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Arnett Maynard ISBN 0134011899 9780134011899**

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ASSESSMENT GUIDE

Chapter 2-Section 1

Genetic Influences on Development

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Section 1 Genetic Influences on Development

Test Item File

Multiple Choice Questions

The human body contains how many chromosomes?

- 23
- 46
- 69
- 92

Answer: B

Difficulty: 1

Page: 50

Skill: F

Learning Objective: 2.1

Bloom's Taxonomy Level: Remember

The average human cell has _____ chromosomes.

- 42
- 46
- 23
- 26

Answer: B

Difficulty: 1

Page: 50

Skill: F

Learning Objective: 2.1

Bloom's Taxonomy Level: Remember

% correct 84 a = 1 b = 84 c = 14 d = 1 r = .19

How many pairs of chromosomes do humans have?

- 23
- 46
- 69
- 92

Answer: A

Difficulty: 1

Page: 50

Skill: F

Learning Objective: 2.1

Bloom's Taxonomy Level: Remember

% correct 76 a = 76 b = 24 c = 0 d = 0 r = .33

How many chromosomes from each pair of chromosomes are generally inherited from the father?

- 1
- 2
- 3

4

Answer: A
Difficulty: 1
Page: 50
Skill: F
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember

According to the text, chromosomes are composed of complex molecules known as

_____.
nucleotides

Incorrect. The complex molecules are known as DNA.

genes
DNA

Correct. DNA is a long strand of cell material that stores and transfers genetic information.

RNA

Answer: C
Difficulty: 2
Page: 50
Skill: C
Learning Objective: 2.1
Bloom's Taxonomy Level: Understand

Chromosomes are composed of complex molecules known as _____.

DNA
nucleotide pairs
genetic
dominant recessives

Answer: A
Difficulty: 1
Page: 50
Skill: F
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember

Chromosomes are organized into segments called _____.

DNA

Incorrect. The segments are called genes.

RNA
genes

Correct. Genes are segments of DNA that contain coded instructions for the growth and function of an organism.

nucleotides

Answer: C
Difficulty: 1
Page: 50
Skill: C
Learning Objective: 2.1
Bloom's Taxonomy Level: Understand

Genes contain paired sequences of chemicals called_____.

- genes
- RNA
- DNA
- nucleotides

Answer: D

Difficulty: 2

Page: 50

Skill: F

Learning Objective: 2.1

Bloom's Taxonomy Level: Remember

Genes contain_____.

- protein segments
- nucleotides
- fatty cells
- chromosomes

Answer: B

Difficulty: 2

Page: 50

Skill: F

Learning Objective: 2.1

Bloom's Taxonomy Level: Remember

Approximately how many genes comprise the human genome?

- 10,000
- 23,000
- 50,000
- 100,000

Answer: B

Difficulty: 2

Page: 50

Skill: F

Learning Objective: 2.1

Bloom's Taxonomy Level: Remember

How many nucleotide pairs comprise the human genome?

- 100,000
- 150 million
- 3 billion
- 5 trillion

Answer: C

Difficulty: 1

Page: 50

Skill: F

Learning Objective: 2.1

Bloom's Taxonomy Level: Remember

The totality of an individual's genes is referred to as his or her_____.

- phenotype
- genotype

inheritance
environment

Answer: B
Difficulty: 1
Page: 50
Skill: F
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember

An individual's complete genetic makeup is his or her_____.

genotype
phenotype
allele
reaction range

Answer: A
Difficulty: 1
Page: 50
Skill: F
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember

A person's_____is/are their genetic makeup, whereas a person's_____is/are their characteristics.

phenotype; genotype
genotype; phenotype
nucleotides; DNA
DNA; nucleotides

Answer: B
Difficulty: 3
Page: 50
Skill: F
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember
% correct 88 a = 12 b = 88 c = 0 d = 0 r = .43

The characteristics of an individual's genetic material are referred to as his or her_____.

phenotype
genotype
inheritance
environment

Answer: A
Difficulty: 2
Page: 50
Skill: F
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember

A person's characteristics are known as his or her_____.

phenotype
genotype
chromosomes

DNA

Answer: A

Difficulty: 1

Page: 50

Skill: F

Learning Objective: 2.1

Bloom's Taxonomy Level: Remember

The difference between an individual's genotype and its expression in his or her phenotype is a consequence of the person's_____.

genes

DNA

environment

parents

Answer: C

Difficulty: 2

Page: 50

Skill: F

Learning Objective: 2.1

Bloom's Taxonomy Level: Remember

Fred was born into a family with high musical talent. Both of his parents were professional musicians who encouraged and fostered his musical development. Throughout childhood, he practiced the guitar whenever he could and eventually became a professional musician himself. Which of the following best describes Fred's genotype?

Fred's musical genes

Correct. One's genotype is his or her complete genetic makeup.

Fred's musical talent

Incorrect. Musical talent is the characteristic, or the phenotype.

Fred's nurturing parents

Fred's musical genes and musical talent

Answer: A

Difficulty: 2

Page: 50

Skill: A

Learning Objective: 2.1

Bloom's Taxonomy Level: Apply

Jill's mother was an All-American in the 1500 m and qualified for the Olympic team in the marathon. Jill is a freshman in high school and does not think that she will need to train to become a member of the school's cross country team. Jill keeps telling you that her mother was a great runner, so she will also be a great runner. What do you think?

She is correct; she will be a great runner no matter what she does.

Incorrect. Jill will need to train to become a great runner; that is, she will need to interact with the environment to express those genes.

It is unlikely that Jill even has the genotype for running.

Jill might have the genotype for running ability, but she will need to train become a great runner.

Correct. The athletic ability that may be present in Jill's genotype will not express itself if she does nothing to encourage it, such as training.

Jill has also inherited the genes for superior intelligence.

Answer: C

Difficulty: 2

Page: 50

Skill: A

Learning Objective: 2.1

Bloom's Taxonomy Level: Apply

Alejandro was born into a family with high musical talent. Both of his parents were professional musicians who encouraged and fostered his musical development. Throughout childhood, he practiced the guitar whenever he could and eventually became a professional musician himself. Which of the following best describes Alejandro's phenotype?

Alejandro's musical genes

Incorrect. Alejandro's musical genes are his genotype.

Alejandro's musical talent

Alejandro's nurturing parents

Correct. Alejandro's genotype includes exceptional musical ability, but it's his parents' support of this ability that encouraged those genes to be expressed.

Alejandro's practice of the guitar

Answer: C

Difficulty: 2

Page: 50

Skill: A

Learning Objective: 2.1

Bloom's Taxonomy Level: Apply

Thomas's biological mother and father are both gifted athletes. He was adopted by a couple who had no interest in him being involved in sports. Although Thomas likely inherited athletic ability, it was never expressed in his_.

genotype

phenotype

Correct. Thomas likely inherited his biological parents' genotype, but his adoptive parents' disinterest in sports likely inhibited the development of athletic ability in Thomas's phenotype.

genes

Incorrect. His genetic potential was not expressed in his phenotype.

alleles

Answer: B

Difficulty: 2

Page: 50

Skill: A

Learning Objective: 2.1

Bloom's Taxonomy Level: Apply

% correct 89 a = 7 b = 89 c = 3 d = 2 r = .18

On every pair of chromosomes there are how many forms of each gene?

1

2

3

4

Answer: B

Difficulty: 1

Page: 51

Skill: F

Learning Objective: 2.1

Bloom's Taxonomy Level: Remember

Each form of a gene that is contained within a chromosome is referred to as a _____.

dominant gene

recessive gene

allele

single gene

Answer: C

Difficulty: 1

Page: 51

Skill: F

Learning Objective: 2.1

Bloom's Taxonomy Level: Remember

What type of gene, if it is present, will be expressed in the phenotype?

recessive gene

dominant gene

Correct. Recessive genes will only be expressed when there is no dominant gene present.

expressed gene

controller gene

Incorrect. If a dominant gene is present, it will be expressed in the phenotype.

Answer: B

Difficulty: 1

Page: 51

Skill: C

Learning Objective: 2.1

Bloom's Taxonomy Level: Understand

If having more than five fingers occurs because of a dominant gene, what needs to happen for a person to have more than five fingers?

A person must have that dominant gene.

Correct. If a dominant gene is present, it will be expressed in the phenotype.

A person must have two recessive genes.

The gene must mutate.

Both dominant genes must be present.

Incorrect. For a dominant cell trait to be expressed, all that is needed is the presence of the dominant cell.

Answer: A

Difficulty: 2

Page: 51

Skill: A

Learning Objective: 2.1

Bloom's Taxonomy Level: Apply

If the gene for curly hair is dominant and the gene for straight hair is recessive, from a dominant-recessive pairing, which of the following would be an individual's phenotype?
a. straight hair

Incorrect. Straight hair is recessive.

curly hair

Correct. Since curly hair is a dominant trait and a heterozygotic pairing is present, the individual's phenotype would be the curly hair, because curly hair is dominant and straight hair is recessive.

dominant-recessive

their complete genetic makeup

Answer: B

Difficulty: 2

Page: 51

Skill: A

Learning Objective: 2.1

Bloom's Taxonomy Level: Apply

Jill's mother and father both have brown eyes, yet she has blue eyes. She has come to believe that she is not her parents' actual biological daughter. What would you tell her?

Her mother and father probably carry the recessive trait for blue eyes.

Correct. The blue-eyed child of two brown-eyed parents probably inherited a recessive blue-eyed gene from each parent.

She is correct; there is no way that she would have blue eyes if she were really her parents' biological daughter.

Incorrect. Her parents most likely carry the recessive trait from blue eyes.

Blue eyes are dominant, so her parents should have blue eyes too.

Only the environment determines eye color once the fetus has been born.

Answer: A

Difficulty: 2

Page: 51

Skill: A

Learning Objective: 2.1

Bloom's Taxonomy Level: Apply

correct 97 a = 97 b = 2 c = 1 d = 0 r = .20

For a recessive gene to be expressed in the phenotype, it must be paired with a_____.

dominant gene

recessive gene

Correct. Two recessive genes must be present for that trait to be expressed.

expressed gene

Incorrect. It must be paired with another recessive gene to be expressed.

controller gene

Answer: B

Difficulty: 1

Page: 51

Skill: C

Learning Objective: 2.1

Bloom's Taxonomy Level: Understand

Single gene pairs play a crucial role in development. However, it is more common that developmental outcomes occur because of the interaction of multiple genes. This is known as_____.

inheritability

polygenic inheritance

Correct. Polygenic inheritance accounts for characteristics such as height and weight as well as intelligence and personality.

bimodal inheritance

Incorrect. This type of inheritance is referred to as polygenic inheritance.

single dominance

Answer: B

Difficulty: 2

Page: 52

Skill: C

Learning Objective: 2.1

Bloom's Taxonomy Level: Understand

Characteristics such as height, weight, and skin color are made up of a_____.

homogenetic inheritance

heterogenetic inheritance

dominant-recessive inheritance

polygenic inheritance

Answer: D

Difficulty: 1

Page: 52

Skill: F

Learning Objective: 2.1

Bloom's Taxonomy Level: Remember

% correct 47 a = 6 b = 18 c = 29 d = 47 r = .16

The chromosomes that determine if a fetus will be male or female are known as the _____.

sex chromosomes

Correct. These are called XX in females and XY in males.

gender chromosomes

Incorrect. The sex chromosomes determine the sex of the offspring.

male chromosomes

female chromosomes

Answer: A

Difficulty: 1

Page: 52

Skill: C

Learning Objective: 2.2

Bloom's Taxonomy Level: Understand

If a fetus has the sex chromosomes XX, its genotype is_____.

female

Correct. Males have XY sex chromosomes.

male

Incorrect. XX genotype for the sex chromosome would be female.

undetermined

dimorphic

Answer: A

Difficulty: 1

Page: 52

Skill: C

Learning Objective: 2.2

Bloom's Taxonomy Level: Understand

If the fetus has the sex chromosomes XY, its genotype is_____.

female

Incorrect. XY genotype for the sex chromosome would be male.

male

Correct. Females have XX sex chromosomes.

undetermined

dimorphic

Answer: B

Difficulty: 1

Page: 52

Skill: C

Learning Objective: 2.2

Bloom's Taxonomy Level: Understand

A person with an XY pairing of chromosomes is a_____, whereas a person with an XX pairing of chromosomes is a_____.

male; female

female; male

homogenetic inheritance; polygenetic inheritance

polygenetic inheritance; homogenetic inheritance

Answer: A

Difficulty: 2

Page: 52

Skill: F

Learning Objective: 2.2

Bloom's Taxonomy Level: Remember

Which of the two sex chromosomes is significantly smaller and contains approximately 30% less genetic material?

X

Incorrect. The Y chromosome is notably smaller and contains less genetic material.

Y

Correct. The Y chromosome is notably smaller and contains only 1/2 the genetic material.

O

They are both the same.

Answer: B

Difficulty: 1

Page: 52

Skill: C

Learning Objective: 2.2

Bloom's Taxonomy Level: Understand

Of the following, which best describes the Y chromosome?

The Y chromosome is bigger than the X chromosome.

The Y chromosome contains about 30% less genetic material than the X chromosome.

The Y chromosome is responsible for determining the sex of the child.

There are no differences between the Y chromosome and the X chromosome.

Answer: B

Difficulty: 2

Page: 52

Skill: F

Learning Objective: 2.2

Bloom's Taxonomy Level: Remember

All eggs contain which sex chromosome?

a.X

Correct. Females carry no Y chromosomes.

Y

Incorrect. All ova contain only the X chromosome.

O

None

Answer: A

Difficulty: 1

Page: 52

Skill: C

Learning Objective: 2.2

Bloom's Taxonomy Level: Understand

All ova, a female reproductive egg, are_____.

X chromosome

Y chromosome

XY chromosome

XX chromosome

Answer: A

Difficulty: 1

Page: 52

Skill: F

Learning Objective: 2.2

Bloom's Taxonomy Level: Remember

What happens that determines the sex of the offspring?

The eggs or ovum contain the X chromosome and the sperm cells carry either the X or the Y. The sperm cell that is involved in fertilization determines the sex of the offspring.

Correct. The woman's ova are not responsible for determining a child's sex, as they carry only X chromosomes.

The sperm cells all carry the X chromosome. The ovum contains both the X and Y, so it is the ovum that determines the sex of the offspring.

Incorrect. The sperm cell determines the sex of the offspring because it either carries the Y or the X chromosome.

The ovum and sperm cells both carry X chromosomes. The placenta carries both the X and Y and it determines the sex of the offspring.

The ovum and the sperm cells both contain the X chromosome. During the course of fertilization either an X or a Y will be created, which determines the sex of the offspring.

Answer: A

Difficulty: 1

Page: 52

Skill: C

Learning Objective: 2.2

Bloom's Taxonomy Level: Understand

Your older brother has a friend who was angry with his wife because they have two sons and he wanted to have a daughter. He thought that she was responsible for having two boys rather than a boy and a girl. What would you tell your brother?

His friend was correct, she was purposefully having sons instead of a daughter.

It was not anyone's "fault," but the sperm determined the sex of the offspring.

Correct. The sex of the offspring is determined by which chromosome is contributed by the sperm.

It was not anyone's "fault" even though her ova determined the sex of the offspring.

Incorrect. The sperm cell determines the sex of the offspring.

Sex of the offspring is determined by day of the week. They both should have known what day they were trying to conceive.

Answer: B

Difficulty: 1

Page: 52

Skill: A

Learning Objective: 2.2

Bloom's Taxonomy Level: Apply

% correct 76 a = 6 b = 76 c = 12 d = 6 r = .17

Who is more affected by X-linked inherited disorders?

a. females

Incorrect. Males are more likely to be affected by X-linked inherited disorders.

males

Correct. Males are more affected because they do not have a second X chromosome that may be carrying a dominant gene to block the expression of an X-linked inherited disorder.

children under one year of age

adults with mutations

Answer: B

Difficulty: 1

Page: 52

Skill: C

Learning Objective: 2.2

Bloom's Taxonomy Level: Understand

Who are generally carriers of X-linked disorders?

females

males

individuals who have been exposed to teratogens

individuals with a trisomy

Answer: A

Difficulty: 1

Page: 52–53

Skill: F

Learning Objective: 2.2

Bloom's Taxonomy Level: Remember

Why are males more likely to have X-linked inherited disorders?

If the X chromosome contains the recessive gene for the disorder, their Y chromosome has no dominant gene to prevent it.

Correct. Males also would not have a second X chromosome that may contain a dominant gene to block the X-linked inherited disorder.

They are generally more immature at birth.

Androgen is a hormone that causes disorders to occur.

If the Y chromosome does not develop properly, the genes on this chromosome cannot prevent the disorder from occurring.

Incorrect. If the X chromosome contains the recessive gene for the disorder, the Y chromosome does not have the genes to counteract the gene on the X chromosome.

Answer: A

Difficulty: 1

Page: 52–53

Skill: C

Learning Objective: 2.2

Bloom's Taxonomy Level: Understand

Why are males more susceptible to X linked disorders?

Because males have an XX pairing of chromosomes; therefore, this increases their odds of a disorder.

Because males have an XY pairing of chromosomes and the Y chromosome is more likely to host a genetic disorder.

Because most genetic disorders are connected to the dominant gene and since men have an XY pairing a disorder is more likely to be expressed.

Because males have one X chromosome, and if a recessive gene for a disorder is present, he does not have another X chromosome that may contain a dominant gene to block its expression.

Answer: D

Difficulty: 3

Page: 52–53

Skill: F

Learning Objective: 2.2

Bloom's Taxonomy Level: Remember

Which of the following is an example of an X-linked disorder?

schizophrenia

hemophilia

bipolar disease

enuresis

Answer: B

Difficulty: 1

Page: 52–53

Skill: F

Learning Objective: 2.2

Bloom's Taxonomy Level: Remember

Your friend has hemophilia and was worried that he could pass it to his offspring when he had children. What would you tell him?

a.He is probably correct, he will pass hemophilia on.

Hemophilia is an X-linked disorder and it would be impossible for him to pass it to any male offspring. It would be possible for his female offspring to be carriers, though.

Correct. Since his male offspring would inherit his Y chromosome, he cannot pass along an X-linked disorder to them.

X-linked disorders are not inherited; he has no worries *Incorrect. X-linked disorders are inherited.*

Since he has hemophilia, he is probably sterile and unable to father children.

