Chapter 2 Genetics and Prenatal Development

Chapter 2-Section 1

Genetic Influences on Development

Learning Objective		Remember	Understand	Apply
Learning Objective 2.1	Multiple Choice	1, 2, 3, 4, 6, 8,9,10, 11, 12, 13, 14, 15, 16,17, 22, 23, 33, 34, 36	5, 7, 24, 28, 29, 30, 31, 32, 35	18, 19, 20, 21, 25, 26, 27
	Short Answer			116
	Essay			
Learning Objective 2.2	Multiple Choice	40, 41, 42, 44, 45, 50, 52, 53, 55	37, 38, 39, 43, 46, 49, 51	47, 48, 54
	Short Answer		117, 118	
	Essay			121
Learning Objective 2.3	Multiple Choice	56, 57, 58, 59, 60, 61, 62, 63, 67, 68, 69, 71, 72, 73, 76, 78, 80, 82	64, 65, 70, 74, 77, 81	66, 75, 79, 83, 84
	Short Answer		119	
	Essay			
Learning Objective 2.4	Multiple Choice	85, 87	86, 90	88, 89
	Short Answer			120
	Essay			
Learning Objective 2.5	Multiple Choice		91, 92, 93	
	Short Answer			
	Essay			
Learning Objective 2.6	Multiple Choice	94, 95, 96, 97, 98, 99, 100, 101, 102, 104, 105, 106, 107, 108	103	109
	Short Answer			
	Essay			
Learning Objective 2.7	Multiple Choice	110, 112, 114, 115	111, 113	
	Short Answer			
	Essay		122	

Section 1 Genetic Influences on Development

Test Item File

Difficulty
1=Easy; 2=Moderate; 3=Difficult

Learning Objective number refers to the textbook's learning objectives.

MDL Parallel Question ID refers to the correlating question found in MyDevelopmentLab. For your convenience, the MyDevelopmentLab items for this chapter are included in this document after the Test Item File.

Pre=Pre-Test
Post=Post-Test
CE=Chapter Exam
QR=Quick Review

Multiple Choice Questions

1. The human body contains how many chromosomes?
   a. 23
   b. 46
   c. 69
   d. 92

Answer: B
Difficulty: 1
Page: 47
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Pre 2.1.1

2. The average human cell has ____ chromosomes.
   a. 42
   b. 46
   c. 23
   d. 26

Answer: B
Difficulty: 1
Page: 47
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Post 2.1.1

3. How many pairs of chromosomes do humans have?
   a. 23
   b. 46
   c. 69
   d. 92

Answer: A
Difficulty: 1

Page: 47
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

4. How many chromosomes from each pair of chromosomes are generally inherited from the father?
   a. 1
   b. 2
   c. 3
   d. 4

Answer: A
Difficulty: 1
Page: 47
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

5. According to the text, chromosomes are composed of complex molecules known as _____.
   a. nucleotides
   b. genes
   c. DNA
   d. RNA

Answer: C. DNA is a long strand of cell material that stores and transfers genetic information.
Difficulty: 2
Page: 47
Learning Objective: 2.1
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Pre 2.1.5; CE 2.3.14

6. Chromosomes are composed of complex molecules known as ____.
   a. DNA
   b. nucleotide pairs
   c. genetic
   d. dominant recessive

Answer: A
Difficulty: 1
Page: 47
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

7. The DNA in chromosomes is organized into segments called ____.
   a. DNA
   b. RNA
   c. genes
   d. nucleotides

Answer: C. Genes are segments of DNA that contain coded instructions for the growth and functioning of an organism.

Difficulty: 1
Page: 47
Learning Objective: 2.1
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Post 2.1.2

8. Genes contain paired sequences of chemicals called ____.
   a. genes
   b. RNA
   c. DNA
   d. nucleotides

Answer: D
Difficulty: 2
Page: 47
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

9. Genes are made of ____.
   a. protein segments
   b. nucleotides
   c. fatty cells
   d. chromosomes

Answer: B
Difficulty: 2
Page: 47
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

10. Approximately how many genes comprise the human genome?
   a. 10,000
   b. 23,000
   c. 50,000
   d. 100,000

Answer: B
Difficulty: 2
Page: 47
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

11. How many nucleotide pairs comprise the human genome?
   a. 100,000
   b. 150 million
   c. 3 billion
   d. 5 trillion

Answer: C
Difficulty: 1
Page: 47
Learning Objective: 2.1

Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

12. The totality of an individual's genes is referred to as his or her ____.
    a. phenotype
    b. genotype
    c. inheritance
    d. environment

Answer: B
Difficulty: 1
Page: 47
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Post 2.1.3; CE 2.1.4

13. An individual's complete genetic makeup is his or her ____.
    a. genotype
    b. phenotype
    c. allele
    d. reaction range

Answer: A
Difficulty: 1
Page: 47
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

14. A person's ____ is/are their genetic makeup, whereas a person's ____ is/are their characteristics.
    a. phenotype; genotype
    b. genotype; phenotype
    c. nucleotides; DNA
    d. DNA; nucleotides

Answer: B
Difficulty: 3
Page: 47
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

15. The *expression* of an individual's genetic material is referred to as his or her _____.
    a. phenotype
    b. genotype
    c. inheritance
    d. environment

Answer: A
Difficulty: 2
Page: 47
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember

MDL Parallel Question ID: N/A

16. A person's characteristics are known as his or her ____.
    a. phenotype
    b. genotype
    c. chromosomes
    d. DNA

Answer: A
Difficulty: 1
Page: 47
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

17. The difference between an individual's genotype and its expression in his or her phenotype is a consequence of the person's ____.
    a. genes
    b. DNA
    c. environment
    d. parents

Answer: C
Difficulty: 2
Page: 47
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: CE 2.1.5

18. Fred was born into a family with high musical talent. Both 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?
    a. Fred's musical genes
    b. Fred's musical talent
    c. Fred's nurturing parents
    d. Fred's musical genes and musical talent

Answer: A. One's genotype is his or her complete genetic makeup.
Difficulty: 2
Page: 47
Learning Objective: 2.1
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: Post 2.1.10

19. Jill's mother was an All-American in the 1,500m 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?
    a. She is correct; she will be a great runner no matter what she does.
    b. It is unlikely that Jill even has the genotype for running.

c. Jill might have the genotype for running ability, but she will need to train become a great runner.
d. Jill has also inherited the genes for superior intelligence.

Answer: C. 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.
Difficulty: 2
Page: 47–48
Learning Objective: 2.1
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: Pre 2.1.10

20. Alejandro was born into a family with high musical talent. Both 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?
a. Alejandro's musical genes
b. Alejandro's musical talent
c. Alejandro's nurturing parents
d. Alejandro's practice of the guitar

Answer: C. Alejandro's genotype includes exceptional musical ability, but it's his parents' support of this ability that encouraged those genes to be expressed.
Difficulty: 2
Page: 47-48
Learning Objective: 2.1
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: N/A

21. 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 _____.
a. genotype
b. phenotype
c. genes
d. alleles

Answer: B. 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.
Difficulty: 2
Page: 47-48
Learning Objective: 2.1
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: N/A

22. On every pair of chromosomes there are how many forms of each gene?
a. 1
b. 2
c. 3
d. 4

Answer: B
Difficulty: 1

Page: 48
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: QR 2.1.1

23. Each form of a gene that is contained within a chromosome is referred to as a ____.
    a. dominant gene
    b. recessive gene
    c. allele
    d. single gene

Answer: C
Difficulty: 1
Page: 48
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

24. What type of gene, if it is present, will be expressed in the phenotype?
    a. recessive gene
    b. dominant gene
    c. expressed gene
    d. controller gene

Answer: B. Recessive genes will only be expressed when there is no dominant gene present.
Difficulty: 1
Page: 48
Learning Objective: 2.1
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

25. 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. A person must have that dominant gene.
    b. A person must have two recessive genes.
    c. The gene must mutate.
    d. Both dominant genes must be present.

Answer: A. If a dominant gene is present it will be expressed in the phenotype.
Difficulty: 2
Page: 48
Learning Objective: 2.1
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: CE 2.1.6

26. 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
    b. curly hair
    c. dominant-recessive
    d. their complete genetic makeup

Answer: B. 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.
Difficulty: 2
Page: 48
Learning Objective: 2.1
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: CE 2.1.6

27. 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?
    a. Her mother and father probably carry the recessive trait for blue eyes.
    b. She is correct; there is no way that she would have blue eyes if she were really her parents' biological daughter.
    c. Blue eyes are dominant, so her parents should have blue eyes too.
    d. Only the environment determines eye color once the fetus has been born.

