

## Chapter 02 Biological Beginnings

### Multiple Choice Questions

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 should increase in future generations. This illustrates the process of \_\_\_\_\_.

A.

genetic selection

B.

natural adaptation

**C.**

natural selection

D.

genetic survival

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Hard*

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

*Topic: Natural selection*

## Chapter 02 - Biological Beginnings

2.

\_\_\_\_\_ introduced the theory of evolution by natural selection in 1859.

A.

Sigmund Freud

**B.**

Charles Darwin

C.

Stephen Hawking

D.

Wilhelm Wundt

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Natural selection*

## Chapter 02 - Biological Beginnings

3.

If a baboon learns to eat many 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

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Hard*

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

*Topic: Adaptive behavior*

## Chapter 02 - Biological Beginnings

4.

Evolution takes place:

**A.**

over the course of many generations.

B.

almost immediately.

C.

when a species is ready for it.

D.

due to active attempts at change on the part of a species.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Adaptive behavior*

## Chapter 02 - Biological Beginnings

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

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Evolutionary psychology*

## Chapter 02 - Biological Beginnings

6.

According to evolutionary developmental psychologists, many evolved psychological mechanisms are \_\_\_\_\_. That is, the mechanisms apply only to a specific aspect of a person's makeup.

A.

domain-specific

B.

maladjusted

C.

non-operational

D.

unconditional

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Evolutionary developmental psychology*

## Chapter 02 - Biological Beginnings

7.

Which of the following statements is true about evolutionary developmental psychology?

**A.**

Many evolved psychological mechanisms apply only to a specific aspect of a person's makeup.

B.

The mind is a general-purpose device that can be applied equally to a vast array of problems.

C.

All behaviors that were adaptive for our prehistoric ancestors serve us well today.

D.

Evolution has not impacted human development.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Evolutionary developmental psychology*

## Chapter 02 - Biological Beginnings

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 had acquired during their lifetime to their offspring.

D.

the benefits of evolutionary selection decrease with age.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Hard*

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

*Topic: Evolutionary developmental psychology*



## Chapter 02 - Biological Beginnings

9.

According to Paul Baltes, the benefits conferred with evolutionary selection \_\_\_\_\_ with age.

A.

increase

B.

stay the same

**C.**

decrease

D.

fluctuate

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Evolution and life-span development*

## Chapter 02 - Biological Beginnings

10.

According to life-span developmentalist Paul Baltes, the benefits conferred by evolutionary selection decrease with age. 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.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Evolution and life-span development*

## Chapter 02 - Biological Beginnings

11.

Paul Baltes says that natural selection among humans operates mainly during the \_\_\_\_\_ of life.

A.

second half

B.

last years

**C.**

first half

D.

first year

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Evolution and life-span development*

## Chapter 02 - Biological Beginnings

12.

As the benefits of evolutionary selection decrease with age, Baltes argues, the need for all of the following increases, EXCEPT:

A.

social support.

B.

medical technology.

**C.**

job training.

D.

culture.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Medium*

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

*Topic: Evolution and life-span development*

## Chapter 02 - Biological Beginnings

13.

As an alternative to "\_\_\_\_\_ evolutionism" presented in evolutionary psychology, Albert Bandura proposed a \_\_\_\_\_ view.

A.

bidirectional; unidirectional

**B.**

one-sided; bidirectional

C.

dynamic; linear

D.

balanced; biased

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Evolution and life-span development*

## Chapter 02 - Biological Beginnings

14.

A fertilized human egg cannot grow into a crocodile, duck, or fish specifically because of:

A.

social influence.

B.

environmental influence.

C.

adaptive behavior.

**D.**

genetic code.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Genes*

## Chapter 02 - Biological Beginnings

15.

\_\_\_\_\_ is a complex molecule with a double helix shape, like a spiral staircase, and contains genetic information.

A.

RNA

B.

Chromosome

**C.**

DNA

D.

Ribosome

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Genes*

## Chapter 02 - Biological Beginnings

16.

\_\_\_\_\_, the units of hereditary information, are short segments of deoxyribonucleic acid (DNA). They direct cells to reproduce themselves and to assemble proteins.

A.

Genes

B.

Chromosomes

C.

RNA

D.

Ribosomes

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Genes*



## Chapter 02 - Biological Beginnings

17.

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

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Genes*

## Chapter 02 - Biological Beginnings

18.

\_\_\_\_\_ are the building blocks of cells as well as the regulators that direct the body's processes.

A.

Genes

**B.**

Proteins

C.

Ribosomes

D.

DNA

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Genes*

## Chapter 02 - Biological Beginnings

19.

Scientists had thought that humans had as many as 100,000 or more genes, but recent research indicates a figure of approximately:

A.

250.

B.

1,500.

**C.**

20,500.

D.

1,000,000.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Hard*

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

*Topic: Genes*

## Chapter 02 - Biological Beginnings

20.

Which of the following statements about the activity of genes is TRUE?