Answer: B

Difficulty: 1

Page: 52–53

Skill: A

Learning Objective: 2.2

Bloom's Taxonomy Level: Apply

Which of the following is an example of an X-linked inheritance disorder?

autism

Down syndrome

hemophilia

Turner's syndrome

Answer: C

Difficulty: 1

Page: 52–53

Skill: F

Learning Objective: 2.2

Bloom's Taxonomy Level: Remember

Nature is to _____ as nurture is to _____.

conditioning; learning

learning; conditioning

environment; genetics

genetics; environment

Answer: D

Difficulty: 1

Page: 53–54

Skill: F

Learning Objective: 2.3

Bloom's Taxonomy Level: Remember

% correct 82 a = 0 b = 6 c = 12 d = 82 r = .32

According to your text, what have researchers concluded about the nature–nurture debate in terms of development?

Genetics is more important.

Environment is more important.

Both are important.

Genetics is more important in infancy and environment in childhood.

Answer: C

Difficulty: 1

Page: 54

Skill: F

Learning Objective: 2.3

Bloom's Taxonomy Level: Remember

Which the following statements best describes the nature–nurture debate?

- Most characteristics develop solely from nature or nurture, but not both.
- Most characteristics develop from a combination of nature and nurture.
- Most characteristics develop from only nature.
- Most characteristics develop from only nurture.

Answer: B

Difficulty: 1

Page: 54

Skill: F

Learning Objective: 2.3

Bloom's Taxonomy Level: Remember

What field is concerned with the question of how much genes influence development?

- embryology
- behavior genetics
- developmental psychology
- genetics

Answer: B

Difficulty: 1

Page: 54

Skill: F

Learning Objective: 2.3

Bloom's Taxonomy Level: Remember

Which question best captures the spirit of most individuals who study human development with regard to the nurture/nature question?

- a. How do genes and environmental factors interact in the development of memory processes?

Correct. Human development is influenced by both genes and environment.

Which human behaviors are determined genetically, and which are determined by environmental factors?

Incorrect. Behavior is a collective contribution of both nature and nurture.

At what age do environmental factors surpass genetic factors as most important in human development?

Which genes are responsible for childhood behavior, and which genes are responsible for adult behavior?

Answer: A

Difficulty: 3

Page: 54

Skill: A

Learning Objective: 2.3

Bloom's Taxonomy Level: Apply

A behavioral geneticist would use which of the following research methods to study the influence of genetics?

- longitudinal studies
- cross-sectional studies
- quasi-experimental studies
- twin and adoption studies

Answer: D

Difficulty: 1

Page: 54

Skill: F

Learning Objective: 2.3

Bloom's Taxonomy Level: Remember

Monozygotic (MZ) twins are also known as_____.

- fraternal twins
- identical twins
- dizygotic twins
- conjoined twins

Answer: B

Difficulty: 1

Page: 54

Skill: F

Learning Objective: 2.3

Bloom's Taxonomy Level: Remember

What percentage of their genes do monozygotic twins have in common?

- 40%
- 60%
- 80%
- 100%

Answer: D

Difficulty: 1

Page: 54

Skill: F

Learning Objective: 2.3

Bloom's Taxonomy Level: Remember

Which of the following have a 100% genetic similarity to each other?

- brother and sister
- dizygotic twins
- cousins
- monozygotic twins

Answer: D

Difficulty: 1

Page: 54

Skill: F

Learning Objective: 2.3

Bloom's Taxonomy Level: Remember

If temperament were genetically based, which of the following would have the greatest degree of similarity?

- a. monozygotic twins
- Correct. Monozygotic twins have a 100% genetic similarity.*
- dizygotic twins
- Incorrect. Dizygotic twins have a 40 to 60% genetic similarity.*
- parents and children
- cousins

Answer: A

Difficulty: 1

Page: 54

Skill: C

Learning Objective: 2.3

Bloom's Taxonomy Level: Understand

Dizygotic (DZ) twins are also known as_____.

a.fraternal twins

Correct. Dizygotic twins result when a woman releases two ova and both are fertilized by sperm.

identical twins

Incorrect. Identical twins are monozygotic twins.

monozygotic twins

conjoined twins

Answer: A

Difficulty: 1

Page: 54

Skill: C

Learning Objective: 2.3

Bloom's Taxonomy Level: Understand

You are pushing a stroller that has two babies in it. One boy, dressed in blue, and one girl, dressed in pink. Someone stops you tells you how beautiful your baby boy and girl are. Then they ask if they are "identical twins." You tell them they are not, but what are you thinking?

It is impossible to have identical twins of different sexes.

Correct. Identical twins have exactly the same genotype, including sex.

They could be identical; that was a great question.

Incorrect. Identical twins share 100% of their genes, so they would both be of the same sex.

Fraternal twins are usually both girls.

Fraternal twins are usually both boys.

Answer: A

Difficulty: 1

Page: 54

Skill: A

Learning Objective: 2.3

Bloom's Taxonomy Level: Apply

correct 85 a = 85 b = 13 c = 1 d = 1 r = .20

What percentage of their genes do dizygotic twins have in common?

100%

70 to 90%

40 to 60%

10 to 30%

Answer: C

Difficulty: 1

Page: 54

Skill: F

Learning Objective: 2.3

Bloom's Taxonomy Level: Remember

Which of the following have a 40 to 60% similarity of genetic inheritance?

- identical twins
- fraternal twins
- cousins
- adopted siblings

Answer: B

Difficulty: 1

Page: 54

Skill: F

Learning Objective: 2.3

Bloom's Taxonomy Level: Remember

What type of study allows researchers to study whether certain behaviors or traits are more closely related to their genetics or their environment?

genetics

Incorrect. Adoption studies examine the effects of environment.

temperament

chromosomal

adoption

Correct. Adoption studies let researchers observe the behavior of parents and children who share no genetic material.

Answer: D

Difficulty: 1

Page: 54

Skill: C

Learning Objective: 2.3

Bloom's Taxonomy Level: Understand

_____ is an estimate of the extent to which genes are responsible for the differences among persons within a specific population.

Heritability

Reaction range

Genetic ratio

Environmental coefficient

Answer: A

Difficulty: 1

Page: 54

Skill: F

Learning Objective: 2.3

Bloom's Taxonomy Level: Remember

What is the name of the statistic that ranges from 0 to 1.00 and is used to estimate the degree to which genes are responsible for differences among people from a specific population?

genetic correlation

heritability estimate

concordance rate

chromosomal correction

Answer: B

Difficulty: 1

Page: 54

Skill: F

Learning Objective: 2.3

Bloom's Taxonomy Level: Remember

The heritability estimate ranges from_____.

1 to 100

0 to 1.00

1 to 5

0 to 20

Answer: B

Difficulty: 1

Page: 54

Skill: F

Learning Objective: 2.3

Bloom's Taxonomy Level: Remember

Professor Glossner proposes that the heritability of temperament is .80. Which of the following statements does Professor Glossner propose?

A large portion of temperament is determined by genetics.

Correct. Heritability is an estimate of the extent to which genes are responsible for the differences among persons within a specific population. The value of the heritability estimate ranges from 0 to 1.00. The higher the heritability, the more the characteristic is believed to be influenced by genetics.

A large portion of temperament is determined by environment. *Incorrect.*

From the estimate provided, 20% is determined by the environment.

80% of temperament is determined by the X chromosome.

20% of temperament is determined by the X chromosome.

Answer: A

Difficulty: 2

Page: 54

Skill: C

Learning Objective: 2.3

Bloom's Taxonomy Level: Understand

Your friend's mother is extremely intelligent. As a result, even though he usually does OK in school (2.8 GPA), he is convinced that he is a genius. What do you think?

a. Heritability estimates for intelligence are .50, so he is probably overestimating his intelligence.

Correct. Heritability estimates for intelligence are .50, so given his GPA, it is likely that he is exaggerating his level of intelligence.

He is definitely correct; he is likely a genius.

Incorrect. Heritability estimates for intelligence are .50, so given his GPA, it is likely that he is exaggerating his level of intelligence.

Actually, children of intellectually gifted adults are usually much lower in intelligence.

d. With a 2.8 GPA, he must be correct.

Answer: A

Difficulty: 2

Page: 54

Skill: A

Learning Objective: 2.3

Bloom's Taxonomy Level: Apply

According to your text, what percentage of variation of intelligence is estimated to be attributed to genetics?

- 25%
- 50%
- 75%
- 100%

Answer: B

Difficulty: 1

Page: 54

Skill: F

Learning Objective: 2.3

Bloom's Taxonomy Level: Remember

What measure allows researchers to estimate not just genetic influence, but of how much the environment allows the genes to be expressed?

- genetic correlation
- heritability estimate

Correct. Heritability is an estimate of the extent to which genes are responsible for the differences among persons within a specific population.

concordance rate

Incorrect. The heritability estimate includes not just genetics, but how much the environment allows the genes to be expressed.

chromosomal correction

Answer: B

Difficulty: 1

Page: 54

Skill: C

Learning Objective: 2.3

Bloom's Taxonomy Level: Understand

Concordance rate is defined as_____.

- the degree of similarity in characteristics among peoples of a cultural group
- the influence of genes on development by comparing people who share different amounts of their genes
- the percentage that indicates the degree of similarity in phenotype among pairs of family members
- the degree of difference as expressed by variations in environment

Answer: C

Difficulty: 3

Page: 52

Skill: F

Learning Objective: 2.3

Bloom's Taxonomy Level: Remember

% correct 88 a = 6 b = 0 c = 88 d = 6 r = .29

If you were to design a research study that examines depression in relation to concordance rate, which of the following are the best groups to use for comparison?

identical twins and fraternal twins

Correct. Monozygotic twins are identical with a 100% genetic similarity and dizygotic twins are fraternal with a 50% genetic similarity. Therefore, twin studies are important in estimating concordance rate.

college students and the general public

brothers and sisters

Incorrect. Brothers and sisters have a 50% genetic similarity. Therefore, a comparison with the same environment will be of little value.

parent(s) and children

Answer: A

Difficulty: 2

Page: 54–55

Skill: A

Learning Objective: 2.3

Bloom's Taxonomy Level: Apply

When concordance rates are higher among monozygotic twins than dizygotic twins, this indicates which of the following?

There is partially a genetic basis.

There is partially an environmental basis.

There is a 100% environmental cause.

There is a 100% genetic cause.

Answer: A

Difficulty: 2

Page: 55

Skill: F

Learning Objective: 2.3

Bloom's Taxonomy Level: Remember

Which measure allows behavior geneticists to determine the percentage of similarity in phenotype among pairs of family members and is used mostly to examine mental disorders?

genetic correlation

heritability estimate

Incorrect. Similarity of phenotypes is estimated with the concordance rate.

concordance rate

Correct. Concordance rates range from 0 to 100%. The higher the concordance rate, the more similar two persons are.

chromosomal correction

Answer: C

Difficulty: 1

Page: 54–55

Skill: C

Learning Objective: 2.3

Bloom's Taxonomy Level: Understand

Which of the following pairs would have a higher concordance rate for schizophrenia?

monozygotic twins

dizygotic twins

adopted siblings

cousins

Answer: A

Difficulty: 3

Page: 55

Skill: F

Learning Objective: 2.3

Bloom's Taxonomy Level: Remember

% correct 80 a = 80 b = 18 c = 1 d = 1 r = .38

If John has schizophrenia, how likely is it that his monozygotic twin brother will also have schizophrenia?

John's brother will also have schizophrenia.

There is an 80% probability that John's brother will have schizophrenia.

Incorrect. There is a 50% probability that his identical twin will also have schizophrenia.

There is a 50% probability that John's brother will have schizophrenia.

Correct. The concordance rate for schizophrenia among monozygotic, or identical, twins is 50%.

John's brother will not have schizophrenia.

Answer: C

Difficulty: 1

Page: 55

Skill: A

Learning Objective: 2.3

Bloom's Taxonomy Level: Apply

If John has schizophrenia, how likely is it that his dizygotic twin brother will also have schizophrenia?

John's brother will also have schizophrenia.

There is a 38% probability that John's brother will have schizophrenia.

Incorrect. There is an 18% probability that his fraternal twin will also have schizophrenia.

There is an 18% probability that John's brother will have schizophrenia.

Correct. The concordance rate for schizophrenia among dizygotic, or fraternal, twins is 18%.

John's brother will not have schizophrenia.

Answer: C

Difficulty: 1

Page: 55

Skill: A

Learning Objective: 2.3

Bloom's Taxonomy Level: Apply

_____ refers to the continuous bidirectional interactions between genes and environment.

Nature versus nurture

Epigenesis

Reaction range

Concordance rate

Answer: B

Difficulty: 1

Page: 55

Skill: F

Learning Objective: 2.4

Bloom's Taxonomy Level: Remember

Epigenesis suggests_____.

- the influence of the environment on genes is strongest
- the influence of genes on the environment is strongest
- the interactions between genes and environment are bidirectional
- there are no interactions between genes and environment

Answer: C

Difficulty: 1

Page: 55

Skill: F

Learning Objective: 2.4

Bloom's Taxonomy Level: Remember

The_____is when genes establish boundaries for environmental influences rather than specifically denoting a particular characteristic.

- reaction range
- nature-nurture debate
- genetic ratio
- concordance rate

Answer: A

Difficulty: 1

Page: 55

Skill: F

Learning Objective: 2.4

Bloom's Taxonomy Level: Remember

Genes establish a potential of expression and environment determines where a person's phenotype will fall. What is this boundary of genetic influence?

- environmental influence
- gene boundaries
- the inheritability estimate

Incorrect. The boundary of genetic influence is the reaction range.

- the reaction range

Correct. The reaction range is when genes establish boundaries for environmental influences.

Answer: D

Difficulty: 2

Page: 55

Skill: C

Learning Objective: 2.4

Bloom's Taxonomy Level: Understand

The concept of reaction range proposes that_____establish(es) boundaries, whereas _____ determines where a person falls within that range.

- genetics; environment
- environment; genetics
- phenotype; genotype
- polygenetic inheritance; homogenetic inheritance

Answer: A

Difficulty: 2

Page: 55

Skill: F

Learning Objective: 2.4

Bloom's Taxonomy Level: Remember

% correct 53 a = 53 b = 12 c = 0 d = 29 r = .48

Elizabeth was just born. Her father is 6'8" tall and her mother is 5'11" tall. It is quite likely that Elizabeth will be tall as well. However, the environment will play a role in her eventual height as well. The genetic potential for Elizabeth's height is known as the_.

environmental range

reaction range

Correct. The reaction range is when genes establish boundaries for environmental influences.

genetic range

Incorrect. Elizabeth's genetic potential for height is her reaction range.

interaction range

Answer: B

Difficulty: 2

Page: 55

Skill: A

Learning Objective: 2.4

Bloom's Taxonomy Level: Apply

correct 50 a = 9 b = 50 c = 32 d = 8 r = .40

Which of the following individuals illustrates a person who is closer to the peak of their reaction range?

a. Samir was born with a potential IQ of 145 (gifted IQ), was raised in an educationally enriching environment, and is a highly motivated learner. *Correct. Reaction range proposes that genetics establish limits, whereas one's environment places them on that scale. This means that Samir was born with a potential of an IQ of 145 and he is living within an environment that allows him to reach his fullest potential.*

Joseppi, who was born with a potential IQ of 145 (gifted IQ), was raised in an educationally deprived environment and is an unmotivated learner.

Incorrect. Joseppi has the genetic potential; however, his environment is limiting.

Susan was born with the potential IQ of 80 (below average IQ), was raised in an educationally deprived environment and is an unmotivated learner.

Iman, who was born with the potential IQ of 80 (below average IQ), was raised in an educationally enriching environment and is an unmotivated learner who makes little progress.

Answer: A

Difficulty: 2

Page: 55

Skill: A

Learning Objective: 2.4

Bloom's Taxonomy Level: Apply

In the past few decades, the average height of adults in Western countries has not changed much. This indicates that adult height for these countries has reached the upper boundary of their_____.

a. socio-economic range

health status
reaction range

Correct. Reaction range proposes that genetics establish limits, whereas one's environment places them on that scale.

range of genetic dominance

Incorrect. Adult height in Western countries has reached the upper boundary of their reaction range.

Answer: C

Difficulty: 2

Page: 55

Skill: C

Learning Objective: 2.4

Bloom's Taxonomy Level: Understand

Stress during pregnancy can have _____ effects on fetal development.

positive
negative
no
beneficial

Answer: B

Difficulty: 1

Page: 56

Skill: F

Learning Objective: 2.4

Bloom's Taxonomy Level: Remember

According to Boku, et al. (2015), early life stress is associated with genetic changes that may be precursors to _____ later in life.

psychiatric disorders
cardiovascular disorders
learning disorders
autism spectrum disorder

Answer: A

Difficulty: 1

Page: 55

Skill: F

Learning Objective: 2.4

Bloom's Taxonomy Level: Remember

Sandra Scarr and Kathleen McCartney proposed the theory of genotype → environment effects. Which subtype occurs in biological families because parents provide both genes and environment for their children?

passive genotype → environment effects

Correct. It's difficult to separate genetic influences from environmental influences because parents provide both.

evocative genotype → environment effects

Incorrect. The genotype → environment effect in this case would be passive genotype → environment effect.

active genotype → environment effects

inactive genotype → environment effects

Answer: A

Difficulty: 1

Page: 57

Skill: C

Learning Objective: 2.5

Bloom's Taxonomy Level: Understand

Sandra Scarr and Kathleen McCartney proposed the theory of genotype → environment effects. Which subtype occurs when a person's inherited characteristics bring about responses from others in their environment?

passive genotype → environment effects

Incorrect. The genotype → environment effect in this case would be evocative genotype environment effect.

evocative genotype → environment effects

Correct. An example would be a parent who buys more books for a child who seems to enjoy reading and thereby encourages the expression of her inherited interest in reading.

active genotype → environment effects

inactive genotype → environment effects

Answer: B

Difficulty: 1

Page: 57

Skill: C

Learning Objective: 2.5

Bloom's Taxonomy Level: Understand

Sandra Scarr and Kathleen McCartney proposed the theory of genotype → environment effects. Which subtype occurs when people seek out environments that correspond to their genotypic characteristics?

passive genotype → environment effects

evocative genotype → environment effects

active genotype → environment effects

Correct. An example would be an outgoing young adult seeking a career where she can interact with other people all day.

inactive genotype → environment effects

Incorrect. The genotype → environment effect in this case would be active genotype → environment effect.

Answer: C

Difficulty: 1

Page: 57–58

Skill: C

Learning Objective: 2.5

Bloom's Taxonomy Level: Understand

% correct 81 a = 7 b = 10 c = 81 d = 2 r = .37

Which of the following is the best example of active genotype → environment effects?

Since Jacob is good at math, his parents encourage further learning by playing math games with him each night.

Incorrect. The evocative genotype → environment results when a person's inherited characteristics evoke response from others.

Because everyone in the Martin family burns easily, they rarely go to the beach

and have moved to a colder weather State.

Correct. Active genotype → environment effects state that results occur when people seek out environments that correspond to their genotypic characteristics.

Maria has a green thumb and can grow anything in her garden. When her children were small, they played in the garden next to her. As they grew up, each child decided to go into agricultural fields.