Answer: A. The blue-eyed child of two brown-eyed parents probably inherited a recessive blue-eyed gene from each parent.
Difficulty: 2
Page: 48
Learning Objective: 2.1
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: N/A

28. For a recessive gene to be expressed in the phenotype, it must be paired with a ____.
    a. dominant gene
    b. recessive gene
    c. expressed gene
    d. controller gene

Answer: B. Two recessive genes must be present for that trait to be expressed.
Difficulty: 1
Page: 48
Learning Objective: 2.1
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

29. What is occurring when primarily but not exclusively the dominant gene influences the phenotype?
    a. expression of the dominant gene
    b. expression of the recessive gene
    c. incomplete dominance
    d. failure of expression

Answer: C. The sickle-cell trait that is common among black Africans and African Americans is an example.
Difficulty: 2
Page: 48
Learning Objective: 2.1
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

30. In a dominant-recessive pairing, which of the following genes expresses a person's phenotype?
    a. the dominant
    b. the recessive
    c. the dominant-recessive pairing
    d. it is too complicated to know which genes will be expressed

Answer: A. In a dominant-recessive pairing, the dominant gene will express itself in a person's phenotype. For example, if you inherited a gene for curly hair from one parent and straight hair from the other, you would have curly hair, because curly hair is dominant and straight hair is recessive.
Difficulty: 2
Page: 48
Learning Objective: 2.1
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

31. Which of the following is an example of an incomplete dominant inheritance?
    a. Down syndrome
    b. Fragile X
    c. sickle-cell anemia
    d. HIV

Answer: C. 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.
Difficulty: 2
Page: 48
Learning Objective: 2.1
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: CE 2.1.7

32. Who is most likely to have sickle-cell anemia?
    a. European and European Americans
    b. Hispanics and Hispanic Americans
    c. Asians and Asian Americans
    d. Africans and African Americans

Answer: D. It also occurs more rarely in people whose ancestors came from India or the Mediterranean.
Difficulty: 1
Page: 48
Learning Objective: 2.1
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

33. 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?
    a. Tay-Sachs
    b. trisomy-21
    c. sickle-cell anemia

d. malaria

Answer: C
Difficulty: 1
Page: 48
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

34. Sickle-cell anemia is an evolutionary defense against what disease?
    a. sickle-cell trait
    b. malaria
    c. smallpox
    d. Nile fever

Answer: B
Difficulty: 1
Page: 49
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

35. 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 _____.
    a. inheritability
    b. polygenic inheritance
    c. bimodal inheritance
    d. single dominance

Answer: B. Polygenetic inheritance accounts for characteristics such as height and weight as well as intelligence and personality.
Difficulty: 2
Page: 49
Learning Objective: 2.1
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

36. Characteristics such as height, weight, and skin color are made up of a ____.
    a. homogenetic inheritance
    b. heterogenetic inheritance
    c. dominant-recessive inheritance
    d. polygenetic inheritance

Answer: D
Difficulty: 1
Page: 49
Learning Objective: 2.1
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

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

c. male chromosomes
d. female chromosomes

Answer: A. The sex chromosome pair is called XX in females and XY in males.
Difficulty: 1
Page: 50
Learning Objective: 2.2
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

38. If the fetus has the sex chromosomes XX, its genotype is ____.
a. female
b. male
c. undetermined
d. dimorphic

Answer: A. Males have XY sex chromosomes.
Difficulty: 1
Page: 50
Learning Objective: 2.2
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

39. If the fetus has the sex chromosomes XY, its genotype is _____.
a. female
b. male
c. undetermined
d. dimorphic

Answer: B. Females have XX sex chromosomes.
Difficulty: 1
Page: 50
Learning Objective: 2.2
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

40. A person with an XY pairing of chromosomes is a ____, whereas a person with an XX pairing of chromosomes is a ____.
a. male; female
b. female; male
c. homogenetic inheritance; polygenetic inheritance
d. polygenetic inheritance; homogenetic inheritance

Answer: A
Difficulty: 2
Page: 50
Learning Objective: 2.2
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

41. Which of the two sex chromosomes is significantly smaller and contains approximately 30% less genetic material?
a. X
b. Y
c. O

d. They are both the same

Answer: B
Difficulty: 1
Page: 50
Learning Objective: 2.2
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

42. Of the following, which best describes the Y chromosome?
    a. The Y chromosome is bigger than X chromosome.
    b. The Y chromosome contains 30% less genetic material than the X chromosome.
    c. The Y chromosome is responsible for determining the sex of the child.
    d. There are no differences between the Y chromosome and the X chromosome.

Answer: B
Difficulty: 2
Page: 50
Learning Objective: 2.2
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

43. All eggs in the mother contain which sex chromosome?
    a. X
    b. Y
    c. O
    d. None

Answer: A. Females carry no Y chromosomes.
Difficulty: 1
Page: 50
Learning Objective: 2.2
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

44. All ova, a female reproductive egg in the mother, carry an ____.
    a. X chromosome
    b. Y chromosome
    c. XY chromosome
    d. XX chromosome

Answer: A
Difficulty: 1
Page: 50
Learning Objective: 2.2
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

45. What determines the sex of the offspring?
    a. the ovum
    b. the first sperm cell to arrive at the ovum
    c. egg re-arrangement at fertilization
    d. time of the monthly cycle when fertilization occurs

Answer: B
Difficulty: 1
Page: 50
Learning Objective: 2.2
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

46. What happens that determines the sex of the offspring?
    a. The ovum contains 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.
    b. 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.
    c. 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.
    d. 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. The woman's ova are not responsible for determining a child's sex as they carry only X chromosomes.
Difficulty: 1
Page: 50
Learning Objective: 2.2
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

47. 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?
    a. His friend was correct; she was purposefully having sons instead of a daughter.
    b. It was not anyone's "fault," but the sperm determined the sex of the offspring.
    c. It was not anyone's "fault" even though her ova determined the sex of the offspring.
    d. 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. The sex of the offspring is determined by which chromosome is contributed by the sperm.
Difficulty: 1
Page: 50
Learning Objective: 2.2
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: N/A

48. While having a conversation with a friend who is pregnant, she says to you that since she is "carrying high" she will have a girl. Based upon the textbook, which of the following statements are you thinking?
    a. There is no scientific evidence to support her belief.
    b. There are countless research studies that support her belief.

c. Statistically speaking she is correct.
d. She is wrong, a pregnant woman who is “carrying high” a more likely to be carrying a boy.

Answer: A. This is a common misconception that has no scientific basis.
Difficulty: 1
Page: 51
Learning Objective: 2.2
Bloom’s Taxonomy Level: Apply
MDL Parallel Question ID: N/A

49. Who is more affected by X-linked inherited disorders?
a. females
b. males
c. children under one year of age.
d. adults with mutations

Answer: B. 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.
Difficulty: 1
Page: 51
Learning Objective: 2.2
Bloom’s Taxonomy Level: Understand
MDL Parallel Question ID: N/A

50. Who are generally carriers of X-linked disorders?
a. females
b. males
c. individuals who have been exposed to teratogens
d. individuals with a trisomy

Answer: A
Difficulty: 1
Page: 51
Learning Objective: 2.2
Bloom’s Taxonomy Level: Remember
MDL Parallel Question ID: N/A

51. Why are males more likely to have X-linked inherited disorders?
a. If the X chromosome contains the recessive gene for the disorder, their Y chromosome has no dominant gene to prevent it.
b. They are generally more immature at birth
c. Androgen is a hormone that causes disorders to occur
d. If the Y chromosome does not develop properly, the genes on this chromosome cannot prevent the disorder from occurring

Answer: A. Males also would not have a second X chromosome that may contain a dominant gene to block the X-linked inherited disorder.
Difficulty: 1
Page: 51
Learning Objective: 2.2
Bloom’s Taxonomy Level: Understand
MDL Parallel Question ID: N/A

52. Why are males more susceptible to X linked disorders?
    a. Because males have an XX pairing of chromosomes; therefore, this increases their odds of a disorder.
    b. Because males have an XY pairing of chromosomes and the Y chromosome is more likely to host a genetic disorder.
    c. 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.
    d. 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: 51
Learning Objective: 2.2
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

53. Which of the following is an example of an X-linked disorder?
    a. schizophrenia
    b. hemophilia
    c. bipolar Disease
    d. enuresis

Answer: B
Difficulty: 1
Page: 51-52
Learning Objective: 2.2
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

54. 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 to his offspring.
    b. 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.
    c. X-linked disorders are not inherited; he has no worries
    d. Since he has hemophilia, he is probably sterile and unable to father children.