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.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Genes*

## Chapter 02 - Biological Beginnings

21.

What are gametes?

A.

Zygotes

B.

Embryos

C.

Fertilized eggs

**D.**

Eggs and sperm

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Meiosis*

## Chapter 02 - Biological Beginnings

22.

\_\_\_\_\_ is a stage in reproduction whereby an egg and a sperm fuse to create a single cell.

**A.**

Fertilization

B.

Osmosis

C.

Meiosis

D.

Mitosis

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Fertilization*

Chapter 02 - Biological Beginnings

23. During the process of \_\_\_\_\_, the 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

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Mitosis*

## Chapter 02 - Biological Beginnings

24.

A cell which 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

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Mitosis*



Chapter 02 - Biological Beginnings

25.

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 new cells with 23 pairs of chromosomes.

D.

Mitosis results in the formation of three new cells.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Mitosis*

Chapter 02 - Biological Beginnings

26.

A cell which contains 12 pairs of chromosomes, divides by mitosis to form two new cells. How many pairs of chromosomes does each new cell contain?

A.

12

**B.**

23

C.

6

D.

48

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Mitosis*

Chapter 02 - Biological Beginnings

27.

Except for the sperm and the egg, all cells in the human body have \_\_\_\_\_ chromosomes.

A.

10

B.

32

C.

23

**D.**

46

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Mitosis*

## Chapter 02 - Biological Beginnings

28.

During \_\_\_\_\_, 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

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Mitosis*

Chapter 02 - Biological Beginnings

29.

In human beings, by the end of meiosis, each egg or sperm has \_\_\_\_\_ chromosomes.

A.

46 paired

**B.**

23 unpaired

C.

23 paired

D.

46 unpaired

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Meiosis*

Chapter 02 - Biological Beginnings

30.

During fertilization, an egg and a sperm fuse to create a single cell called a \_\_\_\_\_.

A.

blastocyst

B.

fetus

C.

gamete

**D.**

zygote

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Fertilization*

## Chapter 02 - Biological Beginnings

31.

Sasha's 23<sup>rd</sup> chromosome pair contains two X chromosomes. This indicates that Sasha:

A.

has Down syndrome.

B.

has fragile X syndrome.

**C.**

is a female.

D.

is a male.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Fertilization*

Chapter 02 - Biological Beginnings

32.

Jule's 23<sup>rd</sup> chromosome pair consists of an X chromosome and a Y chromosome. This indicates that Jule:

A.

has Down syndrome.

B.

has XYY syndrome.

C.

is a female.

**D.**

is a male.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Fertilization*



## Chapter 02 - Biological Beginnings

33.

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

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Sources of variability*

Chapter 02 - Biological Beginnings

34.

\_\_\_\_\_ 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

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Sources of variability*

Chapter 02 - Biological Beginnings

35.

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.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Sources of variability*

## Chapter 02 - Biological Beginnings

36.

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.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Sources of variability*

## Chapter 02 - Biological Beginnings

37.

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

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Sources of variability*

## Chapter 02 - Biological Beginnings

38.

\_\_\_\_\_ genes are those that make the individual more vulnerable to specific diseases or acceleration of aging.

**A.**

Susceptibility

B.

Longevity

C.

Vulnerability

D.

Mutated

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Sources of variability*

## Chapter 02 - Biological Beginnings

39.

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 that is observed in Ethel and her family members?

A.

Susceptibility genes

B.

Longevity genes

C.

Vulnerability genes

D.

Mutated genes

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Hard*

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

*Topic: Sources of variability*

## Chapter 02 - Biological Beginnings

40.

\_\_\_\_\_ genes are those that make an individual less vulnerable to certain diseases and make it more likely for him/her to live till an older age.

A.

Susceptibility

**B.**

Longevity

C.

Vulnerability

D.

Mutated

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Sources of variability*



## Chapter 02 - Biological Beginnings

41.

Erin is 90 years old. She has relatively good health, and is fully mobile. Most of Erin's blood relatives live to a ripe, old age. Which of the following genes might be responsible for this?

A.

Susceptibility genes

**B.**

Longevity genes

C.

Vulnerability genes

D.

Mutated genes

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Sources of variability*

## Chapter 02 - Biological Beginnings

42.

Emma and Anna are identical twins who were adopted by different families a few weeks after birth. Although genetically identical, they grew up with different physical and psychological characteristics. For example, though both inherited a tendency to grow large, Anna was slim and athletic due to 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.

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Hard*

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

*Topic: Sources of variability*

Chapter 02 - Biological Beginnings

43. Vanda's genetic makeup is composed of thousands of genes in which some are expressed and directly observable, while some are not. When we talk about all of her genetic material we are talking about her \_\_\_\_\_.

A.

phenotype

B.

RNA

**C.**

genotype

D.

ribosomes

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Sources of variability*

Chapter 02 - Biological Beginnings

44. A genotype is \_\_\_\_\_ percent of a person's genetic material.

A.