Millie was a very round baby and was big for her age. Everyone in her family made comments about her large size and nicknamed her “Big Millie.”

Answer: B

Difficulty: 3

Page: 57–58

Skill: A

Learning Objective: 2.5

Bloom’s Taxonomy Level: Apply

What is the process of regular cell division called?

mitosis

meiosis

sex differentiation

dimorphic cell division

Answer: A

Difficulty: 1

Page: 59

Skill: F

Learning Objective: 2.6

Bloom’s Taxonomy Level: Remember

_____ is known as the normal process of cell reproduction in which chromosomes duplicate themselves and the cells divide to become two cells.

Meiosis

Mitosis

Polar bodies

Crossing over

Answer: B

Difficulty: 2

Page: 59

Skill: F

Learning Objective: 2.6

Bloom’s Taxonomy Level: Remember

What are the only cells in the human body that do not contain 46 chromosomes?

lens cells

neurons

hair cells

gametes

Answer: D

Difficulty: 1

Page: 60

Skill: F

Learning Objective: 2.6

Bloom’s Taxonomy Level: Remember

% correct 81 a = 4 b = 8 c = 7 d = 81 r = .31

Human sex cells, sperm and ova, each contain how many chromosomes?

- 23
- 46
- 23 pairs
- 46 pairs

Answer: A

Difficulty: 1

Page: 60

Skill: F

Learning Objective: 2.6

Bloom's Taxonomy Level: Remember

Sperm and ova are produced by which of the following, respectively?

- penis and uterus
- scrotum and vulva
- testes and ovaries
- kidneys and pancreas

Answer: C

Difficulty: 1

Page: 60

Skill: F

Learning Objective: 2.6

Bloom's Taxonomy Level: Remember

Through what process are gametes formed?

- mitosis
- meiosis
- sex differentiation
- dimorphic cell division

Answer: B

Difficulty: 1

Page: 60

Skill: F

Learning Objective: 2.6

Bloom's Taxonomy Level: Remember

In the process of meiosis, how many chromosomes does the cell originally have, and how many chromosomes are present when the gametes are formed?

- 92, 46
- 69, 46
- 46, 23
- 23, 23

Answer: C

Difficulty: 1

Page: 60

Skill: F

Learning Objective: 2.6

Bloom's Taxonomy Level: Remember

At the conclusion of meiosis, how many sperm cells have been formed?

- 2
- 4
- 8
- 16

Answer: B

Difficulty: 2

Page: 60

Skill: F

Learning Objective: 2.6

Bloom's Taxonomy Level: Remember

At the conclusion of meiosis, how many ova have been formed?

- 1 with 3 polar bodies
- 2 with 2 polar bodies
- 3 with 1 polar body
- 4 with no polar bodies

Answer: A

Difficulty: 1

Page: 60

Skill: F

Learning Objective: 2.6

Bloom's Taxonomy Level: Remember

According to the text, why does the ovum have an excessive amount of cytoplasm?

- so that there is ample room for the sperm's nucleus once it arrives
- to help protect against invading cells

Incorrect. Cytoplasm will be the main source of nutrition for the ovum.

- so that the ovum can be easily found by the sperm cells
- it will be the ovum's main source of nutrition

Correct. Cytoplasm is the ovum's source of nutrients for the first two weeks after fertilization.

Answer: D

Difficulty: 1

Page: 60

Skill: C

Learning Objective: 2.6

Bloom's Taxonomy Level: Understand

What is the process that allows mixing the combinations of genes in a single chromosome, resulting in a virtually infinite possible combination of genes?

- sampling from a large genetic pool
- gamete swapping
- crossing over
- mitosis

Answer: C

Difficulty: 1

Page: 60

Skill: F

Learning Objective: 2.6

Bloom's Taxonomy Level: Remember

The typical male ejaculation expels how many sperm?

- 100 to 300
- 100 to 300 thousand
- 100 to 300 million
- 100 to 300 billion

Answer: C

Difficulty: 2

Page: 60

Skill: F

Learning Objective: 2.6

Bloom's Taxonomy Level: Remember

Males begin producing sperm____, whereas females produce ova_____.

- at puberty; at puberty
- while in the womb; at puberty
- at puberty; while in the womb
- while in the womb; while in the womb

Answer: C

Difficulty: 2

Page: 60

Skill: F

Learning Objective: 2.6

Bloom's Taxonomy Level: Remember

How many ova are present in a female adolescent's ovaries in puberty?

- 20,000
- 40,000
- 60,000
- 80,000

Answer: B

Difficulty: 1

Page: 60

Skill: F

Learning Objective: 2.6

Bloom's Taxonomy Level: Remember

Most women will run out of fertile ova by the time they reach their_____.

- 30s
- 40s
- 50s
- 60s

Answer: B

Difficulty: 1

Page: 60

Skill: F

Learning Objective: 2.6

Bloom's Taxonomy Level: Remember

Lamar and Chandra recently got married and have been discussing how long they could wait to have children. Based upon the text, at what age, statistically speaking, will Chandra run out of fertile ova?

30s

Incorrect. Most women run out of ova at some point in their 40s.

40s

Correct. By contrast, men produce sperm throughout their adult lives, although the quality and quantity may decline with age.

50s

60s

Answer: B

Difficulty: 1

Page: 60

Skill: A

Learning Objective: 2.6

Bloom's Taxonomy Level: Apply

How many days into the woman's menstrual cycle does ovulation occur?

2

14

28

40

Answer: B

Difficulty: 1

Page: 61

Skill: F

Learning Objective: 2.7

Bloom's Taxonomy Level: Remember

Fertilization is most likely to occur when intercourse occurs_____.

a. within 2 days before and on the day of ovulation

Correct. It can take sperm from a few hours to a whole day to travel up the fallopian tubes.

2 days after ovulation

Incorrect. Fertilization is likely to occur within two days before and on the day of ovulation.

5 days after ovulation

1 week after ovulation

Answer: A

Difficulty: 1

Page: 61

Skill: C

Learning Objective: 2.7

Bloom's Taxonomy Level: Understand

According to the text, how long can sperm live in the woman's body after ejaculation?

12 hours

1 day

5 days

1 week

Answer: C

Difficulty: 1

Page: 61

Skill: F

Learning Objective: 2.7

Bloom's Taxonomy Level: Remember

When the ovum and sperm cells unite and fertilization has occurred, what has just been formed?

- the fetus
- the embryo
- the blastocyst

Incorrect. When the ovum and sperm cells unite, the zygote has been formed.

the zygote

Correct. The zygote's 46 paired chromosomes constitute the new organism's unique genotype.

Answer: D

Difficulty: 1

Page: 61–62

Skill: C

Learning Objective: 2.7

Bloom's Taxonomy Level: Understand

There are between 100 and 300 million sperm in one ejaculation. How many will make it to the ovum during sexual intercourse?

- 5 million
- 500,000 thousand
- 1000
- a few hundred

Answer: D

Difficulty: 1

Page: 61

Skill: F

Learning Objective: 2.7

Bloom's Taxonomy Level: Remember

When the ovum is fertilized by the sperm, this is called_____.

- fertility
- conception
- cervix
- gametes

Answer: B

Difficulty: 2

Page: 61–62

Skill: F

Learning Objective: 2.7

Bloom's Taxonomy Level: Understand

Which of the following has increased due to advancements in fertility treatments?

- monozygotic twins
- dizygotic twins
- conjoined twins

Siamese twins

Answer: B
Difficulty: 2
Page: 63
Skill: F
Learning Objective: 2.8
Bloom's Taxonomy Level: Remember

How is infertility defined?

the presence of endometriosis
when the male has a low sperm count
inability to conceive after trying for a year
no desire to have children

Answer: C
Difficulty: 1
Page: 62
Skill: C
Learning Objective: 2.8
Bloom's Taxonomy Level: Understand

According to the text, infertility rates have remained constant over the past century at the rate of

_____.
1–5%
10–15%
20–25%
30–35%

Answer: B
Difficulty: 1
Page: 62
Skill: F
Learning Objective: 2.8
Bloom's Taxonomy Level: Remember

Over the past century, the rate of infertility in the United States has _____.

remained the same at 35%
declined to 5%
remained the same at 10–15%
declined to 10–25%

Answer: C
Difficulty: 3
Page: 62
Skill: F
Learning Objective: 2.8
Bloom's Taxonomy Level: Remember

Which of the following are three main sources for male infertility?

erectile difficulties, decreased libido, and low sperm count
sperm death, poor sperm mobility, and low seminal fluid
low sperm production, poor sperm quality, and poor sperm movement
low sperm production, increased libido, and poor sperm movement

Answer: C

Difficulty: 2

Page: 62

Skill: F

Learning Objective: 2.8

Bloom's Taxonomy Level: Remember

It takes approximately three times longer for men over the age of 40 to impregnate a partner than it does for men under age 25. Why?

lack of libido

endometriosis

decrease in the quantity and quality of their sperm

their partner's fertility

Answer: C

Difficulty: 1

Page: 62

Skill: C

Learning Objective: 2.8

Bloom's Taxonomy Level: Understand

Rashid and Varsha are seeking fertility treatment and were informed by their physician that Rashid's sperm count is low and the quality is poor. Which of the following suggestions were made to help increase his sperm production and quality?

Quit smoking, decrease alcohol consumption, and do not abuse drugs.

Start a calcium regimen, consume more iron, and take a multivitamin.

Exercise daily, increase caffeine consumption, and reduce stress.

Avoid wearing boxer shorts and switch to tighter underwear.

Answer: A

Difficulty: 2

Page: 62

Skill: C

Learning Objective: 2.8

Bloom's Taxonomy Level: Understand

_____ is the most common cause of infertility in women.

Alcohol

Stress

Age

Smoking

Answer: C

Difficulty: 2

Page: 62

Skill: F

Learning Objective: 2.8

Bloom's Taxonomy Level: Remember

In most cultures and throughout history, infertility has been regarded mostly as a problem that originates from_____.

a lack of spiritual commitment

the male

the female

both the male and female

Answer: C

Difficulty: 1

Page: 63

Skill: F

Learning Objective: 2.8

Bloom's Taxonomy Level: Remember

What is the oldest effective treatment for infertility?

- in vitro fertilization
- nutritional supplements
- surrogate motherhood
- artificial insemination

Answer: D

Difficulty: 1

Page: 63

Skill: F

Learning Objective: 2.8

Bloom's Taxonomy Level: Remember

_____ is the process in which sperm is injected directly into the uterus, and is the simplest and most effective reproductive treatment.

- In vitro fertilization
- Artificial insemination
- Amniocentesis
- Infertility injections

Answer: B

Difficulty: 2

Page: 63

Skill: F

Learning Objective: 2.8

Bloom's Taxonomy Level: Remember

What is the success rate of artificial insemination?

- 10%
- 40%
- 70%
- 100%

Answer: C

Difficulty: 1

Page: 63

Skill: F

Learning Objective: 2.8

Bloom's Taxonomy Level: Remember

What is the most common approach to female infertility if the woman cannot ovulate properly?

- eliminating nutritional deficiencies
- fertility drugs
- increasing the frequency of intercourse
- herbal therapy

Answer: B

Difficulty: 1

Page: 63

Skill: F

Learning Objective: 2.8

Bloom's Taxonomy Level: Remember

More than half of the women who take fertility drugs become pregnant in how many cycles (months)?

2

6

10

20

Answer: B

Difficulty: 1

Page: 63

Skill: F

Learning Objective: 2.8

Bloom's Taxonomy Level: Remember

Which of the following are known risks associated with fertility drugs?

hypertension, cardiac arrhythmias, and gastrointestinal problems

depression, anxiety, and suicidal thoughts

blood clots, kidney damage, and damage to the ovaries

diabetes, endometriosis, and eczema

Answer: C

Difficulty: 3

Page: 63

Skill: F

Learning Objective: 2.8

Bloom's Taxonomy Level: Remember

Depending on the drug, what percentage of multiple births results from using fertility drugs?

1–2%

10–25%

40–55%

60–75%

Answer: B

Difficulty: 1

Page: 63

Skill: F

Learning Objective: 2.8

Bloom's Taxonomy Level: Remember

A friend tells you that she is on a fertility drug to increase the number of follicles during ovulation and is so excited about the possibility of having twins. Based upon the reading, would you agree that she has an increased possibility of conceiving twins?

Yes, fertility drugs increase the rate of multiple births by increasing the probability of releasing more than one ovum; which might lead to fraternal twins.

No, the use of fertility drugs is in no way related in giving birth to twins.

No, having twins is unpredictable and modern medicine has not been able to alter the process in any way.

Yes, infertility drugs have shown to increase the rate of identical twins; however these pregnancies have a much higher rate of miscarriage than non-multiple pregnancies.

Answer: A

Difficulty: 3

Page: 63

Skill: A

Learning Objective: 2.8

Bloom's Taxonomy Level: Apply

What fertility technique extracts ova, combines them with sperm, and, after a few days, implants two or three blastocysts into the woman's uterus?

in vitro fertilization

nutritional supplements

surrogate motherhood

artificial insemination

Answer: A

Difficulty: 1

Page: 64

Skill: F

Learning Objective: 2.8

Bloom's Taxonomy Level: Remember

Short Answer Questions

Give an example that explains the difference between phenotype and genotypes.

Answer: Two identical twins will have the same genotype because their genetic makeup is exactly the same, but if they were adopted into homes with parents who had different views about health, they may have different phenotypes. One may be overweight because eating junk food is the norm, whereas the other twin may have a trim athletic build because fitness was always a part of the family's routine and involvement in sports was encouraged.

Page: 50

Learning Objective: 2.1

Bloom's Taxonomy Level: Apply

You have likely heard people say, "The father is the one who determines the sex of the child." Explain whether or not this is true.

Answer: Females' eggs have two X chromosomes and males' sperm contains either an X or a Y. When a zygote is formed, it always gets an X from the female, but it can get either an X or a Y from the male. If it gets a Y, the result is a male; if it gets an X, it becomes a female.

Page: 52

Learning Objective: 2.2

Bloom's Taxonomy Level: Understand

Although often viewed as the stronger sex, explain why males are actually more vulnerable.

Answer: Because the sex chromosome of females is composed of two Xs, if one of these Xs contains a recessive gene for a disorder or disease, it will not manifest itself due to the other

X overriding it and not allowing it to be expressed. Since the sex chromosome makeup of the male is XY, if there is a recessive gene for a disorder on his X chromosome, it will express itself because there is not another X chromosome that may contain a dominant gene to block its expression.

Page: 52–53

Learning Objective: 2.2

Bloom's Taxonomy Level: Understand

The concordance rate for schizophrenia among identical twins is .40; the concordance rate for schizophrenia is only .10 if a person's parent has schizophrenia. Explain what these numbers mean. Include a discussion of nature and nurture in your response.

Answer: This means that if one MZ twin has schizophrenia, there is a 40% chance that the other twin will also develop this disorder, whereas there is only a 10% chance of developing it if your mother or father has it. The higher rate for identical twins means that there is a genetic component to schizophrenia. However, there is still a 60% chance of not getting schizophrenia if your MZ has it, so environment plays a greater role than genes.

Page: 54–54

Learning Objective: 2.3

Bloom's Taxonomy Level: Understand

What is a reaction range? Provide an example to illustrate.

Answer: A reaction range refers to the range of possibilities that a person is capable of as set forth by their genetic makeup. It is similar to one's genetic potential. If a person's parents are both short in stature with a petite frame, it is genetically possible that the child will have a body type suitable to be a jockey. However, the environment plays an important role; if the person eats a high fat diet and does not maintain her health, she may not have the trim, strong build required for this work.

Page: 55

Learning Objective: 2.4

Bloom's Taxonomy Level: Apply

Essay Questions

Explain how DZ and MZ twins are formed. Include a discussion of how twin studies help to inform the nature-nurture debate.

Answer: DZ twins result when the female releases two eggs instead of one and each is fertilized with a sperm. MZ twins result when a zygote is formed and it divides. MZ twins share 100% of their genotype, whereas DZ twins share approximately 40–60% of their genetic inheritance. When MZ twins are more similar than DZ twins this indicates that genetics play a strong role.

Page: 54

Learning Objective: 2.3

Bloom's Taxonomy Level: Understand

TOTAL**ASSESSMENT
GUIDE****Chapter 2-Section 2****Prenatal Development and Prenatal Care**

Learning Objective		Remember	Understand	Apply
Learning Objective 2.9	Multiple Choice	1, 2, 3, 5, 7, 9, 11, 12, 13	4, 6, 8, 10	
	Short Answer			
	Essay		115	
Learning Objective 2.10	Multiple Choice	14, 15, 17, 21, 23, 24	16, 18, 19, 20, 22, 25, 26, 27	
	Short Answer			
	Essay		115	
Learning Objective 2.11	Multiple Choice	29, 31, 33, 34, 39, 41, 42, 43, 44, 48	28, 30, 35, 36, 45, 46, 47, 49, 50, 52, 53	32, 37, 38, 40, 51, 54
	Short Answer	107		
	Essay		115	116
Learning Objective 2.12	Multiple Choice	55, 57, 58, 59, 69, 71, 75	56, 61, 62, 64, 65, 66, 68, 70, 72, 73, 74	60, 63, 67
	Short Answer		109, 111	108
	Essay			
Learning Objective 2.13	Multiple Choice	76, 78, 79, 80, 83, 84, 88, 90, 91, 92, 95, 100, 101, 103, 104	77, 81, 82, 85, 86, 87, 89, 93, 94, 96, 97, 98, 99, 106	102, 105
	Short Answer	112, 113, 114	110	
	Essay			117

Section 2 Prenatal Development and Prenatal Care

Test Item File

Multiple Choice Questions

What are the first 2 weeks after fertilization referred to as?

- the germinal period
- the embryonic period
- the fetal period
- the fertilization period

Answer: A

Difficulty: 1

Page: 7

Skill: F

Learning Objective: 2.9

Bloom's Taxonomy Level: Remember

The first 2 weeks after fertilization is known as _____.

- conception
- the germinal period
- the embryonic period
- the fetal period

Answer: B

Difficulty: 1

Page: 67

Skill: F

Learning Objective: 2.9

Bloom's Taxonomy Level: Remember

% correct 94 a = 0 b = 94 c = 6 d = 0 r = .18

By the end of the first week following conception, the fertilized egg now has approximately 100 cells and is known as the _____.

- neonate
- fetus
- embryo
- blastocyst

Answer: D

Difficulty: 2

Page: 67

Skill: F

Learning Objective: 2.9

Bloom's Taxonomy Level: Remember

% correct 46 a = 15 b = 23 c = 15 d = 46 r = .47

Which of the following is a correct sequence of development during the germinal period?

