus are some of the causes of infertility in women. Sperm lacking motility, low sperm count, and blocked passageways are among the causes of infertility in men.
In some cases of infertility, surgery may correct the cause; in others, hormone-based drugs may improve the probability of having a child.

147) Short Answer
Open adoption involves sharing identifying information and having contact with the biological parents; in contrast, closed adoption involves not having such sharing and contact. Most adoption agencies today offer adoptive parents the opportunity to have either an open or a closed adoption. A longitudinal study found that when their adopted children reached adulthood, adoptive parents described open adoption positively and saw it as serving the child's best interests. Another longitudinal study found that birth mothers, adoptive parents, and adopted children who had contact were more satisfied with their arrangements than those who did not have contact. Also, in this study, contact was linked to more optimal adjustment for adolescents and emerging adults. Further, birth mothers who were more satisfied with their contact arrangements had less unresolved grief 12 to 20 years after placement. In a study of adoptees in emerging adulthood, perceptions of secure parent-child attachment relationships, as well as sensitive and open communication about birth parent contact, were linked to greater satisfaction with life.

148) Short Answer
During infancy, children might struggle with attachment, especially if parents' expectations aren't met. By early childhood, children begin to ask where they came from. Thus, parents must decide when and if to tell their children that they are adopted. During middle and late childhood, children tend to show greater interest in where they came from, their birth parents, and why they were put up for adoption. By adolescence, adopted children start focusing their attention on physical appearances. As a result, they may notice that they look different from their biological parents and try to determine their identity.

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149) Short Answer
To study the influence of heredity on behavior, behavior geneticists often use either twins or adoption situations. In the most common twin study, the behavioral similarity of identical twins (who are genetically identical) is compared with the behavioral similarity of fraternal twins. In an adoption study, investigators seek to discover whether the behavior and psychological characteristics of adopted children are more like those of their adoptive parents, who have provided a home environment, or more like those of their biological parents, who have contributed their heredity. Another form of adoption study compares adoptive and biological siblings.

150) Short Answer
Behavior geneticist Sandra Scarr described three ways that heredity and environment are correlated:
1) Passive genotype-environment correlations that occur because biological parents, who are genetically related to the child, provide a rearing environment for the child
2) Evocative genotype-environment correlations that occur because a child's characteristics elicit certain types of environments
3) Active (niche-picking) genotype-environment correlations that occur when children seek out environments that they find compatible and stimulating



151) Short Answer
This would reflect the active (niche-picking) genotype-environment correlation, which occurs when children seek out environments that they find compatible and stimulating.

152) Short Answer
Gene × environment (G × E) interaction refers to the interaction of a specific measured variation in the DNA and a specific measured aspect of the environment. In one study, adults who experienced parental loss as young children were more likely to have unresolved attachment issues as adults only when they had the short version of the 5-HTTLPR gene. The long version of the serotonin transporter gene apparently provided some protection and ability to cope better with parental loss.

153) Short Answer
Chorionic villus sampling (CVS) is the prenatal medical procedure in which a small sample of the placenta is removed.

154) Short Answer
This best represents an evocative genotype-environment correlation.