100

B.

50

C.

25

D.

5

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Hard*

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

*Topic: Sources of variability*

Chapter 02 - Biological Beginnings

45. \_\_\_\_\_ is the way an individual's genotype is expressed in observable and measurable characteristics.

A.

RNA

B.

DNA

**C.**

Phenotype

D.

Stereotype

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Sources of variability*

## Chapter 02 - Biological Beginnings

46.

Marly describes her friend Gina as having blonde hair, green eyes, and fair skin with freckles. Marly has described Gina's \_\_\_\_\_.

A.

genotype

B.

genetic imprint

**C.**

phenotype

D.

X-linked inheritance

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Sources of variability*

## Chapter 02 - Biological Beginnings

47.

A phenotype can consist of \_\_\_\_\_ as well as \_\_\_\_\_ characteristics.

A.

physical; environmental

B.

conscious; subconscious

C.

biological; ecological

**D.**

physical; psychological

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Hard*

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

*Topic: Sources of variability*

## Chapter 02 - Biological Beginnings

48.

For each genotype, a range of \_\_\_\_\_ can be expressed, thus providing a source of variability.

A.

genetic imprints

**B.**

phenotypes

C.

karyotypes

D.

mesotypes

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Sources of variability*



## Chapter 02 - Biological Beginnings

49.

In some cases, 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

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Dominant-recessive genes*

Chapter 02 - Biological Beginnings

50. Clark's genotype contains a dominant gene for brown eye color and recessive gene for blue eye color. According to the dominant-recessive gene principle, which of the following phenotypes is most likely to be observed in Clark?

A.

black eyes

B.

blue eyes

C.

grey eyes

**D.**

brown eyes

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Dominant-recessive genes*

Chapter 02 - Biological Beginnings

51. Mary's mother has blonde hair and her father has brown hair. Mary has a gene for brown hair and a gene for blonde hair. She has brown hair. This indicates that the gene for brown hair is a(n) \_\_\_\_\_.

A.

dominant gene

B.

recessive gene

C.

susceptible gene

D.

longevity gene

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Dominant-recessive genes*

Chapter 02 - Biological Beginnings

52. Carrie's parents have brown hair. However, Carrie gets genes for blond hair from both of her parents, and as a result she has blonde hair. This indicates that the gene for blonde hair is

a:

A.

recessive gene.

B.

dominant gene.

C.

susceptibility gene.

D.

longevity gene.

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Hard*

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

*Topic: Dominant-recessive genes*

Chapter 02 - Biological Beginnings

53.

A(n) \_\_\_\_\_ gene overrides the potential influence of a recessive gene.

A.

longevity

**B.**

dominant

C.

susceptible

D.

aggressive

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Dominant-recessive genes*

## Chapter 02 - Biological Beginnings

54.

A recessive gene exerts its influence only if:

**A.**

both genes in a pair are recessive.

B.

it is the stronger gene.

C.

the environment is right.

D.

the dominant gene is also present in the pair.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Medium*

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

*Topic: Dominant-recessive genes*

Chapter 02 - Biological Beginnings

55.

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

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Sex-linked genes*

Chapter 02 - Biological Beginnings

56.

Most individuals who have X-linked diseases are \_\_\_\_\_.

A.

males

B.

females

C.

intersex

D.

hemophiliacs

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Sex-linked genes*



Chapter 02 - Biological Beginnings

57.

Victor has an X-linked inheritance disease. Which of the following conditions is Victor most likely to have?

A.

Beckwith-Wiedemann syndrome

**B.**

Hemophilia

C.

Wilms tumor

D.

Diabetes

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Sex-linked genes*

Chapter 02 - Biological Beginnings

58.

\_\_\_\_\_ 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

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Hard*

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

*Topic: Genetic imprinting*

## Chapter 02 - Biological Beginnings

59.

Vivanta has been diagnosed with Beckwith-Wiedemann syndrome, a growth disorder, which the doctor has indicated could be a result of \_\_\_\_\_ going awry.

**A.**

genetic imprinting

B.

polygenic inheritance

C.

sex-linked genes

D.

chromosomes

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Hard*

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

*Topic: Genetic imprinting*

## Chapter 02 - Biological Beginnings

60.

Most characteristics are:

A.

determined by a single gene.

B.

determined by a pair of genes.

C.

not determined by genes.

**D.**

determined polygenically.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Polygenic inheritance*

Chapter 02 - Biological Beginnings

61.

Which of the following is an example of chromosomal abnormality that occurs when whole chromosomes do not separate properly during meiosis?

A.

Down syndrome

B.

Hemophilia

C.

Huntington's disease

D.

Sickle-cell anemia

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Down syndrome*

## Chapter 02 - Biological Beginnings

62.

Jason was born with \_\_\_\_\_. The doctor tells his parents that this genetic disorder occurred because he has an extra copy of chromosome 21.

A.

fragile X syndrome

B.

Klinefelter disease

**C.**

Down syndrome

D.