Answer: B. Since his male offspring would inherit his Y chromosome, he cannot pass along an X-linked disorder to them.
Difficulty: 1
Page: 51-52
Learning Objective: 2.2
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: N/A

55. Which of the following is an example of an X-linked inheritance disorder?
    a. autism
    b. Down syndrome
    c. hemophilia
    d. Turner's syndrome

Answer: C
Difficulty: 1
Page: 51-52
Learning Objective: 2.2
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

56. Nature is to ____ as nurture is to ____.
    a. conditioning; learning
    b. learning; conditioning
    c. environment; genetics
    d. genetics; environment

Answer: D
Difficulty: 1
Page: 52
Learning Objective: 2.3
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

57. According to your text, what have researchers concluded about the nature–nurture debate in terms of development?
    a. Genetics is more important.
    b. Environment is more important.
    c. Both are important.
    d. Genetics is more important in infancy and environment in childhood.

Answer: C
Difficulty: 1
Page: 52
Learning Objective: 2.3
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

58. Which the following statement best describes the nature–nurture debate?
    a. Most characteristics develop solely from nature or nurture, but not both.
    b. Most characteristics develop from a combination of nature and nurture.
    c. Most characteristics develop from only nature.
    d. Most characteristics develop from only nurture.

Answer: B
Difficulty: 1
Page: 52
Learning Objective: 2.3
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Pre 2.1.2

59. What field is concerned with the question of how much genes influence development?
    a. embryology
    b. behavior genetics
    c. developmental psychology
    d. genetics

Answer: B

Difficulty: 1
Page: 52
Learning Objective: 2.3
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

60. A behavioral geneticist would use which of the following research methods to study the influence of genetics?
    a. longitudinal studies
    b. cross-sectional studies
    c. quasi-experimental studies
    d. twin and adoption studies

Answer: D
Difficulty: 1
Page: 52
Learning Objective: 2.3
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

61. Monozygotic (MZ) twins are also known as _____.
    a. fraternal twins
    b. identical twins
    c. dizygotic twins
    d. conjoined twins

Answer: B
Difficulty: 1
Page: 52
Learning Objective: 2.3
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

62. What percentage of their genes do monozygotic twins have in common?
    a. 40%
    b. 60%
    c. 80%
    d. 100%

Answer: D
Difficulty: 1
Page: 52
Learning Objective: 2.3
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

63. Which of the following have a 100% genetic similarity to each other?
    a. brother and sister
    b. dizygotic twins
    c. cousins
    d. identical or monozygotic twins

Answer: D
Difficulty: 1
Page: 52

Learning Objective: 2.3
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

64. If temperament were based genetically, which of the following would have the greatest degree of similarity?
    a. monozygotic twins
    b. dizygotic twins
    c. parents and children
    d. cousins

Answer: A. Monozygotic or identical twins have a 100% genetic similarity.
Difficulty: 1
Page: 52
Learning Objective: 2.3
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Pre 2.1.6

65. Dizygotic (DZ) twins are also known as:
    a. fraternal twins
    b. identical twins
    c. monozygotic twins
    d. conjoined twins

Answer: A. Dizygotic twins result when a woman releases two ova and both are fertilized by sperm.
Difficulty: 1
Page: 52
Learning Objective: 2.3
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Post 2.1.5

66. 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?
    a. It is impossible to have identical twins of different sexes.
    b. They could be identical; that was a great question.
    c. Fraternal twins are usually both girls.
    d. Fraternal twins are usually both boys.

Answer: A. Identical twins have exactly the same genotype, including sex.
Difficulty: 1
Page: 52
Learning Objective: 2.3
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: CE 2.1.14

67. What percentage of their genes do dizygotic twins have in common?
    a. 100%
    b. 70 to 90%
    c. 40 to 60%
    d. 10 to 30%

Answer: C

Difficulty: 1
Page: 52
Learning Objective: 2.3
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

68. Which of the following have a 40 to 60% similarity of genetic inheritance?
    a. identical twins
    b. fraternal twins
    c. cousins
    d. adopted siblings

Answer: B
Difficulty: 1
Page: 52
Learning Objective: 2.3
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

69. What percentage of their genes do parents and their children have in common?
    a. 10%
    b. 30%
    c. 50%
    d. 70%

Answer: C
Difficulty: 1
Page: 52
Learning Objective: 2.3
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

70. What type of study allows researchers to study whether certain behaviors or traits are more closely related to their genetics or their environment?
    a. genetics
    b. temperament
    c. chromosomal
    d. adoption

Answer: D. Adoption studies let researchers observe the behavior of parents and children who share no genetic material.
Difficulty: 1
Page: 52
Learning Objective: 2.3
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

71. ____ is an estimate of the extent to which genes are responsible for the differences among persons within a specific population.
    a. Heritability
    b. Reaction range
    c. Genetic ratio
    d. Environmental coefficient

Answer: A

Difficulty: 1
Page: 52
Learning Objective: 2.3
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

72. 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?
    a. genetic correlation
    b. heritability estimate
    c. concordance rate
    d. chromosomal correction

Answer: B
Difficulty: 1
Page: 52
Learning Objective: 2.3
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

73. The heritability estimate ranges from ____.
    a. 1 to 100
    b. 0 to 1.00
    c. 1 to 5
    d. 0 to 20

Answer: B
Difficulty: 1
Page: 52
Learning Objective: 2.3
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

74. Professor Glossner proposes that the heritability of temperament is .80. Which of the following statements does Professor Glossner propose?
    a. A large portion of temperament is determined by genetics.
    b. A large portion of temperament is determined by environment.
    c. 80% of temperament is determined by the X chromosome.
    d. 20% of temperament is determined by the X chromosome.

Answer: A. 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.
Difficulty: 2
Page: 52
Learning Objective: 2.3
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Pre 2.1.7

75. 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. Since heritability estimates for intelligence are .50, he is probably overestimating his intelligence.
b. He is definitely correct; he is likely a genius.
c. Actually, children of intellectually gifted adults are usually much lower in intelligence.
d. With a 2.8 GPA, he must be correct.

Answer: A. Heritability estimates for intelligence are .50, so given his GPA, it is likely that he is exaggerating his level of intelligence.
Difficulty: 2
Page: 52-53
Learning Objective: 2.3
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: N/A

76. According to your text, what percentage of variation of intelligence is estimated to be attributed to genetics?
a. 25%
b. 50%
c. 75%
d. 100%

Answer: B
Difficulty: 1
Page: 52-53
Learning Objective: 2.3
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Post 2.1.4

77. What measure allows researchers to estimate not just genetic influence, but of how much the environment allows the genes to be expressed?
a. genetic correlation
b. heritability estimate
c. concordance rate
d. chromosomal correction

Answer: B. Heritability is an estimate of the extent to which genes are responsible for the differences among persons within a specific population.
Difficulty: 1
Page: 53
Learning Objective: 2.3
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

78. Concordance rate is defined as _____.
a. the degree of similarity in characteristics among peoples of a cultural group
b. the influence of genes on development by comparing people who share different amounts of their genes
c. the percentage that indicates the degree of similarity in phenotype among pairs of family members
d. the degree of difference as expressed by variations in environment

Answer: C
Difficulty: 3

Page: 53
Learning Objective: 2.3
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

79. 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?
    a. identical twins to and fraternal twins
    b. college students and the general public
    c. brothers and sisters
    d. parent(s) and children

Answer: A. 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.
Difficulty: 2
Page: 53
Learning Objective: 2.3
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: Pre 2.1.8

80. When concordance rates are higher among monozygotic twins than dizygotic twins, this indicates which of the following?
    a. There is partially a genetic basis.
    b. There is partially an environmental basis.
    c. There is a 100% environmental cause.
    d. There is a 100% genetic cause.

Answer: A
Difficulty: 2
Page: 53
Learning Objective: 2.3
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

81. 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?
    a. genetic correlation
    b. heritability estimate
    c. concordance rate
    d. chromosomal correction

Answer: C. Concordance rates range from 0 to 100%. The higher the concordance rate, the more similar two persons are.
Difficulty: 1
Page: 53
Learning Objective: 2.3
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

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

a. monozygotic twins
b. dizygotic twins
c. adopted siblings
d. cousins

Answer: A
Difficulty: 3
Page: 53
Learning Objective: 2.3
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

83. If John has schizophrenia, how likely is it that his monozygotic twin brother will also have schizophrenia?
a. John's brother will also have schizophrenia.
b. There is an 80% probability that John's brother will have schizophrenia.
c. There is a 50% probability that John's brother will have schizophrenia.
d. John's brother will not have schizophrenia.