- placenta, implantation, blastocyst

Incorrect. During the germinal period, the zygote divides and forms the blastocyst, which implants in the uterus and begins forming the amnion, placenta, and umbilical cord.

- blastocyst, implantation, placenta

Correct. During the germinal period, the zygote divides and forms the blastocyst, which implants in the uterus and begins forming the amnion, placenta, and umbilical cord.

placenta, blastocyst, implantation
implantation, placenta, blastocyst

Answer: B

Difficulty: 3

Page: 67

Skill: C

Learning Objective: 2.9

Bloom's Taxonomy Level: Understand

The blastocyst will implant itself into the uterine wall during the _____ after conception.

first day
second day
first week
second week

Answer: D

Difficulty: 2

Page: 67

Skill: F

Learning Objective: 2.9

Bloom's Taxonomy Level: Remember

When the blastocyst becomes firmly embedded into the lining of the uterus, what has happened?

implantation

Correct. This occurs during the second week after conception.

fertilization

Incorrect. When the blastocyst becomes embedded into the uterus, implantation has occurred.

conception
pregnancy

Answer: A

Difficulty: 1

Page: 67

Skill: C

Learning Objective: 2.9

Bloom's Taxonomy Level: Understand

When does implantation of the blastocyst occur?

at conception
during the second week after conception
during the second month after conception
during the second trimester after conception

Answer: B

Difficulty: 2

Page: 67

Skill: F

Learning Objective: 2.9

Bloom's Taxonomy Level: Remember

According to the text, what structure provides a protective environment in which the fetus's temperature is well regulated and protects the fetus from friction caused by the mother's movements?

the placenta

Incorrect. The amnion protects the fetus.

the umbilical cord

the amnion

Correct. The amnion develops from the trophoblast during the second week during the second week after conception.

the germinal structure

Answer: C

Difficulty: 2

Page: 67

Skill: C

Learning Objective: 2.9

Bloom's Taxonomy Level: Understand

% correct 64 a = 36 b = 0 c = 64 d = 0 r = .21

The outer layer of cells that will form the structures that will provide protection and nourishment for the newly formed organism is the_____.

umbilical cord

placenta

embryonic disk

trophoblast

Answer: D

Difficulty: 3

Page: 67

Skill: F

Learning Objective: 2.9

Bloom's Taxonomy Level: Remember

The inner layer of the blastocyst that will become the embryo is the_____.

umbilical cord

placenta

Incorrect. The inner layer of the blastocyst is the embryonic disk.

embryonic disk

Correct. This is part of the blastocyst that is formed about one week after conception.

trophoblast

Answer: C

Difficulty: 2

Page: 67

Skill: C

Learning Objective: 2.9

Bloom's Taxonomy Level: Understand

The_____is/are the organ(s) that allow(s) nutrients to pass from the mother to the child and allow(s) waste to pass from the child to the mother during the course of pregnancy.

uterus

placenta

fallopian tubes

ovaries

Answer: B

Difficulty: 1

Page: 67

Skill: F

Learning Objective: 2.9

Bloom's Taxonomy Level: Remember

What structure provides nutrients from the mother to the fetus, takes waste products away from the fetus, and protects the fetus from bacteria and waste in the mother's blood?

- the placenta
- the umbilical cord
- the amnion
- the germinal structure

Answer: A

Difficulty: 2

Page: 67

Skill: F

Learning Objective: 2.9

Bloom's Taxonomy Level: Remember

% correct 35 a = 35 b = 41 c = 12 d = 0 r = .42

What percentage of blastocysts do not implant successfully?

- 15%
- 25%
- 50%
- 75%

Answer: C

Difficulty: 1

Page: 67

Skill: F

Learning Objective: 2.9

Bloom's Taxonomy Level: Remember

The embryonic period lasts from the _____ to the _____.

- 1st week; 4th week
- 3rd week; 8th week
- 6th week; 16th week
- 12th week; 32nd week

Answer: B

Difficulty: 2

Page: 67

Skill: F

Learning Objective: 2.10

Bloom's Taxonomy Level: Remember

% correct 78 a = 17 b = 78 c = 2 d = 3 r = .40

The embryonic period is _____ weeks long.

- 4
- 6
- 8
- 10

Answer: B

Difficulty: 1

Page: 67

Skill: F

Learning Objective: 2.10

Bloom's Taxonomy Level: Remember

During the embryonic period, the ectoderm is formed, which will become the_____.

a.skin, hair, nails, sensory organs and nervous system

Correct. The ectoderm is formed within the third week after conception.

muscles, bones, reproductive system and circulatory system

Incorrect. During the embryonic period, the ectoderm will become the skin, hair, nails, sensory organs and nervous system.

digestive and respiratory systems

hormonal and endocrine systems

Answer: A

Difficulty: 2

Page: 67

Skill: C

Learning Objective: 2.10

Bloom's Taxonomy Level: Understand

The outer layer of the embryonic disk will become_____.

the brain and spinal cord

skin, hair, nails, and the nervous system

muscle, bones, and the circulatory system

the digestive and respiratory systems

Answer: B

Difficulty: 3

Page: 67

Skill: F

Learning Objective: 2.10

Bloom's Taxonomy Level: Remember

During the embryonic period, the mesoderm is formed, which will become the_____.

skin, hair, nails, sensory organs, and nervous system

muscles, bones, reproductive system, and circulatory system

Correct. The mesoderm is formed within the third week after conception.

digestive and respiratory systems

Incorrect. During the embryonic period, the mesoderm is formed, which will become the muscles, bones, reproductive system and circulatory system.

hormonal and endocrine systems

Answer: B

Difficulty: 2

Page: 67

Skill: C

Learning Objective: 2.10

Bloom's Taxonomy Level: Understand

During the embryonic period, the endoderm is formed, which will become the_____.

skin, hair, nails, sensory organs and nervous system

Incorrect. During the embryonic period, the endoderm is formed, which will become the digestive and respiratory systems.

muscles, bones, reproductive system and circulatory system
digestive and respiratory systems

Correct. The endoderm is formed within the third week after conception.
hormonal and endocrine systems

Answer: C

Difficulty: 2

Page: 67

Skill: C

Learning Objective: 2.10

Bloom's Taxonomy Level: Understand

What embryonic structure will become the brain and spinal cord?

brain stem
neural blast

Incorrect. The neural tube will become the brain and spinal cord.
neural tube

Correct. The neural tube is formed by the end of the third week after conception.
cerebral cortex

Answer: C

Difficulty: 2

Page: 67

Skill: C

Learning Objective: 2.10

Bloom's Taxonomy Level: Understand

% correct 65 a = 12 b = 6 c = 65 d = 18 r = .50

By the end of the third week, the neural tube begins to form. This structure will eventually become_____.

the skull and torso
the legs and arms
the spinal cord and brain
the lungs and the digestive system

Answer: C

Difficulty: 2

Page: 67

Skill: F

Learning Objective: 2.10

Bloom's Taxonomy Level: Remember

% correct 98 a = 0 b = 0 c = 98 d = 2 r = .22

Damage to the neural tube would consist of_____.

problems with the formation of the digestive system
the umbilical cord not connecting the placenta to the uterus

Incorrect. The umbilical cord is not the neural tube.

the skin not developing pores and hair follicles
the spinal cord and brain not developing correctly

Correct. The neural tube is formed by the end of the third week after conception and creates the brain and spinal cord.

Answer: D

Difficulty: 2

Page: 67

Skill: C

Learning Objective: 2.10

Bloom's Taxonomy Level: Understand

At what rate are neurons produced during the embryonic period?

- 25 per minute
- 250 per minute
- 250,000 per minute
- 2 billion per minute

Answer: C

Difficulty: 1

Page: 67

Skill: F

Learning Objective: 2.10

Bloom's Taxonomy Level: Remember

By the end of the fourth week, the embryo's head is apparent and the eyes, nose, mouth, and ears begin to form. How long is the embryo at this point?

- 1/4 inch
- 4 inches
- 8 inches
- 12 inches

Answer: A

Difficulty: 1

Page: 68

Skill: F

Learning Objective: 2.10

Bloom's Taxonomy Level: Remember

Nearly all of the major organs are formed during what period?

- genetic
- zygotic
- fetal

Incorrect. The major organs are formed during the embryonic period.

embryonic

Correct. This period lasts from the third to eighth week after conception.

Answer: D

Difficulty: 2

Page: 68

Skill: C

Learning Objective: 2.10

Bloom's Taxonomy Level: Understand

% correct 63 a = 0 b = 7 c = 29 d = 63 r = .33

At the end of the eighth week, the embryo is only one inch long and weighs just one gram.

According to the text, what can the embryo now do?

- step in place
- suck its thumb

Incorrect. The embryo can respond to touch during this time.

- vocalize
- respond to touch

Correct. The embryo's sense of touch is especially sensitive around its mouth at this point.

Answer: D
 Difficulty: 2
 Page: 68
 Skill: C
 Learning Objective: 2.10
 Bloom's Taxonomy Level: Understand

By the end of the eighth week, the embryo_____.

- is unrecognizable as human
- responds to touch and can move

Correct. The embryo's sense of touch is especially sensitive around its mouth at this point.

- has yet to develop major organs
- has fully developed sex organs

Incorrect. By the end of the eighth week, the embryo responds to touch and all of the main organs are formed except the sex organs.

Answer: B
 Difficulty: 2
 Page: 68
 Skill: C
 Learning Objective: 2.10
 Bloom's Taxonomy Level: Understand

The fetal period ends at birth. When does it begin?

- a.4 weeks after conception
- Incorrect. The fetal period begins nine weeks after conception.*
- 9 weeks after conception
- Correct. The fetal period follows the embryonic period.*
- 12 weeks after conception
- 15 weeks after conception

Answer: B
 Difficulty: 2
 Page: 68
 Skill: C
 Learning Objective: 2.11
 Bloom's Taxonomy Level: Understand

The_____period lasts from the ninth week after conception until birth.

- germinal
- embryonic
- fetal
- zygote

Answer: C
 Difficulty: 1
 Page: 68
 Skill: F
 Learning Objective: 2.11

Bloom's Taxonomy Level: Remember

Fernando and Rebecca are anxious to know the sex of their baby. It would not be until the end of the _____ month of pregnancy that they can find out, because the genitalia will not have fully formed before then.

2nd

3rd

Correct. Fingernails, toenails, and taste buds begin to develop at the same time.

4th

Incorrect. By the end of the third month, genitalia are formed.

5th

Answer: B

Difficulty: 2

Page: 68

Skill: C

Learning Objective: 2.11

Bloom's Taxonomy Level: Understand

According to the text, how early can the fetus's heartbeat be heard with a stethoscope?

during the third week

during the third month

during the fifth month

during the seventh month

Answer: B

Difficulty: 1

Page: 68

Skill: F

Learning Objective: 2.11

Bloom's Taxonomy Level: Remember

Your friend just had her first pregnancy check-up and is just starting her second month of pregnancy. She is very upset that she was not given the chance to hear her fetus's heartbeat. Remembering what you learned in developmental class, what should you tell her?

That probably means that the fetus died.

Incorrect. It is not likely that the heartbeat can be heard until the third month.

She will not be able to hear the heartbeat with a stethoscope until the third month.

Correct. It is not until the third month of pregnancy that a fetal heartbeat can typically be heard using a stethoscope.

The fetus probably has a heart problem.

The doctor did not want her to hear the fetal heartbeat.

Answer: B

Difficulty: 2

Page: 68

Skill: A

Learning Objective: 2.11

Bloom's Taxonomy Level: Apply

At three months, the average fetus_____.

weighs three ounces and is three inches long

weighs three pounds and is three inches long

has developed three brain structures
has developed three sensory systems

Answer: A
Difficulty: 1
Page: 68
Skill: F
Learning Objective: 2.11
Bloom's Taxonomy Level: Remember

By the end of the third month, the typical fetus can be described as “three times three” because_____.

it has been three months, the fetus weighs three ounces, and is three inches long
it weighs three pounds, is three inches long, and has three senses
three major systems have developed: brain, heart, and lungs
all three facial features are clearly distinguishable

Answer: A
Difficulty: 2
Page: 68
Skill: F
Learning Objective: 2.11
Bloom's Taxonomy Level: Remember

Prenatal development is divided into segments. What are these segments called?

fetalesters
prenatal sections
semesters

*Incorrect. These segments are referred to as trimesters.
trimesters*

Correct. Prenatal development is divided into 3-month trimesters.

Answer: D
Difficulty: 1
Page: 68
Skill: C
Learning Objective: 2.11
Bloom's Taxonomy Level: Understand

By the end of what month do pregnant women typically feel the movements of the fetus?

second
fourth

Correct. The fetus's movements diversify over the course of the second trimester.

sixth

Incorrect. Pregnant women typically feel the movement of the fetus during the fourth month.

eight

Answer: B
Difficulty: 1
Page: 68
Skill: C
Learning Objective: 2.11
Bloom's Taxonomy Level: Understand

Your sister-in-law just finished her fourth month of pregnancy. She swears that she can feel the movements of her fetus. Is this likely? After what month do women generally feel the fetus move?

Yes, she has probably been feeling the fetus move since the second month.

Yes, pregnant women can usually begin feeling the fetus's movements by the fourth month of pregnancy.

Correct. The fetus's movements begin to diversify at this time, and include kicking, hiccupping, and thumb sucking.

No, the fetus is not developed enough to move very much until the end of the sixth month of pregnancy.

Incorrect. Pregnant women typically feel the movement of the fetus during the fourth month.

No, it is very difficult for a pregnant woman to feel the fetus's movement until the fetus is viable, during the 8th month of pregnancy.

Answer: B

Difficulty: 1

Page: 68

Skill: A

Learning Objective: 2.11

Bloom's Taxonomy Level: Apply

Susan is talking to her friend, who is at the end of her second trimester. Lucila wants to be reassured that she is not crazy, but thinks her baby actually kicks, turns, and hiccups. Lucila even thinks that the baby becomes more active if she talks to it. If you were Susan, how would you respond to Lucila's observations?

a. "Lucila, those activities are normal for the end of the second trimester, and fetuses can hear even in the womb."

Correct. These are all normal actions and responses for a pregnant woman to feel.

"Lucila, I think you are going crazy. A fetus really doesn't kick that early in the pregnancy and it's crazy to think it can hear."

"Lucila, all those things do happen, but not really until the end of the third trimester."

Incorrect. During the second trimester, the mother can feel movement from the fetus. The fetus kicks, turns, hiccups, sucks its thumb, breathes amniotic fluid, and responds to sounds, especially music and familiar voices.

"Lucila, I think you need to go see your doctor because something is absolutely wrong."

Answer: A

Difficulty: 2

Page: 68

Skill: A

Learning Objective: 2.11

Bloom's Taxonomy Level: Apply

What is the name of the white slimy substance that covers the fetus's skin?

lanugo

vernix

keratin

ossicles

Answer: B

Difficulty: 2

Page: 68

Skill: F

Learning Objective: 2.11

Bloom's Taxonomy Level: Remember

A fellow worker was present at his son's birth. He was really upset because his son was born with a white substance all over his skin and no one told him what the problem was. You should tell him_.

that it was probably cancer

that his baby probably had something wrong with it; you have never heard of such a thing

Incorrect. The white substance is called vernix and is normal.

that the white substance was vernix and many babies have that at birth; it protects their skin in utero

Correct. The white substance is called vernix and is normal.

that that was a greasy like substance that is used to help the baby emerge from the birth canal; they will wash it off later

Answer: C

Difficulty: 2

Page: 68

Skill: A

Learning Objective: 2.11

Bloom's Taxonomy Level: Apply

% correct 82 a = 0 b = 0 c = 82 d = 12 r = .20

The purpose of lanugo is to_____.

work as a lubricant during the birthing process

lubricate the lungs

guide neuro-migration during brain development

help the vernix stick to the fetus's skin, which protects against chapping

Answer: D

Difficulty: 2

Page: 68

Skill: F

Learning Objective: 2.11

Bloom's Taxonomy Level: Remember

What is the name of the downy hair that covers the fetus?

lanugo

vernix

keratin

ossicles

Answer: A

Difficulty: 1

Page: 68

Skill: F

Learning Objective: 2.11

Bloom's Taxonomy Level: Remember

What is the term used to describe the fetus's likelihood of surviving outside of the uterus?

a. survival index

Apgar Score
Braxton Hicks
viability

Answer: D

Difficulty: 1

Page: 68

Skill: F

Learning Objective: 2.11

Bloom's Taxonomy Level: Remember

% correct 53 a = 24 b = 0 c = 18 d = 53 r = .35

_____ is the term for an infant's ability to survive outside the womb if born preterm/premature.

Immaturity
Small for size
Viability
Survivability

Answer: C

Difficulty: 1

Page: 68

Skill: F

Learning Objective: 2.11

Bloom's Taxonomy Level: Remember

What is the likely outcome for a fetus whose mother lives in a developing country and is born before the end of the second trimester? The newborn will probably_____.

not survive

Correct. Access to the necessary advanced medical care is scarce in developing countries, so the newborn's chances of survival are not strong.

be healthy

Incorrect. It is more likely that the newborn will not survive.

have an Apgar score of at least 7

have a breech birth

Answer: A

Difficulty: 1

Page: 68–69

Skill: C

Learning Objective: 2.11

Bloom's Taxonomy Level: Understand

The last major organ system to develop during fetal life is the_____.

heart

Incorrect. The last major organs to develop are the lungs.

lungs

Correct. Even a baby born in the seventh or eighth month of pregnancy may need the help of a respirator to breathe.

intestines

skeletal muscles

Answer: B

Difficulty: 1

Page: 69

Skill: C

Learning Objective: 2.11

Bloom's Taxonomy Level: Understand

% correct 68 a = 8 b = 68 c = 7 d = 17 r = .27

Newborns weighing less than what weight are at risk for a wide range of developmental difficulties?

5.5 pounds

Correct. Many of these developmental difficulties will be discussed in Chapter 3.

7.0 pounds

Incorrect. Newborns weighing less than 5.5 pounds are at risk.

8.5 pounds

10 pounds

Answer: A

Difficulty: 1

Page: 69

Skill: C

Learning Objective: 2.11

Bloom's Taxonomy Level: Understand

As a result of evolutionary history, which of the following structures is the most underdeveloped at birth?

the lungs

the spinal cord

the brain

the digestive system

Answer: C

Difficulty: 2

Page: 69

Skill: F

Learning Objective: 2.11

Bloom's Taxonomy Level: Remember

Humans are born with immature brains that are incompletely developed. One result is that babies_____.

are less vulnerable to environmental difficulties

Incorrect. The environment has a greater effect and parental care is required for a longer period than with other animals.

learn to care for themselves very quickly

have a genetic resistance to infection

require parental care for a longer time than other animals

Correct. As we learned in Chapter 1, this is a result of evolutionary history.