Tay Sach's disease

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Down syndrome*

## Chapter 02 - Biological Beginnings

63.

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 chromosome Y.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Down syndrome*

Chapter 02 - Biological Beginnings

64.

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.

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Hard*

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

*Topic: Down syndrome*



Chapter 02 - Biological Beginnings

65.

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

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Sex-linked chromosomal abnormalities*

Chapter 02 - Biological Beginnings

66.

Klinefelter syndrome affects:

**A.**

only males.

B.

only females.

C.

both males and females equally.

D.

more females than males.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Sex-linked genes*

## Chapter 02 - Biological Beginnings

67.

Tom is a tall man with undeveloped testes and enlarged breasts. His doctor has determined that he has an extra X chromosome leading to the diagnosis of:

A.

Down syndrome.

B.

fragile X syndrome.

**C.**

Klinefelter syndrome.

D.

Turner syndrome.

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Sex-linked chromosomal abnormalities*

Chapter 02 - Biological Beginnings

68.

Klinefelter syndrome occurs approximately \_\_\_\_\_ live male births.

A.

once in every 100

**B.**

once in every 600

C.

once in every 10,000

D.

once in every 100,000

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Hard*

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

*Topic: Sex-linked chromosomal abnormalities*

## Chapter 02 - Biological Beginnings

69.

Tristan has a genetic disorder that results from an abnormality in the X chromosome, which becomes constricted and often breaks. His doctor informed Tristan's mother that he has:

A.

fragile X syndrome.

B.

XYY syndrome.

C.

Turner syndrome.

D.

Tay-Sach's disease.

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Sex-linked chromosomal abnormalities*

## Chapter 02 - Biological Beginnings

70.

Fragile X syndrome occurs:

**A.**

more often in males than in females.

B.

only in females.

C.

in both sexes equally.

D.

only in males.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Sex-linked chromosomal abnormalities*

Chapter 02 - Biological Beginnings

71.

Harry has been suffering from mental retardation and a learning disability since infancy. Subsequent tests revealed an abnormality in his X chromosome, which becomes constricted and often breaks. Identify the syndrome that Harry suffers from.

A.

Turner syndrome

**B.**

Fragile X syndrome

C.

XYY syndrome

D.

Klinefelter syndrome

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Sex-linked chromosomal abnormalities*

## Chapter 02 - Biological Beginnings

72.

Angelique has a chromosomal disorder characterized by a missing X chromosome making her XO instead of XX. Angelique's doctors have diagnosed her with \_\_\_\_\_.

A.

fragile X syndrome

B.

XYY syndrome

C.

Klinefelter syndrome

**D.**

Turner syndrome

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Sex-linked chromosomal abnormalities*



Chapter 02 - Biological Beginnings

73.

Turner syndrome occurs in approximately \_\_\_\_\_ live female births.

A.

1 of every 100

**B.**

1 of every 2,500

C.

1 of every 22,500

D.

1 of every 40,000

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Hard*

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

*Topic: Sex-linked chromosomal abnormalities*

## Chapter 02 - Biological Beginnings

74.

Sandra excels in reading and spelling but struggles with mathematics. She is shorter than her peers and has a webbed neck. Her doctor has determined that she has one X chromosome missing. Sandra most likely has:

A.

XYY syndrome.

B.

fragile X syndrome.

**C.**

Turner syndrome.

D.

XXO syndrome.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Hard*

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

*Topic: Sex-linked chromosomal abnormalities*

Chapter 02 - Biological Beginnings

75.

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 neck.

D.

Turner syndrome occurs in approximately 1 of every 25,000 live female births.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Sex-linked chromosomal abnormalities*

Chapter 02 - Biological Beginnings

76.

Early interest in the XYY syndrome focused on the belief that the extra Y chromosome found in some males contributed to \_\_\_\_\_. However, subsequent research has proved this to be \_\_\_\_\_.

A.

aggression and violence; false

B.

aggression and violence; true

C.

impotence; false

D.

impotence; true

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Sex-linked chromosomal abnormalities*

Chapter 02 - Biological Beginnings

77.

Phenylketonuria (PKU) is a genetic disorder in which the individual cannot properly metabolize phenylalanine, which is a(n) \_\_\_\_\_.

A.

vitamin

**B.**

amino acid

C.

mineral

D.

carbohydrate

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Gene-linked abnormalities*

## Chapter 02 - Biological Beginnings

78.

Phenylketonuria (PKU) occurs in approximately \_\_\_\_\_ live births.

A.

1 of every 100 to 200

B.

1 of every 1,000 to 2,000

**C.**

1 of every 10,000 to 20,000

D.

1 of every 100,000 to 150,000

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Hard*

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

*Topic: Gene-linked abnormalities*

Chapter 02 - Biological Beginnings

79.

Which of the following is true of phenylketonuria?

**A.**

It results from a recessive gene.

B.

It is a chromosomal disorder.

C.

It results in death by the age of five.