Answer: C. The concordance rate for schizophrenia among monozygotic, or identical, twins is 50%.
Difficulty: 1
Page: 53
Learning Objective: 2.3
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: CE 2.1.15

84. If John has schizophrenia, how likely is it that his dizygotic twin brother will also have schizophrenia?
a. John's brother will also have schizophrenia.
b. There is a 38% probability that John's brother will have schizophrenia.
c. There is an 18% probability that John's brother will have schizophrenia.
d. John's brother will not have schizophrenia.

Answer: C. The concordance rate for schizophrenia among dizygotic, or fraternal, twins is 18%.
Difficulty: 1
Page: 53
Learning Objective: 2.3
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: Post 2.1.8

85. The ____ is when genes establish boundaries for environmental influences rather than specifically denoting a particular characteristic.
a. reaction range
b. nature-nurture debate
c. genetic ratio
d. concordance rate

Answer: A
Difficulty: 1
Page: 53
Learning Objective: 2.4
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

86. Genes establish a potential of expression and environment determines where a person's phenotype will fall. What is this boundary of genetic influence?
    a. Environmental influence
    b. Gene boundaries
    c. The inheritability estimate
    d. The reaction range

Answer: D. The reaction range is when genes establish boundaries for environmental influences.
Difficulty: 2
Page: 53
Learning Objective: 2.4
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

87. The concept of reaction range proposes ____ establish(es) boundaries, whereas ____ determines where a person falls within that range.
    a. genetics; environment
    b. environment; genetics
    c. phenotype; genotype
    d. polygenetic inheritance; homogenetic inheritance

Answer: A
Difficulty: 2
Page: 53-54
Learning Objective: 2.4
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: CE 2.1.3

88. 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 ____.
    a. environmental range
    b. reaction range
    c. genetic range
    d. Interaction range

Answer: B. The reaction range is when genes establish boundaries for environmental influences.
Difficulty: 2
Page: 53-54
Learning Objective: 2.4
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: CE 2.1.8

89. 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.
    b. Joseppi, who was born with a potential IQ of 145 (gifted IQ), was raised in an educationally deprived environment and is an unmotivated learner.

c. Susan was born with the potential IQ of 80 (below average IQ), was raised in an educationally deprived environment and is an unmotivated learner.
d. 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. Reaction range proposes that genetics establishes 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.
Difficulty: 2
Page: 53-54
Learning Objective: 2.4
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: Post 2.1.9

90. 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
b. health status
c. reaction range
d. range of genetic dominance

Answer: C. Reaction range proposes that genetics establishes limits, whereas one's environment determines where development takes place within that range.
Difficulty: 2
Page: 54
Learning Objective: 2.4
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: QR 2.1.8

91. 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?
a. Passive genotype → □environment effects
b. Evocative genotype → environment effects
c. Active genotype → □environment effects
d. Inactive genotype → □environment effects

Answer: A. It's difficult to separate genetic influences from environmental influences because parents provide both.
Difficulty: 1
Page: 54
Learning Objective: 2.5
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Post 2.1.7

92. 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?
a. Passive genotype → environment effects
b. Evocative genotype → □environment effects

c. Active genotype → □environment effects
d. Inactive genotype → □environment effects

Answer: B. 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.
Difficulty: 1
Page: 54
Learning Objective: 2.5
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: CE 2.1.9

93. 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?
a. Passive genotype → environment effects
b. Evocative genotype → □environment effects
c. Active genotype → environment effects
d. Inactive genotype → □environment effects

Answer: C. An example would be an outgoing young adult seeking a career where she can interact with other people all day.
Difficulty: 1
Page: 54
Learning Objective: 2.5
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Post 2.1.7

94. What are the only cells in the human body that do not contain 46 chromosomes?
a. lens cells
b. neurons
c. hair cells
d. gametes

Answer: D
Difficulty: 1
Page: 57
Learning Objective: 2.6
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: CE 2.1.10

95. Human sex cells, sperm and ova, each contain how many chromosomes?
a. 23
b. 46
c. 23 pairs
d. 46 pairs

Answer: A
Difficulty: 1
Page: 57
Learning Objective: 2.6
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

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

a. penis and uterus
b. scrotum and vulva
c. testes and ovaries
d. kidneys and pancreas

Answer: C
Difficulty: 1
Page: 57
Learning Objective: 2.6
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

97. Through what process are gametes formed?
a. mitosis
b. meiosis
c. sex differentiation
d. dimorphic cell division

Answer: B
Difficulty: 1
Page: 57
Learning Objective: 2.6
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

98. What is the process of regular cell division called?
a. mitosis
b. meiosis
c. sex differentiation
d. dimorphic cell division

Answer: A
Difficulty: 1
Page: 57
Learning Objective: 2.6
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Pre 2.1.3

99. ____ is known as the normal process of cell reproduction in which chromosomes duplicate themselves and the cells divide to become two cells.
a. Meiosis
b. Mitosis
c. Polar bodies
d. Crossing over

Answer: B
Difficulty: 2
Page: 57
Learning Objective: 2.6
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: CE 2.1.2

100. In the process of meiosis, how many chromosomes does the cell originally have and how many chromosomes are present when the gametes are formed?
a. 92, 46

b. 69, 46
c. 46, 23
d. 23, 23

Answer: C
Difficulty: 1
Page: 58
Learning Objective: 2.6
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

101. At the conclusion of meiosis how many sperm cells have been formed?
a. 2
b. 4
c. 8
d. 16

Answer: B
Difficulty: 1
Page: 58
Learning Objective: 2.6
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

102. At the conclusion of meiosis how may ova have been formed?
a. 1 with 3 polar bodies
b. 2 with 2 polar bodies
c. 3 with 1 polar body
d. 4 with no polar bodies

Answer: A
Difficulty: 1
Page: 58
Learning Objective: 2.6
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

103. According to the text, why does the ovum have an excessive amount of cytoplasm?
a. so that there is ample room for the sperms nucleus once it arrives
b. to help protect against invading cells
c. so that the ovum can be easily found by the sperm cells
d. it will be the ovum's main source of nutrition

Answer: D. Cytoplasm is the ovum's source of nutrients for the first two weeks after fertilization.
Difficulty: 1
Page: 59
Learning Objective: 2.6
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

104. What is the process that allows mixing the combinations of genes in a single chromosome resulting in a virtually infinite possible combination of genes?
a. sampling from a large genetic pool

b. gamete swapping
c. crossing over
d. mitosis

Answer: C
Difficulty: 1
Page: 58-59
Learning Objective: 2.6
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

105. The typical male ejaculation expels how many sperm?
a. 100 to 300
b. 100 to 300 thousand
c. 100 to 300 million
d. 100 to 300 billion

Answer: C
Difficulty: 2
Page: 58
Learning Objective: 2.6
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

106. Males begin producing sperm ____, whereas females produce ova ____.
a. at puberty; at puberty
b. while in the womb; at puberty
c. at puberty; while in the womb
d. while in the womb; while in the womb

Answer: C
Difficulty: 2
Page: 58
Learning Objective: 2.6
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: CE 2.1.13

107. How many ova are present in a female adolescent's ovaries in puberty?
a. 20,000
b. 40,000
c. 60,000
d. 80,000

Answer: B
Difficulty: 1
Page: 58
Learning Objective: 2.6
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

108. Most women will run out of fertile ova by the time they reach their ____.
a. 30s
b. 40s
c. 50s
d. 60s

Answer: B
Difficulty: 1
Page: 58
Learning Objective: 2.6
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: CE 2.1.1

109. 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?
    a. 30s
    b. 40s
    c. 50s
    d. 60s

Answer: B. By contrast, men produce sperm throughout their adult lives although the quality and quantity may decline with age.
Difficulty: 1
Page: 58
Learning Objective: 2.6
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: Pre 2.1.9

110. How many days into the woman's menstrual cycle does ovulation occur?
    a. 2
    b. 14
    c. 28
    d. 40

Answer: B
Difficulty: 1
Page: 59
Learning Objective: 2.7
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: CE 2.1.11

111. Fertilization is most likely to occur when intercourse occurs ____.
    a. within 2 days before and on the day of ovulation
    b. 2 days after ovulation
    c. 5 days after ovulation
    d. 1 week after ovulation

Answer: A. It can take sperm from a few hours to a whole day to travel up the fallopian tubes.
Difficulty: 1
Page: 59
Learning Objective: 2.7
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: QR 2.1.7