Answer: D

Difficulty: 1

Page: 69

Skill: C

Learning Objective: 2.11

Bloom's Taxonomy Level: Understand

It has been discovered that the fetus responds to sound at the end of the sixth month. What sound does the fetus prefer at this time?

Mozart's music

Incorrect. At the sixth month, the fetus is likely to respond to its mother's voice.

rhythmic tapping
its mother's voice

Correct. We know this is true because an increase in fetal heart rate is observed when a fetus hears its mother's voice.

a cat's meow

Answer: C

Difficulty: 2

Page: 69

Skill: C

Learning Objective: 2.11

Bloom's Taxonomy Level: Understand

Your roommate's sister-in-law is pregnant and is trying to do all that she can to protect her fetus and to make sure that her fetus develops well. She does not like to have any loud music on and even does not talk very loudly for fear that her fetus will be harmed.

What would you tell her?

That her fetus will not be adversely affected and that studies have discovered that fetuses actually prefer their mothers' voices. So, she should talk as much as she likes.

Correct. A fetus's heart rate has been shown to increase when it hears its mother's voice.

That she is correct; loud music is readily transmitted through the amniotic fluid and will cause damage to the fetus's cochlea.

That she should play Mozart really loudly. Fetuses who listen to Mozart are more intelligent than those who do not listen to Mozart.

Research has shown that fetuses love country music.

Incorrect. Fetuses have been shown to respond best to the sound of the mother's voice.

Answer: A

Difficulty: 3

Page: 69

Skill: A

Learning Objective: 2.11

Bloom's Taxonomy Level: Apply

DeCasper and Spence asked mothers to read *The Cat in the Hat* to their fetuses every day for the last six weeks of their pregnancies. After the birth, babies showed a preference for

_____.

hearing their mothers read any Dr. Seuss book
their mother's voice
rhythmic tapping

Incorrect. The babies showed a preference for The Cat in the Hat.

hearing their mothers read *The Cat in the Hat*

Correct. The babies preferred this even over similar rhyming stories they had not heard before.

Answer: D

Difficulty: 1

Page: 69

Skill: C

Learning Objective: 2.11

Bloom's Taxonomy Level: Understand

What do fetuses do when their mothers are highly stressed?

become very still

Incorrect. They generally move more and have faster heart rates when their mothers are stressed.

move more and have faster heart rates

Correct. Fetuses respond in kind to their mothers' stress levels.

suck their thumbs

hold their hands to their ears

Answer: B

Difficulty: 1

Page: 69

Skill: C

Learning Objective: 2.11

Bloom's Taxonomy Level: Understand

Your roommate is pregnant and she gets very angry and yells quite a bit over the smallest things.

What is a good piece of advice that you could give her?

It is OK if she gets upset, but she should not yell. It will harm the fetus's hearing. Getting angry and yelling is good for the fetus since it will raise the fetus's heart rate.

She should probably get a different boyfriend. He is not going to be a very good father.

Incorrect. She should try relaxation therapy.

That she should try relaxation therapy. Whenever she gets really upset, her fetus gets very upset, too.

Correct. Fetuses generally move more and have faster heart rates when their mothers are stressed.

Answer: D

Difficulty: 1

Page: 69

Skill: A

Learning Objective: 2.11

Bloom's Taxonomy Level: Apply

The Beng people of the Ivory Coast have several practices and suggestions for pregnant women. Which of the following is an example of a suggestion from this culture?

eat the meat from a bushbuck antelope

avoid drinking palm wine.

her husband must stop hunting while she is pregnant

she must not commit any immoral behavior

Answer: B

Difficulty: 1

Page: 70

Skill: F

Learning Objective: 2.12

Bloom's Taxonomy Level: Remember

Your sister, who is currently of healthy weight, is pregnant and she believes she should eat as much food as she can because she is "eating for two". You respond by_____.

encouraging her to gain as much weight as possible as long as she's eating healthy foods
cautioning her against this belief because gaining too much weight during pregnancy could be damaging to her health
cautioning her against this belief and telling her she should only gain a maximum of 15 pounds during pregnancy
encouraging her to eat as much as she wants because there are no risks associated with too much weight gain during pregnancy

Answer: B
Difficulty: 2
Page: 70
Skill: C
Learning Objective: 2.12
Bloom's Taxonomy Level: Understand

Risks of gaining too much weight during pregnancy include _____.
structural abnormalities in the fetus
jaundice in the fetus
increased chance of stroke in the mother
hypertension, preeclampsia, and diabetes in the mother

Answer: D
Difficulty: 1
Page: 70
Skill: F
Learning Objective: 2.12
Bloom's Taxonomy Level: Remember

Recent scientific studies have shown that women should gain _____ pounds during pregnancy.
15–20
25–35
35–40
45–50

Answer: B
Difficulty: 1
Page: 70
Skill: F
Learning Objective: 2.12
Bloom's Taxonomy Level: Remember

Women who gain less than 20 pounds are more likely to have babies who are _____.
more likely to be obese during childhood
above average in intelligence
preterm and have low birth weight
more likely to have heart disease later in life

Answer: C
Difficulty: 1
Page: 70
Skill: F
Learning Objective: 2.12
Bloom's Taxonomy Level: Remember

Your friend is worried that she will gain quite a bit of weight since she is now pregnant. She is planning on dieting. What would be your advice?

Tell her to definitely diet, this will insure that her children will not be obese.

Tell her that dieting increases intelligence in neonates.

Incorrect. Dieting leads to low birth weight and prematurity.

Tell her that dieting could lead to her baby being born preterm and having a low birth weight.

Correct. Women should gain 25–35 pounds during pregnancy.

That it would be a good idea to keep her weight gain under 20 pounds.

Answer: C

Difficulty: 1

Page: 70

Skill: A

Learning Objective: 2.12

Bloom's Taxonomy Level: Apply

What are possible side effects for the baby of a woman who gains less than 20 pounds during her pregnancy?

Down syndrome and Fragile X

gestational diabetes

high blood pressure and gastrointestinal problems

Incorrect. Scientific studies have shown that women should typically gain 25–35 pounds during pregnancy, and women who gain less than 20 pounds are at risk for having babies who are preterm and low birth weight.

the baby may be born preterm with a low birth weight

Correct. Scientific studies have shown that women should typically gain 25–35 pounds during pregnancy, and women who gain less than 20 pounds are at risk for having babies who are preterm and low birth weight.

Answer: D

Difficulty: 2

Page: 70

Skill: C

Learning Objective: 2.12

Bloom's Taxonomy Level: Understand

Based upon the accumulated scientific knowledge on prenatal care, which of the following is the one key conclusion regarding pregnant women?

a. avoid drinking any alcohol

Incorrect. Most professionals agree that regular prenatal care is the greatest thing a pregnant woman can do.

minimize as much stress as possible

receive regular evaluations from a health care professional

Correct. The percentage of woman who receive regular prenatal care beginning early in pregnancy varies greatly based on ethnicity and SES.

cut all caffeine from her diet

Answer: C

Difficulty: 3

Page: 70

Skill: C

Learning Objective: 2.12

Bloom's Taxonomy Level: Understand

Shantel is talking to her grandmother about how she is continuing her moderate exercise program while she is pregnant. However, Grandma warns her not to exercise because she holds the outdated belief, once common in developed countries, that Shantel is _____.

in a physical state similar to a disability or illness

Correct. Until a few decades ago, it was widely believed in developed countries that pregnant women were too fragile to walk or carry groceries.

too physically weak and could fall

going to harm the baby while exercising

going to stimulate a preterm birth

Incorrect. Until a few decades ago, it was widely believed in developed countries that pregnancy was a kind of disability or illness.

Answer: A

Difficulty: 2

Page: 71

Skill: A

Learning Objective: 2.12

Bloom's Taxonomy Level: Apply

According to the text, what enhances the health of the pregnant woman and her fetus?

mild to moderate exercise

Correct. One benefit is that mild to moderate exercise increases a woman's ability to process oxygen for herself and her fetus.

drinking several cups of tea each day

eating herbs

conserving energy

Incorrect. Mild to moderate exercise enhances the health of the pregnant woman and her fetus.

Answer: A

Difficulty: 1

Page: 71

Skill: C

Learning Objective: 2.12

Bloom's Taxonomy Level: Understand

What is an example of an aerobic exercise?

walking/jogging

Correct. These stimulate a woman's muscular and circulatory systems.

weightlifting

sprinting

Incorrect. Walking/jogging are examples of aerobic exercise.

jumping

Answer: A

Difficulty: 1

Page: 71

Skill: C

Learning Objective: 2.12

Bloom's Taxonomy Level: Understand

Why is aerobic exercise important to a pregnant woman? It helps to_____.

lower muscle mass

Incorrect. It increases the woman's ability to process oxygen.

increase fetal heart rate

stop dangerous teratogens from reaching the fetus

increase the woman's ability to process oxygen

Correct. This oxygen increase, in turn, benefits her fetus.

Answer: D

Difficulty: 1

Page: 71

Skill: C

Learning Objective: 2.12

Bloom's Taxonomy Level: Understand

Your best friend has just learned that she is pregnant. She is a healthy person and is planning on engaging in aerobic exercise during her pregnancy. What would be your advice to her? She should_____.

be very careful in that this type of exercise during pregnancy could lower muscle mass

Incorrect. Aerobic exercise increases a pregnant woman's ability to process oxygen, a benefit for both her and the fetus.

not run too quickly because it could dangerously increase fetal heart rate

exercise regularly since it will stop dangerous teratogens from reaching the fetus

exercise regularly in that she will increase her ability to process oxygen

Correct. Moderate aerobic exercise increases a pregnant woman's ability to process oxygen, a benefit for both her and the fetus.

Answer: D

Difficulty: 1

Page: 71

Skill: A

Learning Objective: 2.12

Bloom's Taxonomy Level: Apply

According to the text, what type of exercise stimulates the circulatory and muscular systems of the woman's body and increases her ability to process oxygen?

meditation

active stretching

weight training

Incorrect. Aerobic exercise stimulates the circulatory and muscular systems.

aerobic exercise

Correct. Moderate aerobic exercise provides benefit for both a pregnant woman and her fetus.

Answer: D

Difficulty: 1

Page: 71

Skill: C

Learning Objective: 2.12

Bloom's Taxonomy Level: Understand

What exercise strengthens the vaginal muscles and helps prepare the mother for the delivery of the fetus?

a.bench presses

squats
Kegels
abdominal crunches

Answer: C
Difficulty: 1
Page: 71
Skill: F
Learning Objective: 2.12
Bloom's Taxonomy Level: Remember

Which of the following exercises should be avoided during pregnancy?

any contact sports

Correct. Contact sports are too traumatic for pregnant women.

walking

light jogging

Incorrect. Light jogging is recommended for pregnant women.

swimming

Answer: A
Difficulty: 1
Page: 71
Skill: C
Learning Objective: 2.12
Bloom's Taxonomy Level: Understand

The guidelines for prenatal care focus mostly on three key areas: ___.

rest, stress reduction, and the avoidance of fatty foods

diet, exercise, and avoidance of teratogens

exercise, mental state, and relaxation

prenatal vitamins, exercise, and avoidance of caffeine

Answer: B
Difficulty: 2
Page: 71
Skill: F
Learning Objective: 2.12
Bloom's Taxonomy Level: Remember

Many traditional cultures do not have access to trained physicians but may rely on which of the following individuals during the prenatal period?

nurse

midwife

Correct. Midwives assist in prenatal care and the birth process.

staff from the World Health Organization

Incorrect. Midwives are commonly used.

paramedics

Answer: B
Difficulty: 2
Page: 72
Skill: C
Learning Objective: 2.12
Bloom's Taxonomy Level: Understand

Based upon the reading, a midwife might perform a(n)_____if the fetus's feet are pointed towards the vaginal opening.

diversion

prenatal massage

Incorrect. If the fetus is turned in an unfavorable position, so that it would be likely to come out feet first rather than head first, the midwife will attempt an inversion to turn the fetus's head toward the vaginal opening.

inversion

Correct. If the fetus is turned in an unfavorable position, so that it would be likely to come out feet first rather than head first, the midwife will attempt an inversion to turn the fetus's head toward the vaginal opening.

amniocentesis

Answer: C

Difficulty: 2

Page: 72

Skill: C

Learning Objective: 2.12

Bloom's Taxonomy Level: Understand

A method of prenatal care that has been used by traditional cultures that is now being used by midwives, nurses, and physicians in developed countries is_____.

dancing

singing

daily naps

Incorrect. Prenatal massage has a long history in many cultures. In recent years, it has also begun to be used by midwives, nurses, and physicians in developed countries.

massage

Correct. Prenatal massage has a long history in many cultures. In recent years, it has also begun to be used by midwives, nurses, and physicians in developed countries.

Answer: D

Difficulty: 1

Page: 72

Skill: C

Learning Objective: 2.12

Bloom's Taxonomy Level: Understand

% correct 97 a = 1 b = 2 c = 1 d = 97 r = .26

In recent years, prenatal massage in developed countries has_____.

increased

decreased

remained the same

not been statistically tracked

Answer: A

Difficulty: 1

Page: 72

Skill: F

Learning Objective: 2.12

Bloom's Taxonomy Level: Remember

_____is/are described as behaviors, environments, and bodily conditions that could be harmful to a fetus.

Lanugo
Teratogens
Vernix
Trophoblasts

Answer: B
Difficulty: 1
Page: 72
Skill: F
Learning Objective: 2.13
Bloom's Taxonomy Level: Remember

Which period of prenatal development is considered the *critical period* and also a time in which teratogens can have a profound effect that endure into adulthood?

conception
germinal period

Incorrect. The placenta is not fully formed during the embryonic period.

embryonic period

Correct. The embryonic period lasts from the third to the eighth week after conception.

fetal period

Answer: C
Difficulty: 1
Page: 72–73
Skill: C
Learning Objective: 2.13
Bloom's Taxonomy Level: Understand
% correct 53 a = 0 b = 6 c = 53 d = 41 r = .52

What term refers to malnutrition, disease, alcohol, tobacco, and other drugs that are harmful to the fetus?

teratogens
pathogens
carcinogens
fetogens

Answer: A
Difficulty: 1
Page: 72
Skill: F
Learning Objective: 2.13
Bloom's Taxonomy Level: Remember
% correct 89 a = 89 b = 8 c = 2 d = 1 r = .38

Which of the following are examples of teratogens?

calcium, iron, and iodine
prenatal vitamins and micronutrients
meats, grains, and legumes
alcohol, tobacco, and other drugs

Answer: D
Difficulty: 2
Page: 72
Skill: F
Learning Objective: 2.13

Bloom's Taxonomy Level: Remember

Which of the following are examples of teratogens?

- calcium, iron, and iodine
- prenatal vitamins and micronutrients
- infectious diseases and malnutrition
- folic acid and iodine

Answer: C

Difficulty: 2

Page: 72

Skill: F

Learning Objective: 2.13

Bloom's Taxonomy Level: Remember

What describes the profound and enduring effect on later development that teratogens can have during the embryonic period?

critical period

Correct. The embryonic period lasts from the third to the eighth week after conception.

sensitive period

Incorrect. The profound and enduring effect on later development that teratogens can have during the embryonic period describes a critical period.

embryonic period

fetal period

Answer: A

Difficulty: 2

Page: 72

Skill: C

Learning Objective: 2.13

Bloom's Taxonomy Level: Understand

What are the major teratogens during the fetal period?

lack of maternal sleep and lack of exercise

excessive maternal weight gain and maternal age

malnutrition and tobacco

Correct. Malnutrition and tobacco use are the major teratogens during the fetal period.

sugar and starch

Incorrect. The major teratogens during the fetal period are malnutrition and tobacco.

Answer: C

Difficulty: 2

Page: 72–73

Skill: C

Learning Objective: 2.13

Bloom's Taxonomy Level: Understand

According to the text, what is the most common teratogen worldwide?

malnutrition

tobacco

alcohol

infectious disease

Answer: A

Difficulty: 1

Page: 73

Skill: F

Learning Objective: 2.13

Bloom's Taxonomy Level: Remember

From a global perspective, which of the following is the most common teratogen to affect pregnancies?

- lead
- malnutrition
- alcohol
- rubella

Answer: B

Difficulty: 2

Page: 73

Skill: F

Learning Objective: 2.13

Bloom's Taxonomy Level: Remember

Prenatal health depends on proper prenatal nutrition. Because approximately 50% of the world's population is rural, pregnant women_____.

- have access to fruits and vegetables year round
- are malnourished year round

Incorrect. Pregnant women who live in rural areas may only eat well during the summer and fall when the crops have been harvested.

- cannot afford the required vitamins recommended by their physicians
- may only eat well only during the summer and fall

Correct. The diet of people in rural areas can vary dramatically depending on the season.

Answer: D

Difficulty: 2

Page: 73

Skill: C

Learning Objective: 2.13

Bloom's Taxonomy Level: Understand

Iron-rich foods such as beef, duck, potatoes, spinach, and dried fruits are important in what way for the pregnant mother and fetus? These foods help to_____.

- build the blood supply of the mother and fetus

Correct. Iron deficiencies place women at risk of delivering preterm or low-birth-weight babies.

- increase the muscle mass of the fetus
- assist in visual development of the fetus

Incorrect. Iron-rich foods help to build the blood supply of the mother and fetus. provide nutrients for proper brain development

Answer: A

Difficulty: 1

Page: 74

Skill: C

Learning Objective: 2.13

Bloom's Taxonomy Level: Understand

Low iodine intake during pregnancy increases the risks of miscarriage, stillbirth, and abnormalities in fetal brain development. As a result, what has been done since the 1920s in developed countries?

women receive iodine injections

Incorrect. Salt has been iodized.

salt has been iodized

Correct. Iodine deficiencies are still a risk in developing countries.

babies are given iodine baths after birth

fetuses are examined with ultrasound

Answer: B

Difficulty: 1

Page: 74

Skill: C

Learning Objective: 2.13

Bloom's Taxonomy Level: Understand

As compared with developing nations, the rates of miscarriage, stillbirth, and abnormalities in fetal brain development have been lowered because iodine has been added to

_____.

salt

school lunches

bread

the water supply

Answer: A

Difficulty: 2

Page: 74

Skill: F

Learning Objective: 2.13

Bloom's Taxonomy Level: Remember

What is another name for the German measles?

cephalopelvic disproportion

rubella

Correct. The embryonic period is a critical period for exposure to rubella.

anencephaly

neurofibromatosis

Incorrect. German measles is also known as rubella.