D.

It is caused by an accumulation of lipids in the nervous system.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Gene-linked abnormalities*

## Chapter 02 - Biological Beginnings

80.

Mateo is on a special diet because his parents are aware that he cannot metabolize phenylalanine, an amino acid. Buildup of this amino acid in his system could result in mental retardation. Mateo has:

A.

Down syndrome.

**B.**

phenylketonuria (PKU).

C.

sickle-cell anemia.

D.

Huntington's disease.

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Gene-linked abnormalities*



## Chapter 02 - Biological Beginnings

81.

Which of the following is a gene-linked abnormality?

A.

Down syndrome.

**B.**

Phenylketonuria (PKU).

C.

Turner syndrome.

D.

Klinefelter syndrome.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Gene-linked abnormalities*

## Chapter 02 - Biological Beginnings

82.

Tamera has a genetic disorder where her red blood cells take on a hook shape instead of the normal disk shape. The doctors tell Tamera's parents that she has \_\_\_\_\_, and that this condition also provides her with a resistance to malaria.

A.

Tay-Sach's disease

**B.**

sickle-cell anemia

C.

leukemia

D.

Huntington's disease

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Gene-linked abnormalities*

## Chapter 02 - Biological Beginnings

83.

Approximately, \_\_\_\_\_ African Americans is a carrier for sickle-cell anemia.

A.

1 in 50

B.

1 in 100

**C.**

1 in 10

D.

1 in 200

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Hard*

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

*Topic: Gene-linked abnormalities*

## Chapter 02 - Biological Beginnings

84.

Patrick suffers from \_\_\_\_\_, 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

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Gene-linked abnormalities*

## Chapter 02 - Biological Beginnings

85.

Paul suffers from hemophilia. Suggest an appropriate treatment option for Paul's condition.

A.

Insulin treatment

**B.**

Blood transfusions/injections

C.

Physical therapy

D.

Oxygen therapy

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Gene-linked abnormalities*

Chapter 02 - Biological Beginnings

86.

Samantha has been diagnosed with \_\_\_\_\_, which is a glandular dysfunction that interferes with mucus production.

**A.**

cystic fibrosis

B.

Huntington's disease

C.

phenylketonuria

D.

Tay-Sachs disease

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Gene-linked abnormalities*

## Chapter 02 - Biological Beginnings

87.

\_\_\_\_\_ 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's disease

D.

Tay-Sachs disease

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Gene-linked abnormalities*

## Chapter 02 - Biological Beginnings

88.

Penny has been diagnosed with cystic fibrosis. Which of the following would be an appropriate course of treatment for her?

A.

Medication for pain, antibiotics, blood transfusions, and hydroxyurea.

B.

Insulin treatment.

C.

Blood transfusions/injections.

**D.**

Physical and oxygen therapy, synthetic enzymes, and antibiotics.

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Gene-linked abnormalities*



## Chapter 02 - Biological Beginnings

89.

Mary and Jim are expecting a child and prenatal diagnostic procedures have confirmed that the fetus has \_\_\_\_\_, a neural tube disorder that causes brain and spine abnormalities. Their physician has explained that this gene-linked abnormality could be treated with corrective surgery at birth, orthopedic devices, and physical or medical therapy.

**A.**

spina bifida

B.

Tay-Sachs disease

C.

phenylketonuria

D.

Huntington's disease

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Gene-linked abnormalities*

Chapter 02 - Biological Beginnings

90. Lindsay's body does not produce enough insulin, causing an abnormal metabolism of sugar. She is receiving insulin treatment. Lindsay has:

A.

spina bifida.

B.

hemophilia.

C.

phenylketonuria.

**D.**

diabetes.

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Gene-linked abnormalities*

## Chapter 02 - Biological Beginnings

91.

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 and blood transfusions. His doctor has indicated that a study named Baby HUG may offer a better drug in the future.

A.

spina bifida

B.

Tay-Sachs disease

**C.**

sickle-cell anemia

D.

Huntington's disease

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Gene-linked abnormalities*

Chapter 02 - Biological Beginnings

92.

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 five. Benny is suffering from:

A.

spina bifida.

**B.**

Tay-Sachs disease.

C.

phenylketonuria.

D.

Huntington's disease.

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Gene-linked abnormalities*

## Chapter 02 - Biological Beginnings

93.

Gwendolyn is having a prenatal test where her doctor uses high-frequency sound waves directed into her abdomen to check her fetus. She is most likely having a(n) \_\_\_\_\_.

A.

chorionic villus sampling

B.

triple screen

C.

amniocentesis

**D.**

ultrasound sonography

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Ultrasound sonography*

## Chapter 02 - Biological Beginnings

94.

\_\_\_\_\_ refers to a form of mental retardation involving an abnormally small brain.

A.

Spina bifida

B.

Klinefelter syndrome

C.

Hemophilia

**D.**

Microencephaly

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Ultrasound sonography*

Chapter 02 - Biological Beginnings

95.