112. According to the text, how long can sperm live in the woman's body after ejaculation?
    a. 12 hours
    b. 1 day

c. 5 days
d. 1 week

Answer: C
Difficulty: 1
Page: 59
Learning Objective: 2.7
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: CE 2.2.12

113. When the ovum and sperm cells unite and fertilization has occurred, what has just been formed?
a. the fetus
b. the embryo
c. the blastocyst
d. the zygote

Answer: D. The zygote's 46 paired chromosomes constitute the new organism's unique genotype.
Difficulty: 1
Page: 59
Learning Objective: 2.7
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Post 2.1.6

114. When the ovum is fertilized by the sperm this is called ____.
a. fertility
b. conception
c. cervix
d. gametes

Answer: B
Difficulty: 1
Page: 59
Learning Objective: 2.7
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

115. Which of the following has increased due to advancements in fertility treatments?
a. monozygotic twins
b. dizygotic twins
c. conjoined twins
d. Siamese twins

Answer: B
Difficulty: 2
Page: 59-60
Learning Objective: 2.7
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Pre 2.1.4

Short Answer Questions

116. 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 47-48
Learning Objective: 2.1
Bloom's Taxonomy Level: Apply

117. 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: 50
Learning Objective: 2.2
Bloom's Taxonomy Level: Understand

118. 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 make up 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: 51
Learning Objective: 2.2
Bloom's Taxonomy Level: Understand

119. 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 number 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% of not getting schizophrenia if your MZ has it, so environment plays a greater role than genes.
Page: 53
Learning Objective: 2.3
Bloom's Taxonomy Level: Understand

120. 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 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: 53
Learning Objective: 2.4
Bloom's Taxonomy Level: Apply

Essay Questions

121. Explain the phenomenon of incomplete dominance in sickle cell inheritance.
Answer: Incomplete dominance occurs when there is a dominant-recessive pair of genes and the phenotype is affected mostly by the dominant gene, but the recessive gene also becomes expressed partially. In sickle cell anemia, a person inherits two recessive genes for the sickle-cell trait and their blood cells are disk-shaped rather than round, causing clogging and a number of problems, such as pain. If the person only inherits one recessive gene for the sickle cell trait, they will not have sickle cell anemia, but some of their blood cells will be misshaped. This condition causes resistance to malaria, an often fatal disease that is common in Africa. It would be adaptive to carry this recessive trait in Africa, so this explains the higher prevalence of sickle-cell diseases among people of African heritage.
Page: 48-49
Learning Objective: 2.1
Bloom's Taxonomy Level: Apply

122. Explain how DZ and MZ twins are formed. Include a discussion of ethnic variations and factors that increase the chances of having twins.
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. DZ twins are more common among Africans and least common among Asians. MZ twins are not more common in some ethnic groups. The chances of having DZ twins increase if they run in the family, if the person is in good health and if the mother is older. None of these variables predicts MZ twins.
Page: 52
Learning Objective: 2.7
Bloom's Taxonomy Level: Understand

MyDevelopmentLab Question Bank

Section 1 Exam

1.0. By the time most women reach their ____ they will run out of ova.

30s
40s
50s
60s

QuestionID: CE 2.1.1
Page-Reference: 58

Answer: 40s

2.0. In meiosis, cells that begin with 23 pairs of chromosomes first _____ then replicate themselves and split into two cells, each with 23 pairs of chromosomes.

double to 46 pairs of chromosomes
split into 23 single chromosomes
split into 46 single chromosomes
multiply into 72 pairs of chromosomes

QuestionID: CE 2.1.2
Page-Reference: 58

Answer: split into 46 single chromosomes

3.0. Reaction range proposes ____ establish(es) boundaries, and ____ determines where a person falls within that range.

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

QuestionID: CE 2.1.3
Page-Reference: 54

Answer: genetics; environment

4.0. An individual's complete genetic makeup is referred to as his or her _____

genotype
phenotype
archetype
prototype

QuestionID: CE 2.1.4
Page-Reference: 47

Answer: genotype

5.0. Which of the following factors when paired with an individual's genotype creates an expression of their phenotype?
environment
genes
DNA
parents

QuestionID: CE 2.1.5
Page-Reference: 47

Answer: environment

6.0. If Bert inherits a gene for curly hair from his mother and a gene for straight hair from his father, Bert will have _____.
curly hair
straight hair
t is not possible to answer this question.
both curly and straight hair mixed together

QuestionID: CE 2.1.6
Page-Reference: 48

Answer: curly hair

7.0. ____ is an example of an incomplete dominant inheritance.

Down syndrome
HIV
Sickle-cell anemia
Fragile X

QuestionID: CE 2.1.7
Page-Reference: 48

Answer: Sickle-cell anemia

8.0. Grant is 7 years old and has ambitions of becoming a professional basketball player. His father is 5' 7" tall and his mother is 5' 3" tall. It is quite likely that Grant will be 5' 7" tall or a little taller, but not of NBA height. Grant's genetic potential is known as _____.
reaction range
genetic loading
interaction range
chromosomal load

QuestionID: CE 2.1.8
Page-Reference: 54

Answer: reaction range

9.0. Scarr and 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?

Evocative genotype →□environment effects
Submissive genotype →□environment effects
Proactive →□environment effects
Active genotype →□environment effects

QuestionID: CE 2.1.9
Page-Reference: 55

Answer: Evocative genotype →□environment effects

10.0. According to the text, which cells in the human body are the only ones that do not contain 46 chromosomes?

Eardrum cells
Hair cells
Gametes
Capillaries

QuestionID: CE 2.1.10
Page-Reference: 57

Answer: Gametes

11.0. Assume you have very close friends who are trying to get pregnant. To improve their odds you advise them that they should have intercourse when she is closer to ovulation and tell them that women generally ovulate ____ days into their menstrual cycles.

3
7
14
21

QuestionID: CE 2.1.11
Page-Reference: 59

Answer: 14

12.0. After ejaculation, sperm can live for ___ days inside the human body.

2
5
7
9

QuestionID: CE 2.1.12
Page-Reference: 59

Answer: 5

13.0. Females produce ova ____; whereas, males produce sperm ____.

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

QuestionID: CE 2.1.13
Page-Reference: 58

Answer: while in the womb; at puberty

14.0. You are at the airport with your twin babies. Your son is dressed in blue and your daughter is dressed in pink. Someone stops you and tells you how beautiful they are and asks if they are "identical twins." You simply tell them no, but what are you thinking in your head?

It's impossible to have identical twins of different sexes.
That's a great question, they could be identical twins.
Usually fraternal twins are boys.
Usually fraternal twins are girls.

QuestionID: CE 2.1.14
Page-Reference: 52

Answer: It's impossible to have identical twins of different sexes.

15.0. If Frank has schizophrenia, how likely is it that his identical twin brother will also have schizophrenia?

Highly likely
Very likely
50% chance
Highly unlikely

QuestionID: CE 2.1.15
Page-Reference: 53

Answer: 50% chance

Section 1 Study Plan

1.0 - Remember the Facts

1.0.1. The average human cell has ____ chromosomes.

23
46
78
96

QuestionID: Pre 2.1.1.1
Page-Reference: 47

Answer: 46

1.0.2. Nurture is to ____; whereas, nature is to ____.

environment; genetics
genetics; environment
learning; conditioning
conditioning; learning

QuestionID: Pre 2.1.1.2
Page-Reference: 52

Answer: environment; genetics

1.0.3. The normal process of cell replication is called _____.

mitosis
meiosis
metamorphosis
monophonic

QuestionID: Pre 2.1.1.3
Page-Reference: 57-58

Answer: mitosis

1.0.4. Due to advancements in fertility treatments, ____ have increased in recent times.

monozygotic twins
dizygotic twins
conjoined twins
Siamese twins

QuestionID: Pre 2.1.1.4
Page-Reference: 60

Answer: dizygotic twins

1.0.5. The average human cell (with exception to ova and sperm cells) contains how many chromosomes?

23
46
52
78

QuestionID: Post 2.1.1.1
Page-Reference: 47

Answer: 46

1.0.6. ____ is a person's complete genetic makeup.

Genotype
Phenotype
Reaction range
Necelotide

QuestionID: Post 2.1.1.3
Page-Reference: 47

Answer: Genotype

1.0.7. What percentage of variation of intelligence is estimated to be the result of genetics?

10%
30%
50%
80%

QuestionID: Post 2.1.1.4
Page-Reference: 53

Answer: 50%

2.0 - Understand the Concepts

2.0.1. The complex molecules that act as the building blocks for chromosomes are known as _____.

DNA
RNA
MRI
genes

QuestionID: Pre 2.1.2.5
Page-Reference: 47

Answer: DNA

2.0.2. If temperament was genetically based, which of the following would have the greatest degree of similarity?
identical twins
fraternal twins
cousins
step brothers and sisters

QuestionID: Pre 2.1.2.6
Page-Reference: 52

Answer: identical twins

2.0.3. If one proposes the heritability of IQ is .80, which of the following statements is correct?

A large portion of IQ is determined by genetics.
A large portion of IQ is determined by environment.
80% of IQ is determined by the X chromosome.
20% of IQ is determined by the X chromosome.