Answer: B

Difficulty: 2

Page: 74

Skill: C

Learning Objective: 2.13

Bloom's Taxonomy Level: Understand

If a pregnant woman contracts rubella during the embryonic period of pregnancy, what are the likely outcomes for the baby?

blindness, deafness, intellectual disabilities and abnormalities of the heart,

genitals and digestive system

neural tube defect

mental retardation

lack of iron in the blood supply

Answer: A

Difficulty: 2

Page: 74

Skill: F

Learning Objective: 2.13

Bloom's Taxonomy Level: Remember

Infants born with the effects of rubella (German measles) within the United States have greatly decreased since the 1960s because_.

vaccinations for infectious diseases have increased

funding for Medicaid and Medicare have increased

fluoride has been added to the water

folic acid has been added to grain products

Answer: A

Difficulty: 3

Page: 74

Skill: F

Learning Objective: 2.13

Bloom's Taxonomy Level: Remember

What sexually transmitted infection is caused by the human immunodeficiency virus?

syphilis

herpes

gonorrhea

AIDS

Answer: D

Difficulty: 1

Page: 74

Skill: F

Learning Objective: 2.13

Bloom's Taxonomy Level: Remember

What sexually transmitted infection can be transmitted to the fetus during prenatal development and to the neonate during birth and later through breast milk?

syphilis

herpes

Incorrect. AIDS can be transmitted from mother to child during prenatal development through the blood, during birth, or through breast milk.

gonorrhea

AIDS

Correct. HIV/AIDS damages brain development prenatally and increases the risk that an infant will not live to adulthood.

Answer: D

Difficulty: 2

Page: 74

Skill: C

Learning Objective: 2.13

Bloom's Taxonomy Level: Understand

HIV/AIDS can be transmitted from the mother to the child_____.

a.during prenatal development, birth, or through breast milk

Correct. HIV/AIDS damages brain development prenatally and increases the risk that an infant will not live to adulthood.

through casual skin-to-skin contact such as hugs and kisses

Incorrect. HIV/AIDS can be transmitted from mother to child during prenatal development through the blood, during birth, or through breast milk.

via bacterial infections during times of illness while pregnant

through HIV bacteria being transmitted via contaminated environmental objects

Answer: A

Difficulty: 3

Page: 74

Skill: C

Learning Objective: 2.13

Bloom's Taxonomy Level: Understand

% correct 94 a = 94 b = 0 c = 6 d = 0 r = .18

Where do 95% of all HIV infections take place?

North America

Asia

Africa

Europe

Answer: C

Difficulty: 1

Page: 75

Skill: F

Learning Objective: 2.13

Bloom's Taxonomy Level: Remember

What teratogen causes the most widespread damage to prenatal development in developed countries?

tobacco

Incorrect. Alcohol causes more damage to prenatal development in developed countries.

infectious diseases

cocaine

alcohol

Correct. Alcohol causes more damage to prenatal development in developed countries.

Answer: D

Difficulty: 1

Page: 75

Skill: C

Learning Objective: 2.13

Bloom's Taxonomy Level: Understand

According to the text, which of the following is a safe amount of alcohol an individual can consume during pregnancy?

1 glass of wine per week

1 glass of wine per week only after the second trimester

1 glass of wine per week only after the third trimester

Incorrect. A pregnant woman should not drink at all during her pregnancy.

none at all

Correct. Research has shown that the only safe level of alcohol during pregnancy is none at all.

Answer: D

Difficulty: 1

Page: 75

Skill: C

Learning Objective: 2.13

Bloom's Taxonomy Level: Understand

What condition might occur in the fetus, and later in the child, if the pregnant mother consumes alcohol during her pregnancy?

fibromyalgia

alcoholism

Incorrect. Fetal alcohol spectrum disorder can result if a pregnant woman drinks alcohol during her pregnancy.

neuromuscular disorder

fetal alcohol spectrum disorder

Correct. This disorder can result in facial deformities, heart problems, and cognitive problems.

Answer: D

Difficulty: 1

Page: 75

Skill: C

Learning Objective: 2.13

Bloom's Taxonomy Level: Understand

An infant born with facial deformities, heart problems, misshapen limbs, and a variety of cognitive problems, such as mental retardation, has characteristics of which of the following?

fetal alcohol spectrum disorder

Correct. These conditions are characteristics of fetal alcohol spectrum disorder.

autism

Prader-Willi syndrome

rubella

Incorrect. These conditions are characteristics of fetal alcohol spectrum disorder.

Answer: A

Difficulty: 2

Page: 75

Skill: C

Learning Objective: 2.13

Bloom's Taxonomy Level: Understand

What is the leading cause of low birth weight in developed countries?

smoking

cocaine use

drinking alcohol

mega-dosing of vitamins

Answer: A

Difficulty: 1

Page: 75

Skill: F

Learning Objective: 2.13

Bloom's Taxonomy Level: Remember

What maternal behavior during pregnancy was related to behavior problems in adolescence?

- mega-dosing of vitamins
- drinking alcohol
- cocaine use
- smoking

Answer: D

Difficulty: 1

Page: 75

Skill: F

Learning Objective: 2.13

Bloom's Taxonomy Level: Remember

You notice that your pregnant friend just lit a cigarette and you ask her, "What the heck are you doing?" Your friend replies that her doctor said that it was okay to smoke during pregnancy. Which of the following statements should be your reply?

"There are known side effects to smoking and no responsible physician would tell you that you can smoke if you are pregnant."

Correct. Maternal smoking is the leading cause of low birth weight in developed countries.

"Okay, research has shown that smoking is harmless."

"Most physicians would recommend that you wait until the third trimester to begin smoking again."

Incorrect. Pregnant women should not smoke at any time during their pregnancy.

"That makes sense; smoking is harmful if it is secondhand smoke."

Answer: A

Difficulty: 2

Page: 75

Skill: A

Learning Objective: 2.13

Bloom's Taxonomy Level: Apply

What paternal behavior during pregnancy leads to higher risks of low birth weight and childhood cancer?

- mega-dosing of vitamins
- drinking alcohol
- smoking
- cocaine use

Answer: C

Difficulty: 1

Page: 75

Skill: F

Learning Objective: 2.13

Bloom's Taxonomy Level: Remember

The use of marijuana during pregnancy can affect the development of the _____ and retard the growth of the fetus.

- central nervous system
- peripheral nervous system
- motor cortex

sensory cortex

Answer: A

Difficulty: 1

Page: 75

Skill: F

Learning Objective: 2.13

Bloom's Taxonomy Level: Remember

Your friend uses marijuana to treat back pain because she believes it is a natural remedy. She wonders if it is ok to continue using marijuana once she gets pregnant. You respond by telling her_____.

it is ok to continue using marijuana since it is natural

it is ok to continue using marijuana because there are no known harmful effects during pregnancy

she should stop using marijuana as regularly as she does and cut back on her uses during pregnancy

she should stop using marijuana because it could affect the development of the central nervous system and slow the growth of the fetus

Answer: D

Difficulty: 1

Page: 75

Skill: A

Learning Objective: 2.13

Bloom's Taxonomy Level: Apply

Some prescription and over-the-counter drugs may be harmful during pregnancy whereas others may be safe. In determining whether you should continue medications while pregnant it is recommended that you_____.

make sure to continue with the same dosage of the medications

get your doctor's opinion concerning the medications

stop all medications right away

increase the dosage since the placenta will filter out toxins before reaching the fetus

Answer: C

Difficulty: 1

Page: 76

Skill: C

Learning Objective: 2.13

Bloom's Taxonomy Level: Understand

Short Answer Questions

In what prenatal period are the lanugo and vernix formed? Explain what they are.

Answer: Both are formed during the fetal period. The vernix is the waxy coating that protects the skin while floating in the amniotic fluid; the lanugo is the fine hair that helps the vernix to stick to the skin.

Page: 68

Learning Objective: 2.11

Bloom's Taxonomy Level: Remember

Give an example of pregnancy advice that reflects cultural wisdom in traditional cultures. What is a plausible explanation that this advice is passed down from generation to generation?

Answer: Among the Beng people of West Africa, women are warned against drinking palm wine during pregnancy and also to avoid eating the meat of the bushbuck antelope (or the baby may be born with stripes). These warnings reflect the fact that people in these cultures know that many things can go wrong during pregnancy and these tips may offer a sense of control.

Page: 70

Learning Objective: 2.12

Bloom's Taxonomy Level: Apply

Who usually performs prenatal massages in traditional cultures? Are there benefits to prenatal massage besides making the mother feel good and more relaxed? Explain.

Answer: It is usually performed by a midwife. Benefits to mother include less back pain, less swelling of joints, better sleep, and a better chance that the fetus will come out head first. Neonates score better on physical and social measures.

Page: 72

Learning Objective: 2.12

Bloom's Taxonomy Level: Understand

Recall the World Health Organization's guidelines for prenatal care. Name one nutrient that is of critical importance during pregnancy, where women would get it, and what the consequences would be of not having it.

Answer: Iodine. In developed countries, iodine is added to salt. Without it, there is increased risk of miscarriage, stillbirth, or abnormal brain development. Iodine is more readily available in developed countries.

Page: 73–74

Learning Objective: 2.13

Bloom's Taxonomy Level: Understand

How much weight should a woman gain during pregnancy (provide an approximate range)? Provide one diet or exercise recommendation.

Answer: Women should gain between 25–35 pounds. They should drink more fluids and they should eat plenty of fruits and vegetables, especially iron-rich foods, such as leafy greens.

Page: 70

Learning Objective: 2.12

Bloom's Taxonomy Level: Understand

Which prenatal period is considered a critical period when teratogens are most likely to have severe and enduring effects? Why?

Answer: The embryonic period, because this is when all the major organs and systems are forming.

Page: 72–73

Learning Objective: 2.13

Bloom's Taxonomy Level: Remember

What are two consequences of a folic acid deficiency?

Answer: Anencephaly: part of the brain is missing or deformed. Spina bifida: the spine is deformed and does not close.

Page: 74

Learning Objective: 2.13

Bloom's Taxonomy Level: Remember

What are the long-term effects of FASD (in addition to characteristic physiological features)?

Answer: In childhood, there are cognitive deficits that put them behind academically and socially. In addition, in adolescence, they are at risk for delinquency, substance abuse, and depression.

Page: 75

Learning Objective: 2.13

Bloom's Taxonomy Level: Remember

Essay Questions

Choose one prenatal period and provide a detailed overview of what happens. Include when it occurs.

Answer: The germinal period (0–2 weeks after conception) includes the formation of the zygote, rapid cell division forming a 100-celled blastocyst, and implantation. The outer layer of the blastocyst, the trophoblast, develops into the structures that will house and nourish the embryo.

Page: 67–69

Learning Objective: 2.9–2.11

Bloom's Taxonomy Level: Understand

What does viability mean, and how likely is a fetus to be viable at 22 weeks? At 26 weeks? Why would this vary depending upon whether a person lives in a developed or a developing country? What is the main obstacle to viability even by the beginning of the third trimester?

Answer: This is when a fetus would be able to survive outside the womb. Survival is unlikely before 22 weeks, even with medical intervention. Even if babies do survive when they are premature, they are at greater risk for birth defects and disabilities compared to full-term babies. In developing countries, there is less access to medical supplies and facilities, so the age of viability is later than in developed countries (some time in the third trimester, depending on the country and its technology). The reason babies are so vulnerable even in the third trimester is their immature lungs.

Page: 68–69

Learning Objective: 2.11

Bloom's Taxonomy Level: Apply

You are out to dinner with your friend, who is in her second trimester of pregnancy. You order a beer and she proceeds to order a glass of wine. When you raise a concern about alcohol being dangerous for the developing fetus, she replies, “My doctor told me it was okay to have a glass of wine once in a while.” What is your evaluation of this advice?

Answer: No safe amount of alcohol has been determined during pregnancy. Even a few drinks can put a developing fetus at risk for lower height, weight, and head size, and heavy drinking causes FASD. There is a dose-response relation between alcohol and negative effects.

Page: 75

Learning Objective: 2.13

Bloom's Taxonomy Level: Apply

TOTAL

**ASSESSMENT
GUIDE**

**Chapter 2-Section 3
Pregnancy Problems**

		Remember	Understand	Apply
Learning Objective 2.14	Multiple Choice	1, 2, 3, 5, 8, 10, 11, 14, 15, 16	6, 7, 9, 12, 13, 17	4
	Short Answer	38		
	Essay	40		
Learning Objective 2.15	Multiple Choice	20, 21, 22, 23, 24, 25, 26	18, 19, 27	
	Short Answer			
	Essay	40		
Learning Objective 2.16	Multiple Choice	30, 32, 33, 34	28, 29, 31	51
	Short Answer			
	Essay	40		
Learning Objective 2.17	Multiple Choice		35	36, 37
	Short Answer			
	Essay	40		

Section 3 Pregnancy Problems

Test Item File

Multiple Choice Questions

During meiosis, at times chromosomes sometimes fail to divide properly, and as a result, the person may have 45 or 47 chromosomes. Which of the following best describes this phenomenon?

- chromosomal disorders
- genetic misprinting
- mitosis error
- gene displacement

Answer: A

Difficulty: 1

Page: 77

Skill: F

Learning Objective: 2.14

Bloom's Taxonomy Level: Remember

It is estimated that half of all conceptions have too many or too few chromosomes. According to the text, what happens to most of the zygotes that are formed in these situations?

- They are spontaneously aborted.
- They result in neonates with birth defects.
- They result in twins.
- They have no problems.

Answer: A

Difficulty: 1

Page: 77

Skill: F

Learning Objective: 2.14

Bloom's Taxonomy Level: Remember

% correct 41 a = 41 b = 53 c = 0 d = 6 r = .43

Approximately how many neonates have a chromosomal disorder?

- 1 in 10
- 1 in 200
- 1 in 500
- 1 in 1,000

Answer: B

Difficulty: 1

Page: 77

Skill: F

Learning Objective: 2.14

Bloom's Taxonomy Level: Remember

Your friend just found out that she is pregnant after trying for six months. But she is paranoid that she is going to have a baby with a chromosomal disorder. You try to

reassure her by telling her that the rate of babies born with chromosomal disorders is

- _____.
- 1 in 10
 - 1 in 200

Correct. There are two main types of chromosomal disorders: ones that involve sex chromosomes and ones that take place on the twenty-first pair of chromosomes.

1 in 500

Incorrect. Approximately 1 in 200 neonates have a chromosomal disorder.

1 in 1,000

Answer: B

Difficulty: 1

Page: 77

Skill: A

Learning Objective: 2.14

Bloom's Taxonomy Level: Apply

Approximately how many neonates have some type of sex chromosome disorder?

- 1 in 10
- 1 in 200
- 1 in 500
- 1 in 1,000

Answer: C

Difficulty: 1

Page: 77

Skill: F

Learning Objective: 2.14

Bloom's Taxonomy Level: Remember

What are two common consequences of sex chromosome disorders?

- shortened stature and the likelihood to develop nonorganic failure to thrive
- an increased likelihood to have a pregnancy that is preterm and an infant with low birth weight
- an infant that is more likely to have a difficult temperament and an insecure attachment

Incorrect. Cognitive deficits tend to be a side effect of various sex-linked disorders. cognitive deficits and abnormal development of the reproductive system at puberty

Correct. Mental retardation, learning disabilities, and speech impairments are all common.

Answer: D

Difficulty: 2

Page: 77

Skill: C

Learning Objective: 2.14

Bloom's Taxonomy Level: Understand

% correct 94 a = 0 b = 6 c = 0 d = 94 r = .70

One of the consequences of having a sex chromosomal disorder is that it might disrupt development of the reproductive system at puberty. What can be done about the difficulty at puberty?

- a. role playing therapy

Incorrect. The type of treatment would be hormone replacement therapy.

hormone replacement treatment

Correct. This can often effectively correct the problems caused by a sex chromosomal disorder.

group therapy

strenuous exercise

Answer: B

Difficulty: 2

Page: 77

Skill: C

Learning Objective: 2.14

Bloom's Taxonomy Level: Understand

An individual with Down syndrome has how many chromosomes?

45

46

47

48

Answer: C

Difficulty: 1

Page: 78

Skill: F

Learning Objective: 2.14

Bloom's Taxonomy Level: Remember

Down syndrome is also known as trisomy-21 because individuals with Down syndrome

_____.

have three distinct facial features by the 21st week of pregnancy

show three distinct temperament patterns by the 21st week of infancy

have a third chromosome on the 21st pair

Correct. Individuals with Down syndrome have an extra chromosome on the 21st pair.

have 21 genes on the 3rd pair of chromosomes

Incorrect. Individuals with Down syndrome have an extra chromosome on the 21st pair.

Answer: C

Difficulty: 3

Page: 78

Skill: C

Learning Objective: 2.14

Bloom's Taxonomy Level: Understand

What is another name for trisomy-21?

non-sex-linked-21

intellectual disability

Edward's syndrome

Down syndrome

Answer: D

Difficulty: 1

Page: 78

Skill: F

Learning Objective: 2.14

Bloom's Taxonomy Level: Remember

What disorder includes the following characteristics: short, stocky build; flat face; a large tongue; extra fold of skin on the eyelids; and possible cognitive deficits, hearing impairments, and heart defects?

- non-sex-linked-21
- Down syndrome
- Edward's syndrome
- intellectual disability

Answer: B

Difficulty: 2

Page: 78

Skill: F

Learning Objective: 2.14

Bloom's Taxonomy Level: Remember

What helps children with trisomy-21 develop more favorably?

- hormone replacement therapy
- weekly motor treatments

Incorrect. Children with trisomy-21 need supportive and encouraging parents.

- a heart transplant
- supportive and encouraging parents

Correct. Intervention programs in infancy and childhood have also been shown to have positive effects.

Answer: D

Difficulty: 2

Page: 78

Skill: C

Learning Objective: 2.14

Bloom's Taxonomy Level: Understand

Adult individuals with trisomy-21 are_____.

- often able to hold a job that is highly structured with simple tasks

Correct. With adequate social support, an adult with Down syndrome can often successfully hold a job.

- most likely institutionalized

Incorrect. Adults with trisomy-21 can hold jobs that are highly structured with simple tasks.

- not likely to make it to age 30
- as likely as individuals who do not have trisomy-21 to enter college

Answer: A

Difficulty: 2

Page: 78

Skill: C

Learning Objective: 2.14

Bloom's Taxonomy Level: Understand

Individuals who have what chromosomal disorder are more likely to develop leukemia, cancer, Alzheimer's disease, or heart disease at earlier ages than usual (in their thirties and forties)?

- non-sex-linked-21
- Down syndrome
- Edward's syndrome

intellectual disability

Answer: B

Difficulty: 2

Page: 78

Skill: F

Learning Objective: 2.14

Bloom's Taxonomy Level: Remember

Children born with chromosomal problems are almost always born to parents with_____.

the very same chromosomal problem

similar genetic disorders

above average intelligence

no genetic or chromosomal problems

Answer: D

Difficulty: 2

Page: 78

Skill: F

Learning Objective: 2.14

Bloom's Taxonomy Level: Remember

Which of the following increases the risk of having a child with Down syndrome?

smoking while pregnant

alcohol consumption

maternal age

paternal stress

Answer: C

Difficulty: 2

Page: 77

Skill: F

Learning Objective: 2.14

Bloom's Taxonomy Level: Remember

% correct 76 a = 0 b = 24 c = 76 d = 0 r = .49

How old are the ova of a 42 year-old woman trying to conceive?