\_\_\_\_\_ 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

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Ultrasound sonography*

## Chapter 02 - Biological Beginnings

96.

Esperanza is having a prenatal test to remove a small sample of the placenta for genetic testing. Identify the test that her doctor is performing.

A.

Chorionic villus sampling (CVS)

B.

Amniocentesis

C.

Noninvasive prenatal diagnosis (NIPD)

D.

Triple screen

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Chorionic villus sampling*



Chapter 02 - Biological Beginnings

97.

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

A.

Fallopian tube

B.

Ovary

**C.**

Placenta

D.

Cervix

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Chorionic villus sampling*

## Chapter 02 - Biological Beginnings

98.

Identify 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

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Chorionic villus sampling*

## Chapter 02 - Biological Beginnings

99.

Amniocentesis brings a small risk of:

A.

mental retardation.

B.

limb deformity.

**C.**

miscarriage.

D.

Down syndrome.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Amniocentesis*

Chapter 02 - Biological Beginnings

100.

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 chorionic villus sampling.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Hard*

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

*Topic: Amniocentesis*

*Topic: Chorionic villus sampling*

## Chapter 02 - Biological Beginnings

101.

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.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Maternal blood screening*

## Chapter 02 - Biological Beginnings

102.

\_\_\_\_\_ 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.

A.

Amniocentesis

B.

Chorionic villus sampling (CVS)

**C.**

Noninvasive prenatal diagnosis (NIPD)

D.

Triple screen

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Maternal blood screening*

Chapter 02 - Biological Beginnings

103.

Don and Ellie are 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

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Easy*

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

*Topic: Infertility and reproductive technology*

Chapter 02 - Biological Beginnings

104.

Which of the following is NOT a possible explanation for infertility in a woman?

A.

Abnormal ova

B.

Blocked fallopian tubes

**C.**

Eggs lack motility

D.

Disease of the uterus

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Infertility and reproductive technology*



Chapter 02 - Biological Beginnings

105.

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

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Infertility and reproductive technology*

## Chapter 02 - Biological Beginnings

106.

David and Kelly are seeking help for infertility. Under their physician's guidance, they decide to undergo a procedure in which Kelly'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

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Hard*

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

*Topic: Infertility and reproductive technology*

## Chapter 02 - Biological Beginnings

107.

Summer and Clark are considering undergoing fertility treatments. What is one of the main risk factors that the couple must be aware of while weighing their options?

A.

High birth weight in babies conceived through such treatments.

**B.**

An increase in the possibility of multiple births when such treatments are used.

C.

Negative psychological impact on children conceived through such treatments.

D.

Significant differences in developmental outcomes for children conceived through such treatments.

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Infertility and reproductive technology*

## Chapter 02 - Biological Beginnings

108.

\_\_\_\_\_ is the 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

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Adoption*

## Chapter 02 - Biological Beginnings

109.

Shakena is a 38-year-old single woman who works as a pharmaceutical representative. She would like to adopt a child. Recent changes in adoption requirements would mean that:

A.

she would not be considered as a candidate for adopting a child because she is in a same-sex relationship.

B.

she would not be considered as a candidate for adopting a child because she is of African-American descent.

C.

she would be able to adopt a child after she gets married.

**D.**

she would be considered as a candidate for adopting a child.

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Hard*

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

*Topic: Adoption*

Chapter 02 - Biological Beginnings

110.

Which of the following statements is true regarding the differences between outcomes for adopted and nonadopted children?

A.

Nonadopted children are likely to experience more school-related problems than adopted children.

**B.**

Children who are adopted very early in their lives are more likely to have positive outcomes than children adopted later in life.

C.

Adoptees were no more likely to be using mental health services than their nonadopted counterparts.

D.

Adopted adolescents were more likely to be withdrawn.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Adoption*

## Chapter 02 - Biological Beginnings

111.

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

A.

Behavior influence

B.

Behavior therapy

**C.**

Behavior genetics

D.

Behavior development

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Behavior genetics*

## Chapter 02 - Biological Beginnings

112.

Rachel loves to read books, and she also encourages 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

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Passive genotype-environment correlations*



Chapter 02 - Biological Beginnings

113. Tracy's parents are avid sports fans. Since she was a child, they took her to numerous baseball and football games, and Tracy regularly watched the sports channel with her dad. When she was old enough, her parents made her join 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.

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Passive genotype-environment correlations*

Chapter 02 - Biological Beginnings

114. \_\_\_\_\_ 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

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Evocative genotype-environment correlations*

## Chapter 02 - Biological Beginnings

115.

Charlie is a cooperative, attentive child and is a favorite at home and school; and 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.

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Evocative genotype-environment correlations*

Chapter 02 - Biological Beginnings

116.

Timothy is a quiet 6-year-old who is usually withdrawn in class. As a result, he does not receive much attention from his peers and mostly plays by himself. According to Sandra Scarr, this is an example of a(n) \_\_\_\_\_.