QuestionID: Pre 2.1.2.7
Page-Reference: 52-53

Answer: A large portion of IQ is determined by genetics.

2.0.4. When designing a research study which of the following subjects would be best to examine the concordance rate of intelligence?
identical twins to fraternal twins
college students to the general public
brothers to sisters
parent(s) to children

QuestionID: Pre 2.1.2.8
Page-Reference: 53

Answer: identical twins to fraternal twins

2.0.5. ____ are the segments of DNA containing coded instructions for the growth and functioning of an organism.
Genes
Fatty cells
Myelin
Nucleotides

QuestionID: Post 2.1.2.2
Page-Reference: 47

Answer: Genes

2.0.6. Fraternal twins are also known as _____.

dizygotic twins
monozygotic twins
conjoined twins
identical twins

QuestionID: Post 2.1.2.5
Page-Reference: 52

Answer: dizygotic twins

2.0.7. ____ is formed when the ovum and sperm unite and fertilization takes place.

The fetus
The embryo
The blastocyst
The zygote

QuestionID: Post 2.1.2.6
Page-Reference: 59

Answer: The zygote

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

Lateral genotype → environment effects
Evocative genotype → environment effects
Active genotype → environment effects
Inactive genotype → environment effects

QuestionID: Post 2.1.2.7
Page-Reference: 55

Answer: Active genotype → environment effects

3.0 - Apply What You Know and Analyze It

3.0.1. Keith and Carrie have been discussing how long they should wait to have children. At what age, statistically speaking, will Carrie run out of fertile ova?

30s
40s
50s
60s

QuestionID: Pre 2.1.3.9
Page-Reference: 58

Answer: 40s

3.0.2. Jack's father was an All-American in the 50M backstroke and qualified for the Olympic Team. Jack is a freshman in high school and does not think that he will need to train to become a member of the school's swim team. Jack keeps telling you that his father was a great swimmer, so he will also be a great swimmer. What do you think?

He is correct; he will be a great swimmer no matter what he does.
It is unlikely that Jack even has the genotype for swimming.
Jack might have the genotype for swimming, but he will need to train to become a great swimmer.
Jack has also inherited the genes for any athletic sport.

QuestionID: Pre 2.1.3.10
Page-Reference: 47-48

Answer: Jack might have the genotype for swimming, but he will need to train to become a great swimmer.

3.0.3. If an individual has schizophrenia, what is the probability that his dizygotic twin brother will also have schizophrenia?

about 5%
about 18%
about 62%
about 95%

QuestionID: Post 2.1.3.8
Page-Reference: 53

Answer: about 18%

3.0.4. Which of the following individuals illustrates a person who is closer to the lower portion of their reaction range?

Martin, who was born with a potential IQ of 145 (gifted IQ), was raised in an educationally enriching environment, and is a highly motivated learner.
Nathan, who was born with a potential IQ of 145 (gifted IQ), was raised in an educationally deprived environment, and is an unmotivated learner.
Abby, who was born with a potential IQ of 80 (below average IQ), was raised in an educationally enriching environment, and is a motivated learner.
Roman, 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.

QuestionID: Post 2.1.3.9
Page-Reference: 54

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

3.0.5. Kendra is a professional singer who is the daughter of musical artists. Throughout her childhood, her parents encouraged and trained her to the best of their abilities. During school she enrolled in a specialized academy that continued to nurture her talent. Which of the following best describes Kendra's genotype?

Kendra's musical genes
Kendra's musical talent
Kendra's nurturing parents
Kendra's musical genes and musical talent

QuestionID: Post 2.1.3.10
Page-Reference: 47-48

Answer: Kendra's musical genes

4.0 - Section 1 Formative Assessment

4.0.1. James was born with a _____ that included exceptional musical ability, but because he was never exposed to musical instruments or instruction, his musical ability was not apparent in his _____.
phenotype; allele
allele; phenotype
phenotype; genotype
genotype; phenotype

QuestionID: FA_Apply_q1
Page-Reference: 47-48

Answer: genotype; phenotype

4.0.2. George's father carries the recessive gene for sickle-cell anemia, and George's mother carries a normal dominant gene. Therefore, George has inherited _____ from his parents.
traditional anemia
deafness
sickle-cell anemia
a resistance to malaria

QuestionID: FA_Apply_q2
Page-Reference: 48-49

Answer: a resistance to malaria

4.0.3. Ellen carries the recessive X-linked gene for hemophilia, a disorder in which the blood does not clot properly. If Ellen 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 girl
the boy

QuestionID: FA_Apply_q3
Page-Reference: 51

Answer: the boy

4.0.4. Jack and Burton are identical twins, also called _____ twins, and they were born with _____ of their genes in common.

nature-nurture; 25%
heritable; 50%
dizygotic (DZ); 40 to 60%
monozygotic (MZ); 100%

QuestionID: FA_Apply_q4
Page-Reference: 52

Answer: monozygotic (MZ); 100%

4.0.5. What are the three forms of genotype-environment effects?

constructive, active, evocative
constructive, destructive, evocative
passive, evocative, destructive
passive, evocative, and active

QuestionID: FA_Analyze_q1
Page-Reference: 54-55

Answer: passive, evocative, and active

Video Guide Questions

Short Answer Questions

1. What are your thoughts on gender selective abortion in other countries? Did your viewing of this clip impact your thoughts?
Answer: Answers will vary.

2. Describe your reaction to IVH gender selection that occurs in some of the countries discussed in this clip.
Answer: Answers will vary.

3. What are some of the reasons provided by individuals in this clip why boys are preferred over girls in the countries of Taiwan, India, and South Korea?
Answer: Some of the reasons include the following: In some cultures, once a female is married and out of the house she is no longer considered part of the family to contribute or support the family. In these cultures it is appropriate for the family of the female to provide a bride's dowry to the husband's family. The male children will be able to carry on the family name.

Multiple Choice Questions

1. Which of the following countries was not mentioned in the video as having a strong preference for male children over female children?
    a. Taiwan
    b. Spain
    c. India
    d. South Korea

Answer: B

2. Which of the following was listed as a reason why female children are not as preferred in these countries?
    a. Once a female is married, they no longer contribute financially.
    b. Females are less likely to carry heavy loads.
    c. Males are better equipped to deal with the weather conditions.
    d. Males understand the geography of the land much better than females.

Answer: A

3. Which of the following was not listed as a reason that increases the pressure to have a son over a daughter?
    a. A son can carry on the family name.
    b. A daughter would require a bride’s dowry.
    c. A son is better able to parent the children.
    d. A daughter would no longer contribute financially once she has married.

Answer: C

TOTAL ASSESSMENT GUIDE

Chapter 2-Section 2

Prenatal Development and Prenatal Care

Topic		Remember	Understand	Apply
Learning Objective 2.8	Multiple Choice	1, 2, 3, 4, 7, 9, 11, 12, 13	5, 6, 8, 10	
	Short Answer			
	Essay		125	
Learning Objective 2.9	Multiple Choice	14, 15, 17, 21, 22, 23	16, 18, 19, 20, 24, 25, 26	
	Short Answer			
	Essay			
Learning Objective 2.10	Multiple Choice	28, 31, 33, 34, 41, 43, 44, 45, 46, 50	27, 29, 30, 35, 36, 39, 47, 48, 49, 51, 52, 53	32, 37, 38, 40, 42, 54
	Short Answer	117		
	Essay			126
Learning Objective 2.11	Multiple Choice	60	55, 56, 57, 58, 59	
	Short Answer		119	118
	Essay			
Learning Objective 2.12	Multiple Choice	61, 62, 66, 67, 68, 69, 74, 81	64, 65, 72, 73, 76, 77, 78, 80, 82, 84, 86	63, 70, 71, 75, 79, 83, 85
	Short Answer		120. 121	
	Essay			
Learning Objective 2.13	Multiple Choice	87, 88, 89, 92, 94, 95, 97, 98, 100, 101, 103, 104, 107, 108, 113, 114, 116	90, 91, 93, 96, 99, 102, 105, 106, 109, 110, 111, 112	115
	Short Answer	122, 123, 124		
	Essay		127	128