2 weeks

2 months

Incorrect. A 42-year-old woman's ova are 42 years old.

2 years

42 years

Correct. As we learned earlier in the chapter, a female produces all the ova she will ever have while she is still in the womb.

Answer: D

Difficulty: 2

Page: 78

Skill: C

Learning Objective: 2.14

Bloom's Taxonomy Level: Understand

Which of the following is an example of an incomplete dominant inheritance?

Down syndrome

Incorrect. Down syndrome is a genetic-linked disorder.

Fragile X
sickle-cell anemia

Correct. Incomplete dominance occurs when the phenotype is influenced primarily, but not exclusively, by the dominant gene. One example of incomplete dominance involves the sickle-cell trait that is common among black Africans and their descendants, such as African Americans.

HIV

Answer: C
Difficulty: 2
Page: 78
Skill: C
Learning Objective: 2.15
Bloom's Taxonomy Level: Understand

Who is most likely to have sickle-cell anemia?

European and European Americans
Hispanics and Hispanic Americans
Asians and Asian Americans

Incorrect. Africans and African Americans are most likely to have sickle-cell anemia.

Africans and African Americans

Correct. It also occurs more rarely in people whose ancestors came from India or the Mediterranean.

Answer: D
Difficulty: 1
Page: 78
Skill: C
Learning Objective: 2.15
Bloom's Taxonomy Level: Understand

What recessive disorder results in non-normal shaped blood cells that clog up blood vessels and cause pain, increased susceptibility to disease, and early death?

Tay-Sachs
trisomy-21
sickle-cell anemia
malaria

Answer: C
Difficulty: 1
Page: 78
Skill: F
Learning Objective: 2.15
Bloom's Taxonomy Level: Remember

Sickle-cell anemia is an evolutionary defense against what disease?

sickle-cell trait
malaria
smallpox
Nile fever

Answer: B
Difficulty: 1
Page: 78
Skill: F

Learning Objective: 2.15

Bloom's Taxonomy Level: Remember

% correct 88 a = 6 b = 88 c = 0 d = 6 r = .57

What is the most common inherited intellectual disability worldwide?

- phenylketonuria (PKU)
- fragile X syndrome
- Down syndrome
- sickle-cell anemia

Answer: B

Difficulty: 1

Page: 79

Skill: F

Learning Objective: 2.15

Bloom's Taxonomy Level: Remember

Fragile X syndrome is the most common genetic disorder associated with_____.

- sickle-cell anemia
- Down syndrome
- autism spectrum disorder
- phenylketonuria (PKU)

Answer: C

Difficulty: 1

Page: 80

Skill: F

Learning Objective: 2.15

Bloom's Taxonomy Level: Remember

Fragile X syndrome occurs in_____.

- females only
- males only
- both males and females
- first born children only

Answer: C

Difficulty: 1

Page: 80

Skill: F

Learning Objective: 2.15

Bloom's Taxonomy Level: Remember

For individuals with fragile X syndrome,_____tend to exhibit more apparent symptoms.

- more often females
- more often males
- males and females equally
- first born children

Answer: B

Difficulty: 1

Page: 80

Skill: F

Learning Objective: 2.15

Bloom's Taxonomy Level: Remember

The reason why individuals develop phenylketonuria (PKU) is because_____.

- their bodies cannot process phenylalanine (a certain amino acid) properly
- their bodies process phenylalanine (a certain amino acid) too quickly
- their bodies do not produce enough phenylalanine (a certain amino acid)
- their bodies overproduce phenylalanine (a certain amino acid)

Answer: A

Difficulty: 1

Page: 80

Skill: F

Learning Objective: 2.15

Bloom's Taxonomy Level: Remember

Avoiding_____is a common treatment for phenylketonuria (PKU).

- carbohydrates
- too much exercise
- food and drinks with too much sugar
- food and drinks containing high amounts of protein

Answer: D

Difficulty: 1

Page: 80

Skill: C

Learning Objective: 2.15

Bloom's Taxonomy Level: Understand

Which of the following are three techniques used to monitor pregnancy?

- fetal heart rate, blood pressure, and CT scans
- ultrasounds, amniocentesis, and chorionic villus sampling

Correct. All three of these methods are commonly available in developed countries.

- genetic counseling, amniocentesis, and epidurals

Incorrect. Genetic counseling is not used to monitor pregnancy.

- fMRI, CT, and PET scans

Answer: B

Difficulty: 2

Page: 80

Skill: C

Learning Objective: 2.16

Bloom's Taxonomy Level: Understand

What prenatal technique uses high-frequency waves to examine the characteristics of the fetus in-utero?

- amniocentesis

Incorrect. Ultrasound uses high-frequency sound waves to examine the fetus in-utero.

- chorionic villus sampling
- alphafetal protein
- ultrasound

Correct. Today, ultrasound is used for most pregnancies in developed countries.

Answer: D

Difficulty: 1

Page: 80

Skill: C

Learning Objective: 2.16

Bloom's Taxonomy Level: Understand

_____uses high-frequency sound waves that are directed toward the uterus, and as they bounce off the fetus, they are converted by a computer to an image that can be viewed on screen.

- Genetic counseling
- Ultrasound
- Chorionic villus sampling
- Amniocentesis

Answer: B

Difficulty: 1

Page: 80

Skill: F

Learning Objective: 2.16

Bloom's Taxonomy Level: Remember

Which of the following is the cheapest, easiest, and safest way for physicians to monitor fetal development?

genetic counseling

Incorrect. Ultrasounds that can be used during routine appointments are relatively inexpensive.

amniocentesis

ultrasound

Correct. Today ultrasound is used for most pregnancies in developed countries.

chorionic villus sampling

Answer: C

Difficulty: 1

Page: 80

Skill: C

Learning Objective: 2.16

Bloom's Taxonomy Level: Understand

What prenatal technique uses a long, hollow needle to extract amniotic fluid to examine the fetus's genotype?

amniocentesis

chorionic villus sampling

alphafetal protein

ultrasound

Answer: A

Difficulty: 1

Page: 80

Skill: F

Learning Objective: 2.16

Bloom's Taxonomy Level: Remember

What prenatal technique can be used to examine the status of the fetus by taking samples of the cells that are beginning to form the umbilical cord?

amniocentesis

chorionic villus sampling

alphafetal protein

ultrasound

Answer: B

Difficulty: 1

Page: 81

Skill: F

Learning Objective: 2.16

Bloom's Taxonomy Level: Remember

Which of the following techniques is used sparingly because there is a slight but genuine risk of miscarriage or damage to the fetus; however, it has a 99% accuracy in diagnosing genetic problems?

CT scan

ultrasound

amniocentesis

chorionic villus sampling

Answer: D

Difficulty: 2

Page: 80–81

Skill: F

Learning Objective: 2.16

Bloom's Taxonomy Level: Remember

Why would some couples seek genetic counseling before attempting a pregnancy?

a. They believe that they might be carriers for a genetic disorder.

Correct. Genetic counseling involves analyzing the family history and genotype of prospective parents.

They live in a high-risk area.

They want to have a high-IQ baby.

They want a particular characteristic in their offspring.

Incorrect. Couples who believe that they might be carriers for genetic disorders might consider genetic counseling.

Answer: A

Difficulty: 1

Page: 81

Skill: C

Learning Objective: 2.17

Bloom's Taxonomy Level: Understand

Latasha and Brett are having their first child and are concerned that their child may have Down syndrome because Latasha is over 40 years old. Which of the following would most likely be used to help Latasha and Brett through this process?

an amniocentesis and PET scan

an ultrasound and genetic counseling

Correct. Those who are at risk for Down syndrome would use an ultrasound because it the safest approach.

an amniocentesis and ultrasound

a chorionic villus sampling and fMRI

Incorrect. Those who are at risk for Down syndrome would use an ultrasound because it the safest approach.

Answer: B

Difficulty: 3

Page: 81

Skill: A

Learning Objective: 2.17

Bloom's Taxonomy Level: Apply

Genetic counseling would be appropriate for which of the following couples?

- a. JJ and Jennifer, who are in their early 30s and have just completed an unsuccessful round of artificial insemination

Incorrect. People with risks that merit genetic counseling include those who have an inherited genetic condition or a close relative who has one, couples with a history of miscarriages or infertility, and older couples.

Stephen and Kerry, who are in their early 20s and have been trying to become pregnant but have been unsuccessful for the last two months

Merriam and Samir, who are in their early 40s and have a history of miscarriages and infertility

Correct. People with risks that merit genetic counseling include those who have an inherited genetic condition or a close relative who has one, couples with a history of miscarriages or infertility, and older couples.

Ngyuen and Pham, who are in their early 30s and both have a history of diabetes

Answer: C

Difficulty: 2

Page: 81

Skill: A

Learning Objective: 2.17

Bloom's Taxonomy Level: Apply

Short Answer Questions

In addition to characteristic facial features, what other types of medical/physical complications might a person caring for an individual with Down syndrome expect?

Answer: They are more at risk for heart problems, leukemia, and cancer, and their life expectancy is lower than average.

Page: 78

Learning Objective: 2.14

Bloom's Taxonomy Level: Remember

Which test can be done earlier: amniocentesis or chorionic villus sampling (CVS)? Explain each.

Answer: CVS can be done earlier, at about 5–10 weeks gestation versus 15–20 weeks. CVS entails inserting a tube through the vagina and into the uterus to remove cells from what will eventually be the umbilical cord. Amniocentesis involves inserting a needle into the abdomen to remove amniotic fluid, which contains cells that have been sloughed off from the developing organism. Both are used to detect genetic problems.

Page: 80–81

Learning Objective: 2.16

Bloom's Taxonomy Level: Understand

Essay Questions

Compare and contrast chromosomal disorders and genetic disorders. Be sure to explain the difference between the two and describe an example for each. Finally, what advice would offer to parents who believe they are at high risk of having a child with a chromosomal or genetic disorder.

Answer: Chromosomal disorders occur because chromosomes fail to divide properly. Genetic disorders, on the other hand, are caused by incomplete inheritance or mutations. Examples of chromosomal disorders: sex chromosome disorders, Down syndrome. Examples of genetic disorders: Sickle-cell anemia, fragile X syndrome, PKU
Advice: Answers will vary. Students might recommend genetic counseling, prenatal screening/diagnosis, or to act in supportive and encouraging ways toward the child once he/she is born to increase the likelihood of favorable development.

Page: 77–81

Learning Objective: 2.14–2.17

Bloom's Taxonomy Level: Understand

REVEL Quiz Questions

ArnettChild_2e_EOC_Q2.1

For hair texture, curly is the dominant allele and straight hair is the recessive allele. Arabella has straight hair. Her mother has curly hair and her father has straight hair. Which of the following is a possibility for the combination of alleles she might have inherited from her parents?

- a curly allele from her curly-haired mother and a straight allele from her straight-haired father
- a straight allele from her curly-haired mother and a straight allele from her straight-haired father
- a curly allele from her curly-haired mother and a curly allele from her straight-haired father
- a straight allele from her curly-haired mother and a curly allele from her straight-haired father

Answer: B

Difficulty: 2

Topic: Genotype and Phenotype

Skill: Applied

LO 2.1 Distinguish between *genotype* and *phenotype* and identify the different forms of genetic inheritance.

ArnettChild_2e_EOC_Q2.2

_____ are at greater risk for X-linked recessive disorders because they have _____.

- Males; only one X chromosome
- Females; only one X chromosome
- Females; 2 X chromosomes
- Males; 2 X chromosomes

Answer: A

Difficulty: 1

Topic: The Sex Chromosomes

Skill: Factual

LO 2.2 Describe the sex chromosomes and identify what makes them different from other chromosomes.

ArnettChild_2e_EOC_Q2.3

Dr. Meyers is a behavioral geneticist. She is investigating whether school achievement has a genetic component. Which of the following scenarios would indicate to her that there is a large genetic component?

- Dizygotic twins show greater similarities in school achievement than siblings born 2 years apart.
- Adopted children show great similarities in school achievement to their adopted parents than their biological parents.
- Monozygotic twins show greater similarities in school achievement than dizygotic twins.
- Siblings born 2 years apart show greater similarities in school achievement than dizygotic twins.

Answer: C

Difficulty: 3

Topic: Principles of Behavior Genetics

Skill: Applied

LO 2.3 Explain how behavior geneticists use heritability estimates and concordance rates in their research.

ArnettChild_2e_EOC_Q2.4

Which of the following is the best illustration of epigenesis?

Females who are under-nourished start menstruating later than females who are properly nourished.

Men are often taller than their mothers.

Monozygotic twins separated at birth (one growing up under-nourished, the other properly nourished) are the same height as adults.

A daughter inherits a genetic disorder from her mother.

Answer: A

Difficulty: 2

Topic: Gene–Environment Interactions: Epigenesis and Reaction Ranges

Skill: Conceptual

LO 2.4 Describe how the concept of *epigenesis* frames gene–environment interactions, and connect epigenesis to the concept of *reaction range*.

ArnettChild_2e_EOC_Q2.5

Ever since he was little, Zachary has been fascinated with what his mother is cooking. As a toddler, he asked her lots of questions about it. As a young child, he began helping her by mixing and measuring. Now that he's in 3rd grade, his mother has signed him up for cooking classes. What type of effect is this?

passive genotype → environment effects

evocative genotype → environment effects

active genotype → environment effects

generalizability

Answer: B

Difficulty: 2

Topic: The Theory of Genotype–Environment Effects

Skill: Conceptual

LO 2.5 Explain how the theory of genotype–environment effects casts new light on the old nature–nurture debate.

ArnettChild_2e_EOC_Q2.6

Elira is a short, slender young woman who has always loved sports and competition, but hasn't been able to keep up physically. When she gets to college, she learns that the college's rowing team has a position called a "coxswain" in which it is advantageous to be small and competitive. She joins the team and starts training for this position. What type of effect is this?

passive genotype → environment effects

evocative genotype → environment effects

active genotype → environment effects

validity

Answer: C

Difficulty: 2

Topic: The Theory of Genotype–Environment Effects

Skill: Conceptual

LO 2.5 Explain how the theory of genotype–environment effects casts new light on the old nature–nurture debate.

ArnettChild_2e_EOC_Q2.7

_____ sperm is/are produced through a process called _____, and each sperm cell contains _____ chromosomes.

Four; meiosis; 23

One; meiosis; 46

Three; mitosis; 23

Four; meiosis; 46

Answer: A

Difficulty: 1

Topic: Sperm and egg formation

Skill: Factual

LO 2.6 Outline the process of meiosis in the formation of reproductive cells.

ArnettChild_2e_EOC_Q2.8

When do women finish producing ova?

when they reach menopause

when they are still in their mother’s womb

when they begin menstruating

never; they continue to produce ova for their entire life

Answer: B

Difficulty: 1

Topic: Sperm and egg formation

Skill: Factual

LO 2.6 Outline the process of meiosis in the formation of reproductive cells.

ArnettChild_2e_EOC_Q2.9

Where does fertilization take place?

uterus

ovary

fallopian tubes

vagina

Answer: C

Difficulty: 2

Topic: Conception

Skill: Conceptual

LO 2.7 Describe the process of fertilization and conception.

ArnettChild_2e_EOC_Q2.10

What is the result of two sperm fertilizing one ovum?

monozygotic twins

dizygotic twins

miscarriage

This is impossible.

Answer: D

Difficulty: 1

Topic: Conception

Skill: Conceptual

LO 2.7 Describe the process of fertilization and conception.

ArnettChild_2e_EOC_Q2.11

Which of the following is NOT a main source of infertility in men?

too few sperm produced

poor quality of sperm

sperm that are low in motility

too many sperm produced

Answer: D

Difficulty: 1

Topic: Infertility

Skill: Factual

LO 2.8 List the major causes of and treatment for infertility, and describe how infertility is viewed in different cultures.

ArnettChild_2e_EOC_Q2.12

What is the process of *in vitro fertilization (IVF)*?

A woman consults her midwife about her infertility problems and the midwife prescribes an herbal supplement regiment.

A woman takes fertility drugs to stimulate follicle production and then has sexual intercourse.

A woman takes fertility drugs to stimulate follicle production. Then, a doctor harvests the ova, fertilizes them, and places the zygotes back in the uterus.

Sperm are injected directly into the woman's uterus.

Answer: C

Difficulty: 1

Topic: Infertility

Skill: Factual

LO 2.8 List the major causes of and treatment for infertility, and describe how infertility is viewed in different cultures.

ArnettChild_2e_EOC_Q2.13

What structures does the trophoblast NOT become?

amnion

placenta

umbilical cord

embryo

Answer: D

Difficulty: 1

Topic: The Germinal Period (First 2 Weeks)

Skill: Factual

LO 2.9 Describe the structures that form during the germinal period.

ArnettChild_2e_EOC_Q2.14

What does the placenta NOT do?

- allows nutrients to pass from mother to developing organism
- protects developing organism from bacteria and wastes in mother's blood
- protects the mother from waste produced by the baby
- produces hormones that maintain blood in the uterine wall and stimulates breasts to produce milk

Answer: C

Difficulty: 1

Topic: The Germinal Period (First 2 Weeks)

Skill: Factual

LO 2.9 Describe the structures that form during the germinal period.

ArnettChild_2e_EOC_Q2.15

Which body system develops first and fastest in the embryo?

- digestive system
- circulatory system
- nervous system
- reproductive system

Answer: C

Difficulty: 1

Topic: The Embryonic Period (Weeks 3–8)

Skill: Factual

LO 2.10 Outline the major milestones of the embryonic period.

ArnettChild_2e_EOC_Q2.16

Your pregnant friend is eager to tell you about how she feels the fetus kick often and even hiccup. Without asking, you know that you friend is probably at what stage in her pregnancy?

- beginning of second trimester
- middle to end of second trimester
- middle to end of third trimester
- middle to end of first trimester

Answer: B

Difficulty: 2

Topic: The Fetal Period (Week 9–Birth)

Skill: Factual

LO 2.11 Describe the major milestones of the fetal period and identify when viability occurs.

ArnettChild_2e_EOC_Q2.17

Decasper and Spence (1986) had pregnant participants read *The Cat in the Hat* to their fetuses during the last 6 weeks of pregnancy. Which of the following sentences best describes their findings?

- Newborns showed a preference for their mother's voice reading over a stranger's voice reading.
- Newborns showed a preference for their mother's voice reading any rhythmic story over a non-rhythmic story.