A.

passive genotype-environment correlation

B.

active (niche-picking) genotype-environment correlation

C.

gene x environment interaction

**D.**

evocative genotype-environment correlation

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Evocative genotype-environment correlations*

## Chapter 02 - Biological Beginnings

117.

Brad is an athletic boy who is on every sport team in school. Stephen loves math and is part of his school's math club. These instances reflect \_\_\_\_\_ correlations that occur 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

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Active genotype-environment correlations*

## Chapter 02 - Biological Beginnings

118.

According to Sandra Scarr, passive genotype-environment correlations are relatively more common in the lives of:

**A.**

infants and young children.

B.

older children.

C.

adolescents.

D.

adults.

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Evocative genotype-environment correlations*

## Chapter 02 - Biological Beginnings

119.

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 music instrument.

D.

Infants who smile more receive more attention from the individuals in their social environment.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Passive genotype-environment correlations*

Chapter 02 - Biological Beginnings

120. Parents' personalities or intellectual orientation, the family's socioeconomic status, and the neighborhood in which they live are all instances of the \_\_\_\_\_ of siblings.

A.

nonshared environmental experiences

B.

shared genetic traits

**C.**

shared environmental experiences

D.

nonshared genetic traits

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Shared environmental influences*



## Chapter 02 - Biological Beginnings

121.

Parents often interact differently with each sibling, and siblings interact differently with parents. Even these experiences occurring within the family can be part of the \_\_\_\_\_ of siblings.

A.

shared environment

**B.**

nonshared environment

C.

shared genes

D.

nonshared genes

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Nonshared environmental influences*

## Chapter 02 - Biological Beginnings

122.

Behavior geneticist Robert Plomin has found that shared environment:

A.

is independent of heredity influences.

B.

accounts for most of the variation in children's personality or interests.

C.

is responsible for higher incidence of rivalry and aggression between siblings.

**D.**

accounts for little of the variation in children's personality or interests.

*APA LO: 1.2*

*Accessibility: Keyboard Navigation*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Shared environmental influences*

## Chapter 02 - Biological Beginnings

123.

Leila and Alexander are siblings. Every Saturday morning, Leila and her grandmother cook breakfast together and then do some errands and shopping together. During that time, Alexander and his grandfather spend some quality "male bonding" time. They like to play miniature golf or do yard work. The interactions that each child has with the grandparent would be known as what type of environmental experience?

A.

Shared environmental experiences

B.

Evocative genotype-environment correlations

C.

Nonshared environmental experiences

D.

Shared experiences with peers

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Apply*

*Difficulty Level: Hard*

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

*Topic: Nonshared environmental influences*

## Chapter 02 - Biological Beginnings

124.

The \_\_\_\_\_ view states that development is the result of an ongoing, bidirectional interchange between heredity and the environment.

**A.**

epigenetic

B.

biosocial

C.

sociogenetic

D.

congenital

*APA LO: 1.1*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Epigenetic view*

## Chapter 02 - Biological Beginnings

125.

\_\_\_\_\_ is the interaction of a specific measured variation in the DNA and a specific measured aspect of the environment.

A.

Heredity-environment correlation

B.

Evocative genotype-environment correlation

**C.**

Gene  $\times$  environment (G  $\times$  E) interaction

D.

Passive genotype-environment interaction

*APA LO: 1.3*

*Accessibility: Keyboard Navigation*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Gene X environment interaction*

### Short Answer Questions

## Chapter 02 - Biological Beginnings

126.

Name the theorist who published *On the Origin of Species*, in 1859, that outlined his/her theory of natural selection.

Charles Darwin

*APA LO: 1.1*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Natural selection*

127.

What is the behavior that promotes an organism's survival in the natural habitat?

Adaptive behavior

*APA LO: 1.1*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Adaptive behavior*

## Chapter 02 - Biological Beginnings

128.

What is the psychological perspective that emphasizes the importance of adaptation, reproduction, and "survival of the fittest" in shaping human behavior?

Evolutionary psychology

*APA LO: 1.1*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Evolutionary psychology*

129.

What is a complex molecule, with a double helix shape, that contains genetic information?

DNA (deoxyribonucleic acid)

*APA LO: 1.1*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Genes*

## Chapter 02 - Biological Beginnings

130.

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

Genes

*APA LO: 1.1*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Genes*

131.

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

Meiosis

*APA LO: 1.1*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Meiosis*



## Chapter 02 - Biological Beginnings

132.

Palomar is pregnant. During the early stages of her pregnancy, the single zygote splits into two genetically identical replicas. Her doctor tells her she is going to have \_\_\_\_\_ twins.

identical (monozygotic)

*APA LO: 1.3*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Sources of variability*

133.

Xiomarra is tall with dark curly hair and brown eyes. She is outgoing and friendly. Name these observable characteristics of her genetic makeup.

Phenotype

*APA LO: 1.3*

*Bloom's: Apply*

*Difficulty Level: Hard*

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

*Topic: Sources of variability*

## Chapter 02 - Biological Beginnings

134.