Section 2 Prenatal Development and Prenatal Care

Test Item File

Multiple Choice Questions

1. What are the first 2 weeks after fertilization referred to as?
    a. the germinal period
    b. the embryonic period
    c. the fetal period
    d. the fertilization period

Answer: A
Difficulty: 1
Page: 61
Learning Objective: 2.8
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

2. The first 2 weeks after fertilization is known as ____.
    a. conception
    b. the germinal period
    c. the embryonic period
    d. the fetal period

Answer: B
Difficulty: 1
Page: 61
Learning Objective: 2.8
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Pre 2.2.1

3. By the end of the first week following conception the fertilized egg now has approximately 100 cells and is known as the _____.
    a. neonate
    b. fetus
    c. embryo
    d. blastocyst

Answer: D
Difficulty: 1
Page: 62
Learning Objective: 2.8
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Post 2.2.1

4. The structure that will form the structures that will provide protection and nourishment for the newly formed organism is the ____.
    a. umbilical cord
    b. placenta
    c. embryonic disk
    d. trophoblast

Answer: D

Difficulty: 3
Page: 62
Learning Objective: 2.8
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

5. The inner layer of blastocyst that will become the embryo is the ____.
   a. umbilical cord
   b. placenta
   c. embryonic disk
   d. trophoblast

Answer: C. This is part of the blastocyst that is formed about one week after conception.
Difficulty: 2
Page: 62
Learning Objective: 2.8
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Pre 2.2.7

6. Which of the following is a correct sequence of development during the germinal period?
   a. placenta, implantation, blastocyst
   b. blastocyst, implantation, placenta
   c. placenta, blastocyst, implantation
   d. implantation, placenta, blastocyst

Answer: B. During the germinal period, the zygote divides and forms blastocyst, which implants in the uterus and begins forming the amnion, placenta, and umbilical cord.
Difficulty: 3
Page: 62
Learning Objective: 2.8
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: CE 2.2.2

7. The blastocyst will implant itself into the uterine wall during the ____ after conception?
   a. first day
   b. second day
   c. first week
   d. second week

Answer: D
Difficulty: 2
Page: 62
Learning Objective: 2.8
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: CE 2.2.3

8. When the blastocyst becomes firmly embedded into the lining of the uterus, what has happened?
   a. implantation
   b. fertilization
   c. conception
   d. pregnancy

Answer: A. This occurs during the second week after conception.
Difficulty: 1
Page: 62
Learning Objective: 2.8
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

9. When does implantation of the blastocyst occur?
    a. at conception
    b. during the second week after conception
    c. during the second month after conception
    d. during the second trimester after conception

Answer: B
Difficulty: 2
Page: 62
Learning Objective: 2.8
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: CE 2.2.3

10. 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?
    a. The placenta
    b. The umbilical cord
    c. The amnion
    d. The germinal structure

Answer: C. The amnion develops from the trophoblast during the second week during the second week after conception.
Difficulty: 2
Page: 62
Learning Objective: 2.8
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Post 2.2.5

11. 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.
    a. uterus
    b. placenta
    c. fallopian tubes
    d. ovaries

Answer: B
Difficulty: 1
Page: 62
Learning Objective: 2.8
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

12. 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?

a. the placenta
b. the umbilical cord
c. the amnion
d. the germinal structure

Answer: A
Difficulty: 2
Page: 62
Learning Objective: 2.8
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

13. What percentage of blastocysts do not implant successfully?
a. 15%
b. 25%
c. 50%
d. 75%

Answer: C
Difficulty: 1
Page: 62
Learning Objective: 2.8
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

14. The embryonic period lasts from the ____ to the ____.
a. 1st week; 4th week
b. 3rd week; 8th week
c. 6th week; 16th week
d. 12th week; 32nd week

Answer: B
Difficulty: 2
Page: 62
Learning Objective: 2.9
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

15. The embryonic period is ____ weeks long.
a. 4
b. 6
c. 8
d. 10

Answer: B
Difficulty: 1
Page: 62
Learning Objective: 2.9
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

16. During the embryonic period, the ectoderm is formed which will become the ____.
a. skin, hair, nails, sensory organs and nervous system
b. muscles, bones, reproductive system and circulatory system

c. digestive and respiratory systems
d. hormonal and endocrine systems

Answer: A. The ectoderm is formed within the third week after conception.
Difficulty: 2
Page: 62
Learning Objective: 2.9
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Pre 2.2.8

17. The outer layer of the embryonic disk will become ____.
a. the brain and spinal cord
b. skin, hair, nails, and the nervous system
c. muscle, bones, and the circulatory system
d. the digestive and respiratory systems

Answer: B
Difficulty: 3
Page: 62
Learning Objective: 2.9
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Pre 2.2.2

18. During the embryonic period, the mesoderm is formed, which will become the ____.
a. skin, hair, nails, sensory organs, and nervous system
b. muscles, bones, reproductive system, and circulatory system
c. digestive and respiratory systems
d. hormonal and endocrine systems

Answer: B. The mesoderm is formed within the third week after conception.
Difficulty: 2
Page: 62
Learning Objective: 2.9
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

19. During the embryonic period, the endoderm is formed, which will become the ____.
a. skin, hair, nails, sensory organs and nervous system
b. muscles, bones, reproductive system and circulatory system
c. digestive and respiratory systems
d. hormonal and endocrine systems

Answer: C. The endoderm is formed within the third week after conception.
Difficulty: 2
Page: 62
Learning Objective: 2.9
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

20. What embryonic structure will become the brain and spinal cord?
a. brain stem
b. neuralblast
c. neural tube

d. cerebral cortex

Answer: C. The neural tube is formed by the end of the third week after conception.
Difficulty: 2
Page: 62
Learning Objective: 2.9
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

21. By the end of the third week the neural tube begins to form. This structure will eventually become ____.
    a. the skull and torso
    b. legs and arms
    c. the spinal cord and brain
    d. lungs and the digestive system

Answer: C
Difficulty: 2
Page: 62
Learning Objective: 2.9
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Post 2.2.2

22. At what rate are neurons produced during the embryonic period?
    a. 25 per minute
    b. 250 per minute
    c. 250,000 per minute
    d. 2 billion per minute

Answer: C
Difficulty: 1
Page: 62
Learning Objective: 2.9
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

23. 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?
    a. ¼ inch
    b. 4 inches
    c. 8 inches
    d. 12 inches

Answer: A
Difficulty: 1
Page: 62-63
Learning Objective: 2.9
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

24. Nearly all of the major organs are formed during what period?
    a. genetic
    b. zygotic
    c. fetal
    d. embryonic

Answer: D. This period lasts from the third to eighth week after conception.
Difficulty: 2
Page: 62
Learning Objective: 2.9
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: CE 2.2.4

25. 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?
    a. Step in place
    b. Suck its thumb
    c. Vocalize
    d. Respond to touch

Answer: D. The embryo's sense of touch is especially sensitive around its mouth at this point.
Difficulty: 2
Page: 63
Learning Objective: 2.9
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

26. By the end of the eighth week the embryo ____.
    a. is unrecognizable as human
    b. responds to touch and can move
    c. has yet to develop major organs
    d. has fully developed sex organs

Answer: B. The embryo's sense of touch is especially sensitive around its mouth at this point.
Difficulty: 2
Page: 63
Learning Objective: 2.9
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

27. The fetal period ends at birth. When does it begin?
    a. 4 weeks after conception
    b. 9 weeks after conception
    c. 12 weeks after conception
    d. 15 weeks after conception

Answer: B. The fetal period follows the embryonic period.
Difficulty: 2
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

28. The ____ period lasts from the ninth week after conception until birth.
    a. germinal
    b. embryonic
    c. fetal
    d. zygote

Answer: C
Difficulty: 1
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

29. What is the average weight of babies at birth in developed countries?
    a. 5 pounds
    b. 7.5 pounds
    c. 10 pounds
    d. 12.5 pounds

Answer: B. The average length of babies at birth in developed countries is 20 inches.
Difficulty: 2
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

30. 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 could find out because the genitalia will not have fully formed before then.
    a. 2nd
    b. 3rd
    c. 4th
    d. 5th

Answer: B. Fingernails, toenails, and taste buds begin to develop at the same time.
Difficulty: 2
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

31. According to the text, at what month can the fetus's heartbeat be heard with a stethoscope?
    a. during the third week
    b. during the third month
    c. during the fifth month
    d. during the seventh month

Answer: B
Difficulty: 1
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

32. 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?
    a. That probably means that the fetus died.

b. She will not be able to hear the heartbeat with a stethoscope until the third month.
c. The fetus probably has a heart problem.
d. The doctor did not want her to hear the fetal heartbeat.