Newborns showed a preference for their mother's voice reading *Cat in the Hat* over another rhythmic story.

Newborns showed a preference for any adult woman's voice reading *Cat in the Hat* over another rhythmic story.

Answer: C

Difficulty: 2

Topic: The Fetal Period (Week 9–Birth)

Skill: Conceptual

LO 2.11 Describe the major milestones of the fetal period and identify when viability occurs.

ArnettChild_2e_EOC_Q2.18

Your senator has asked you what services the country can provide to ensure babies are born healthier. Based on your knowledge from this class, what do you tell him?

The country should pass laws to ban the sale of alcohol and tobacco to pregnant women.

The country should make high quality prenatal care with skilled health care workers available to all pregnant women.

The country should require all women to give birth in a hospital.

The country should educate women about the dangers of gaining more than 15 pounds when they're pregnant.

Answer: B

Difficulty: 1

Topic: Variations in Prenatal Care

Skill: Applied

LO 2.12 Compare and contrast prenatal care in traditional cultures and developed countries.

ArnettChild_2e_EOC_Q2.19

Which of the following is NOT one of the most common nutritional deficiencies of pregnant women around the world?

iron

folic acid

iodine

Vitamin C

Answer: D

Difficulty: 1

Topic: Teratogens

Skill: Factual

LO 2.13 Identify the major teratogens in developing countries and developed countries.

ArnettChild_2e_EOC_Q2.20

Approximately 1 in _____ live births is a child with a chromosomal disorder.

100

50

2,000

200

Answer: D

Difficulty: 1

Topic: Chromosomal Disorders

Skill: Factual

LO 2.14 Explain how chromosomal disorders occur.

ArnettChild_2e_EOC_Q2.21

What parental characteristics make it more likely children will be born with a chromosomal disorder?

- mother's diet during pregnancy
- whether the mother or father has a chromosomal disorder themselves
- father's age
- mother's age

Answer: D

Difficulty: 2

Topic: Chromosomal Disorders

Skill: Applied

LO 2.14 Explain how chromosomal disorders occur.

ArnettChild_2e_EOC_Q2.22

Which of the following is true about PKU?

- PKU causes exceptional intellectual ability.
- Early treatment is very effective.
- A high-protein diet is recommended for teens with PKU.
- People with PKU do not produce enough phenylalanine.

Answer: B

Difficulty: 3

Topic: Genetic Disorders

Skill: Factual

LO 2.15 Describe causes and symptoms of some common genetic disorders.

ArnettChild_2e_EOC_Q2.23

Which of the following is NOT a reason that women have ultrasounds?

- They want to know the biological sex of the baby.
- They want the doctor to screen for any physical abnormalities.
- They want to know how much nutrition the fetus is receiving from the placenta.
- They want to check that their triplets are all developing correctly.

Answer: C

Difficulty: 1

Topic: Prenatal Diagnosis

Skill: Factual

LO 2.16 Describe the three main techniques of prenatal diagnosis.

ArnettChild_2e_EOC_Q2.24

Your cousin is 9 weeks pregnant and is going to the doctor for a prenatal diagnostic test. She doesn't remember the name of the test, but remembers the procedure. What is she likely to describe?

- The doctors will stick a long, hollow needle into her abdomen and take a sample of amniotic fluid.
- High-frequency sound waves will be directed toward the uterus.

A tube is inserted into the vagina and cells are collected from what is forming the umbilical cord.

She has to drink a very sugary drink and then have a blood test.

Answer: C

Difficulty: 3

Topic: Prenatal Diagnosis

Skill: Conceptual

LO 2.16 Describe the three main techniques of prenatal diagnosis.

ArnettChild_2e_EOC_Q2.25

After providing a comprehensive family history, what is the next step in genetic counseling?

Each partner provides a biological sample so doctors can analyze their chromosomes.

Women are given fertility drugs to boost their chance of getting pregnant.

Couples sign up for research studies about people trying to conceive.

Each partner must go through individual talk therapy with a licensed therapist.

Answer: A

Difficulty: 1

Topic: Genetic Counseling

Skill: Factual

LO 2.17 Explain who is likely to seek genetic counseling and for what purposes.

EOM Quiz Question 2.1.1

Enrico's biological parents were both musicians, so he was born with a(n) _____ that included exceptional musical ability, but because he was never exposed to musical instruments or instruction when he was adopted, he never developed his musical ability.

allele

genotype

phenotype

heritability

Answer: B

Difficulty: 3

Topic: Genotype and Phenotype

Skill: Analytical

LO 2.1 Distinguish between *genotype* and *phenotype* and identify the different forms of genetic inheritance.

EOM Quiz Question 2.1.2

The physical, behavioral, and psychological features of a person that are the result of the interaction between one's genes and the environment are part of the _____.

alleles

chromosomes

genotype

phenotype

Answer: D

Difficulty: 1

Topic: Genotype and Phenotype

Skill: Factual

LO 2.1 Distinguish between *genotype* and *phenotype* and identify the different forms of genetic inheritance.

EOM Quiz Question 2.1.3

Most physical and psychological traits are _____.

- determined by one dominant gene
- determined by co-dominant alleles
- polygenic
- not determined by genes

Answer: C

Difficulty: 2

Topic: Genotype and Phenotype

Skill: Factual

LO 2.1 Distinguish between *genotype* and *phenotype* and identify the different forms of genetic inheritance.

EOM Quiz Question 2.1.4

Sadie carries the recessive gene for hemophilia, a disorder in which the blood does not clot properly. If Sadie had two children, a boy and a girl, and passed the recessive gene for the disorder to both children, which of her children would develop hemophilia if the father does not have hemophilia himself?

- neither of the two children
- both children
- the boy
- the girl

Answer: C

Difficulty: 3

Topic: The Sex Chromosomes

Skill: Analytical

LO 2.2 Describe the sex chromosomes and identify what makes them different from other chromosomes.

EOM Quiz Question 2.1.5

Which of the following is TRUE?

- All eggs in the mother contain an X chromosome.
- All sperm carry a Y chromosome.
- The Y chromosome is larger than the X chromosome.
- The X chromosome and Y chromosome carry the same amount of genetic material.

Answer: A

Difficulty: 1

Topic: The Sex Chromosomes

Skill: Factual

LO 2.2 Describe the sex chromosomes and identify what makes them different from other chromosomes.

EOM Quiz Question 2.2.1

The heritability of intelligence _____ from childhood to adulthood.

- decreases
- increases
- stays the same
- has not been calculated in this area of research

Answer: B

Difficulty: 2

Topic: Principles of Behavior Genetics

Skill: Factual

LO 2.3 Explain how behavior geneticists use heritability estimates and concordance rates in their research.

EOM Quiz Question 2.2.2

The higher the concordance rate, _____.

- the more similar the two persons are
- the more different the two persons are
- the higher the person's chances of having twins
- the higher the person's quality of life is likely to be

Answer: A

Difficulty: 2

Topic: Principles of Behavior Genetics

Skill: Factual

LO 2.3 Explain how behavior geneticists use heritability estimates and concordance rates in their research.

EOM Quiz Question 2.2.3

Girls normally begin menstruating around age 11 to 16, toward the lower end of this range under healthy conditions and toward the higher end when nutrition is insufficient. This is an example of _____.

- a high concordance rate
- a low concordance rate
- epigenesis
- heritability

Answer: C

Difficulty: 2

Topic: Gene–Environment Interactions: Epigenesis and Reaction Ranges

Skill: Conceptual

LO 2.4 Describe how the concept of *epigenesis* frames gene–environment interactions, and connect epigenesis to the concept of *reaction range*.

EOM Quiz Question 2.2.4

In recent decades in Western countries, there has been little change in average height, indicating that the populations of these countries have reached the upper boundary of _____ for height.

- their concordance rate
- their heritability

- their reaction range
- their polygenic inheritance

Answer: C

Difficulty: 2

Topic: Gene–Environment Interactions: Epigenesis and Reaction Ranges

Skill: Conceptual

LO 2.4 Describe how the concept of *epigenesis* frames gene–environment interactions, and connect epigenesis to the concept of *reaction range*.

EOM Quiz Question 2.2.5

A toddler from the Hamar tribe in Ethiopia was adopted by an American couple who described themselves as “non-athletes.” This tribe was known for having members who are exceptionally tall. Once she started school, she asked to play in the after-school basketball program, tried out for the team in middle school and high school and eventually went on to earn a scholarship to play in college. This is an example of _____.

- polygenic inheritance
- incomplete dominance
- a self-fulfilling prophecy
- niche picking

Answer: D

Difficulty: 2

Topic: The Theory of Genotype–Environment Effects

Skill: Applied

LO 2.5 Explain how the theory of genotype–environment effects casts new light on the old nature–nurture debate.

EOM Quiz Question 2.3.1

As a result of the process of crossing over, _____.

- the risk of sickle-cell anemia decreases
- boys are more likely to be born with a learning disability
- the genetic material that originated from the mother and father is rearranged
- women are at increased risk for infertility

Answer: C

Difficulty: 2

Topic: Sperm and Egg Formation

Skill: Conceptual

LO 2.6 Outline the process of meiosis in the formation of reproductive cells.

EOM Quiz Question 2.3.2

The _____ is formed when the ovum and sperm unite and fertilization takes place.

- blastula
- blastocyst
- zygote
- embryo

Answer: C

Difficulty: 1

Topic: Conception

Skill: Remember

LO 2.7 Describe the process of fertilization and conception.

EOM Quiz Question 2.3.3

Fertilization can take place only_____.

- within three days after the ovum enters the fallopian tube
- in the first 24 hours after the ovum enters the fallopian tube
- in the first 2 hours after the ovum enters the fallopian tube
- if intercourse occurs on the day of ovulation

Answer: B

Difficulty: 1

Topic: Conception

Skill: Remember

LO 2.7 Describe the process of fertilization and conception.

EOM Quiz Question 2.3.4

In general,_____have the highest rates of DZ twins.

- African Americans
- European Americans
- Asian Americans
- Hispanic Americans

Answer: A

Difficulty: 1

Topic: Conception

Skill: Remember

LO 2.7 Describe the process of fertilization and conception.

EOM Quiz Question 2.3.5

Shonda and Trinity have been a couple for eight years, and they are now excited to take the leap into parenthood together. Because they are both women, they have decided to use _____, which would involve injecting a donor's sperm into Shonda's uterus while she is ovulating.

- epidurals
- artificial insemination
- in vitro fertilization
- chorionic villus sampling

Answer: B

Difficulty: 2

Topic: Infertility

Skill: Apply

LO 2.7 Describe the process of fertilization and conception.

EOM Quiz Question 2.4.1

After fertilization, the first 2 weeks of pregnancy is called the_____.

- germinal period
- embryonic period
- fetal period
- first trimester

Answer: A

Difficulty: 1

Topic: The Germinal Period (First 2 Weeks)

Skill: Remember

LO 2.9 Describe the structures that form during the germinal period.

EOM Quiz Question 2.4.2

The blastocyst forms during the_____.

- germinal period
- embryonic period
- fetal period
- second trimester

Answer: A

Difficulty: 2

Topic: The Germinal Period (First 2 Weeks)

Skill: Remember

LO 2.9 Describe the structures that form during the germinal period.

EOM Quiz Question 2.4.3

The_____form from the outer layer of the embryonic disk.

- digestive and respiratory systems
- brain and spinal cord
- skin, hair, nails, sensory organs, and nervous system
- lungs and heart

Answer: C

Difficulty: 2

Topic: The Embryonic Period (Weeks 3–8)

Skill: Remember

LO 2.10 Outline the major milestones of the embryonic period.

EOM Quiz Question 2.4.4

During the_____period of prenatal development nearly all the major organs are formed.

- germinal
- zygotic
- embryonic
- fetal

Answer: C

Difficulty: 2

Topic: The Embryonic Period (Weeks 3–8)

Skill: Remember

LO 2.10 Outline the major milestones of the embryonic period.

EOM Quiz Question 2.4.5

Maddox, a baby born 6 weeks prematurely, is more at risk of not surviving than his sister, Shekia, who was born full term because Maddox's_____is/are still immature.

- heart

intestines
lungs
pancreas

Answer: C

Difficulty: 2

Topic: The Fetal Period (Week 9–Birth)

Skill: Apply

LO 2.11 Describe the major milestones of the fetal period and identify when viability occurs.

EOM Quiz Question 2.5.1

Melinda is a healthy woman who just found out she was pregnant and went for her first prenatal visit. Which of the following pieces of advice is she most likely to receive from her physician?

Avoid even mild exercise.
Avoid Kegel exercises.
Drink slightly less fluids than usual.
Eat foods with sufficient iodine.

Answer: D

Difficulty: 2

Topic: Variations in Prenatal Care

Skill: Remember

LO 2.12 Compare and contrast prenatal care in traditional cultures and developed countries.

EOM Quiz Question 2.5.2

Your sister is pregnant. She has always been health conscious and exercises regularly. She is planning on engaging in aerobic exercise by continuing to go to her exercise classes. According to most physicians, she should_____.

be very careful as this type of exercise during pregnancy could lower muscle mass
exercise regularly as she will stimulate the circulatory system and muscles
exercise regularly because it lowers the chances of teratogens reaching the fetus
avoid aerobic exercise because it has been shown to dangerously increase fetal heart rate

Answer: B

Difficulty: 2

Topic: Variations in Prenatal Care

Skill: Remember

LO 2.12 Compare and contrast prenatal care in traditional cultures and developed countries.

EOM Quiz Question 2.5.3

The most common teratogen worldwide is_____.

malnutrition
rubella
alcohol
tobacco

Answer: A

Difficulty: 2

Topic: Teratogens

Skill: Remember

LO 2.13 Identify the major teratogens in developing countries and developed countries.

EOM Quiz Question 2.5.4

Marie is a heavy drinker and managed to stop drinking for most of her pregnancy. If she drank alcohol during the _____ period, her baby would be most at risk of structural damage.

- prenatal
- embryonic
- germinal
- blastula

Answer: B

Difficulty: 2

Topic: Teratogens

Skill: Apply

LO 2.13 Identify the major teratogens in developing countries and developed countries.

EOM Quiz Question 2.5.5

It is January 1989 in Beijing, China, and Huang and Jiao have just married. They want to conceive a child as soon as possible, as most newly married Chinese couples do. Considering it is the middle of winter, and fruits and vegetables are not readily available, what important nutrient in Huang's prenatal diet is likely to be missing, potentially causing her child to be born with spina bifida?

- folic acid
- potassium
- calcium
- Vitamin D

Answer: A

Difficulty: 3

Topic: Teratogens

Skill: Apply

LO 2.13 Identify the major teratogens in developing countries and developed countries.

EOM Quiz Question 2.6.1

Julie is a 47-year-old college professor who was shocked to find out she was pregnant. Although she was elated at the idea of having another child, she was worried about having a child with _____ because the chances increase dramatically after age 45.

- anencephaly
- spina bifida
- cystic fibrosis
- Down syndrome

Answer: D

Difficulty: 1

Topic: Chromosomal Disorders

Skill: Remember

LO 2.14 Explain how chromosomal disorders occur.

EOM Quiz Question 2.6.2

Which of the following is TRUE regarding people with Down syndrome?

They are at increased risk for an abnormality in the development of the reproductive system.
 Their total brain volume tends to increase in their 20s.
 They age faster than other people.
 With advances in medical treatment, their life expectancy is now about the same as in the general population.

Answer: C

Difficulty: 2

Topic: Chromosomal Disorders

Skill: Understand

LO 2.14 Explain how chromosomal disorders occur.

EOM Quiz Question 2.6.3

There are two main types of chromosomal disorders, those that take place on the 21st pair of chromosomes and those that_____.

- take place on the 20th pair
- take place on the 22nd pair
- involve the sex chromosomes
- involve rapidly developing chromosomes

Answer: B

Difficulty: 2

Topic: Chromosomal Disorders

Skill: Remember

LO 2.14 Explain how chromosomal disorders occur.

EOM Quiz Question 2.6.4

Errol's father carries two recessive genes for sickle-cell anemia, and Errol's mother carries two normal dominant genes. Therefore, Errol has inherited_____from his parents.

- anemia
- a resistance to malaria
- sickle-cell anemia
- Huntington's chorea

Answer: B

Difficulty: 3

Topic: Genetic Disorders

Skill: Apply

LO 2.15 Describe causes and symptoms of some common genetic disorders.

EOM Quiz Question 2.6.5

Individuals of_____descent are most likely to have sickle-cell anemia.

- Asian
- Hispanic
- African
- Native American

Answer: C

Difficulty: 2

Topic: Genetic Disorders

Skill: Remember

LO 2.15 Describe causes and symptoms of some common genetic disorders.

EOM Quiz Question 2.7.1

Which of the following is safest in terms of risk of miscarriage?

- chorionic villus sampling
- amniocentesis
- ultrasound

They all carry about the same level of risk for miscarriage.

Answer: C

Difficulty: 1

Topic: Prenatal Diagnosis

Skill: Apply

LO 2.16 Describe the three main techniques of prenatal diagnosis.

EOM Quiz Question 2.7.2

Carissa has a family history of Down syndrome and is in her 5th week of pregnancy. She decides that she would like to find out as early as possible whether her unborn child has Down syndrome or any other genetic abnormality. What test is she likely to get?

- chorionic villus sampling
- amniocentesis
- sonogram
- echocardiogram

Answer: A

Difficulty: 3

Topic: Prenatal Diagnosis

Skill: Analyze

LO 2.16 Describe the three main techniques of prenatal diagnosis.

EOM Quiz Question 2.7.3

Chorionic villus sampling_____.

- is the safest of all prenatal testing techniques
- can be done as early as the third week of pregnancy
- is conducted with cells that are forming the umbilical cord
- is dangerous and is no longer conducted in the United States

Answer: C

Difficulty: 1

Topic: Prenatal Diagnosis

Skill: Remember

LO 2.16 Describe the three main techniques of prenatal diagnosis.

EOM Quiz Question 2.7.4

A couple comes to your genetic counseling clinic concerned that they might have a second child affected with the same X-linked recessive disease displayed by their son. Neither of the parents displays the trait. What do you tell them?

- Because it's a recessive trait, they must both be carriers.
- Because it's a recessive trait, only the father could pass the gene to the next offspring.

They have a chance of having another affected son.
They are not at risk of having another affected child.

Answer: C

Difficulty: 3

Topic: Genetic Counseling

Skill: Analyze

LO 2.17 Explain who is likely to seek genetic counseling and for what purposes.

EOM Quiz Question 2.7.5

Genetic counseling is sought by_____.

- couples before they try to conceive
- couples of any age who have a family history of genetic issues
- couples who are over age 40
- any of the above

Answer: D

Difficulty: 2

Topic: Genetic Counseling

Skill: Remember

LO 2.17 Explain who is likely to seek genetic counseling and for what purposes.