A chromosomal abnormality is characterized by an extra copy of chromosome 21. A person with this disorder typically 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. What is this disorder called?

Down syndrome

*APA LO: 1.1*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Down syndrome*

135.

Violet is undergoing a prenatal test where the Doctor takes a small sample of the placenta and then analyzes it to detect genetic defects and chromosomal abnormalities. Name the procedure she is undergoing.

Chorionic villus sampling (CVS)

*APA LO: 1.3*

*Bloom's: Apply*

*Difficulty Level: Hard*

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

*Topic: Chorionic villus sampling*

## Chapter 02 - Biological Beginnings

136.

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

Amniocentesis

*APA LO: 1.1*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Amniocentesis*

137.

Yelena is an outgoing person; therefore, people naturally tend to like her and find her personable. According to Scarr-McCartney, which genotype-environment interaction does this best represent?

Evocative genotype-environment correlation

*APA LO: 1.2*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Evocative genotype-environment correlations*

## Chapter 02 - Biological Beginnings

138.

Deshawn believes that development is the result of an ongoing, bidirectional interchange between heredity and the environment. He has most likely adopted which theoretical perspective?

Epigenetic view

*APA LO: 1.2*

*Bloom's: Understand*

*Difficulty Level: Medium*

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

*Topic: Epigenetic view*

139.

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

Students' answers may vary.

The four genetic principles are: dominant-recessive genes principle, sex-linked genes (X-linked inheritance), genetic imprinting, and polygenic inheritance.

*APA LO: 1.3*

*Bloom's: Apply*

*Difficulty Level: Medium*

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

*Topic: Dominant-recessive genes*

*Topic: Genetic imprinting*

*Topic: Polygenic inheritance*

*Topic: Sex-linked genes*

## Chapter 02 - Biological Beginnings

140.

List four sex-linked chromosomal abnormalities.

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

*APA LO: 1.1*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Sex-linked genes*

141.

List five gene-linked abnormalities.

Cystic fibrosis, diabetes, hemophilia, Huntington's disease, sickle-cell anemia, spina bifida, Tay-Sachs disease, and phenylketonuria (PKU).

*APA LO: 1.1*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Gene-linked abnormalities*

## Chapter 02 - Biological Beginnings

142.

Name and describe three prenatal diagnostic tests.

Prenatal diagnostic tests include:

- 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.

*APA LO: 1.1*

*Bloom's: Remember*

*Difficulty Level: Easy*

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

*Topic: Chorionic villus sampling*

*Topic: Ultrasound sonography*

143.

List three possible causes of infertility in women and in men. What are the two strategies that can be used to overcome infertility?

Lack of ovulation, producing abnormal ova, blocked fallopian tubes, and disease preventing implantation of the ova in the uterus, are some of the causes of infertility in women. Sperm lacking motility, low sperm count, and blocked passageways could be causes of infertility in men.

*APA LO: 1.2*

*Bloom's: Understand*

*Difficulty Level: Hard*

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

*Topic: Infertility and reproductive technology*

## Chapter 02 - Biological Beginnings

144.

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

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.

*APA LO: 1.2*

*Bloom's: Understand*

*Difficulty Level: Hard*

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

*Topic: Behavior genetics*

145.

What are the three ways that heredity and environment are correlated as described by behavior geneticist Sandra Scarr.

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.

*APA LO: 1.3*

*Bloom's: Remember*

*Difficulty Level: Medium*

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

*Topic: Active genotype-environment correlations*

*Topic: Evocative genotype-environment correlations*

*Topic: Passive genotype-environment correlations*

## Chapter 02 - Biological Beginnings

146.

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, which were compatible and stimulating to them. Which heredity-environment correlation is reflected in this scenario?

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

*APA LO: 1.3*

*Bloom's: Apply*

*Difficulty Level: Hard*

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

*Topic: Active genotype-environment correlations*

147.

Define shared and nonshared environmental experience. Provide an example of each and point out how that example exemplifies the concept?

Shared environmental experiences are siblings' common experiences, such as their parents' personalities or intellectual orientation, the family's socioeconomic status, and the neighborhood in which they live. Nonshared environmental experiences are a child's unique experiences, both within the family and outside the family, that are not shared with a sibling. Different peer groups, different teachers, and different friends are examples.

*APA LO: 1.2*

*Bloom's: Apply*

*Difficulty Level: Hard*

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

*Topic: Nonshared environmental influences*

*Topic: Shared environmental influences*



## Chapter 02 - Biological Beginnings

148.

Define Gene  $\times$  environment (G  $\times$  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.

Gene  $\times$  environment (G  $\times$  E) interaction refers to the interaction of a specific measured variation in the DNA and a specific measured aspect of the environment. In a 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.

*APA LO: 1.3*

*Bloom's: Apply*

*Difficulty Level: Hard*

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

*Topic: Gene X environment interaction*