Answer: B. It is not until the third month of pregnancy that a fetal heartbeat can typically be heard using a stethoscope.
Difficulty: 2
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: N/A

33. At three months the average fetus _____.
a. weighs three ounces and is three inches long
b. weighs three pounds and is three inches long
c. has developed three brain structures
d. has developed three sensory systems

Answer: A
Difficulty: 1
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

34. By the end of the third month the typical fetus can be described as "three times three" because ____.
a. it has been three months, the fetus weighs three ounces, and is three inches long
b. it weighs three pounds, is three inches long, and has three senses
c. three major systems have developed: brain, heart and, lungs
d. all three facial features are clearly distinguishable

Answer: A
Difficulty: 2
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

35. Prenatal development is divided into segments. What are these segments called?
a. fetalesters
b. prenatal sections
c. semesters
d. trimesters

Answer: D. Prenatal development is divided into 3-month trimesters.
Difficulty: 1
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

36. By the end of what month do pregnant women typically feel the movements of the fetus?
    a. second
    b. fourth
    c. sixth
    d. eight

Answer: B. The fetus's movements diversify over the course of the second trimester.
Difficulty: 1
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

37. 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?
    a. Yes, she has probably been feeling the fetus move since the second month.
    b. Yes, pregnant women can usually begin feeling the fetus's movements by the fourth month of pregnancy.
    c. No, the fetus is not developed enough to move very much until the end of the sixth month of pregnancy.
    d. 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. The fetus's movements begin to diversify at this time, and include kicking, hiccupping, and thumb sucking.
Difficulty: 1
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: CE 2.2.5

38. 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 do 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."
    b. "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."
    c. "Lucila all those things do happen, but not really until the end of the third trimester."
    d. "Lucila, I think you need to go see your doctor because something is absolutely wrong."

Answer: A. These are all normal actions and responses for a pregnant woman to feel.
Difficulty: 2
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: N/A

39. 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?
    a. Mozart's music
    b. rhythmic tapping
    c. its mother's voice
    d. a cat's meow

Answer: C. We know this is true because an increase in fetal heart rate is observed when a fetus hears its mother's voice.
Difficulty: 2
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: CE 2.2.15

40. 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?
    a. That her fetus will not be adversely affected and that studies have discovered that fetus's actually prefer their mothers' voices. So, she should talk as much as she likes.
    b. That she is correct, loud music is readily transmitted through the amniotic fluid and will cause damage to the fetus's cochlea.
    c. That she should play Mozart really loudly. Fetuses who listen to Mozart are more intelligent than those who do not listen to Mozart.
    d. Research has shown that fetuses' love country music.

Answer: A. A fetus's heart rate has been shown to increase when it hears its mother's voice.
Difficulty: 3
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: N/A

41. What is the name of the white slimy substance that covers the fetus's skin?
    a. lanugo
    b. vernix
    c. keratin
    d. ossicles

Answer: B
Difficulty: 2
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

42. 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 ____.
    a. that it was probably cancer

b. that his baby probably had something wrong with it. You have never heard of such a thing
c. that the white substance was vernix and many babies have that at birth. It protects their skin in utero
d. 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. Vernix covers the skin, to protect it from chapping due to amniotic fluid.
Difficulty: 2
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: N/A

43. The purpose of lanugo is to ____.
a. work as a lubricant during the birthing process
b. lubricate the lungs
c. guide neuro-migration during brain development
d. help the vernix stick to the fetus's skin, which protects against chapping

Answer: D
Difficulty: 2
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

44. What is the name of the downy hair that covers the fetus?
a. lanugo
b. vernix
c. keratin
d. ossicles

Answer: A
Difficulty: 1
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: CE 2.2.14

45. What is the term used to describe the fetus's likelihood of surviving outside of the uterus?
a. survival index
b. Apgar Score
c. Braxton Hicks
d. viability

Answer: D
Difficulty: 1
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

46. ____ is the term for an infant's ability to survive outside the womb if born preterm/premature.
    a. Immaturity
    b. Small for size
    c. Viability
    d. Survivability

Answer: C
Difficulty: 1
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

47. What is the likely outcome for a fetus whose mother lives in a developing country that is born before the end of the second trimester? The newborn will _____.
    a. not survive
    b. be healthy
    c. have an Apgar score of at least 7
    d. have a breech birth

Answer: A. Access to the necessary advanced medical care is scarce in developing countries, so the newborn's chance of survival is not strong.
Difficulty: 1
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

48. The ____ is the last major organ system to develop during fetal life?
    a. heart
    b. lungs
    c. intestines
    d. skeletal muscles

Answer: B. Even a baby born in the seventh or eighth month of pregnancy may need the help of a respirator to breathe.
Difficulty: 1
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Pre 2.2.5

49. Newborns weighing less than what weight are at risk for a wide range of developmental difficulties?
    a. 5.5 pounds
    b. 7.0 pounds
    c. 8.5 pounds
    d. 10 pounds

Answer: A. Many of these developmental difficulties will be discussed in Chapter 3.
Difficulty: 1
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Understand

MDL Parallel Question ID: N/A

50. As a result of evolutionary history, which of the following structures is the most underdeveloped at birth?
    a. the lungs
    b. the spinal cord
    c. the brain
    d. the digestive system

Answer: C
Difficulty: 2
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

51. Humans are born with immature brains that are incompletely developed. One result is that babies _____.
    a. are less vulnerable to environmental difficulties
    b. learn to care for themselves very quickly
    c. have a genetic resistance to infection
    d. require parental care for a longer time than other animals

Answer: D. As we learned in Chapter 1, this is a result of evolutionary history.
Difficulty: 1
Page: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

52. 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 ____.
    a. hearing their mothers read any Dr. Seuss book
    b. their mother's voice
    c. rhythmic tapping
    d. hearing their mothers read *The Cat in the Hat*

Answer: D. The babies preferred this even over similar rhyming stories they had not heard before.
Difficulty: 1
Page: 64
Learning Objective: 2.10
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: CE 2.2.6

53. What do fetuses do when their mothers are highly stressed?
    a. become very still
    b. move more and have faster heart rates
    c. suck their thumbs
    d. hold their hands to their ears

Answer: B. Fetuses respond in kind to their mothers' stress levels.
Difficulty: 1
Page: 64

Learning Objective: 2.10
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Pre 2.2.3

54. 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?
    a. It is OK if she gets upset, but she should not yell. It will harm the fetus's hearing.
    b. Getting angry and yelling is good for the fetus since it will raise the fetus's heart rate.
    c. She should probably get a different boyfriend. He is not going to be a very good father .
    d. That she should try relaxation therapy. Whenever she gets really upset, her fetus gets very upset too.

Answer: D. Fetuses generally move more and have faster heart rates when their mothers are stressed.
Difficulty: 1
Page: 64
Learning Objective: 2.10
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: CE 2.2.7

55. 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 that can be very helpful to the pregnant woman?
    a. avoid eating the meat from a bushbuck antelope
    b. rub an oil on her belly
    c. her husband must stop hunting while she is pregnant
    d. she must not commit any immoral behavior

Answer: B. This will help her skin from feeling uncomfortably tight.
Difficulty: 1
Page: 65
Learning Objective: 2.11
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: CE 2.2.10

56. Which of the following is the *best* practical advice of the Beng people of the West African nation of Ivory Coast?
    a. Do not drink palm wine during the early months of pregnancy.
    b. Rub oil on the swelling belly to relief discomfort.
    c. Avoid eating meat from a bushbuck antelope.
    d. Do not cast any curse on any enemies because your baby will become a witch.

Answer: A. Drinking alcohol when pregnant can cause widespread damage to prenatal development.
Difficulty: 2
Page: 65
Learning Objective: 2.11
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

57. Many traditional cultures do not have access to trained physicians but may rely on which of the following individuals during the prenatal period?
    a. nurse
    b. midwife
    c. staff from the World Health Organization
    d. paramedics

Answer: B. Midwives assist in prenatal care and the birth process.
Difficulty: 2
Page: 65
Learning Objective: 2.11
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: CE 2.2.8

58. Based upon the reading, a midwife might perform a(n) ____ if the fetus's feet are pointed towards the vaginal opening.
    a. diversion
    b. prenatal massage
    c. inversion
    d. amniocentesis

Answer: C. 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.
Difficulty: 2
Page: 65
Learning Objective: 2.11
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

59. 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 ____.
    a. dancing
    b. singing
    c. daily naps
    d. massage

Answer: D. 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.
Difficulty: 1
Page: 65-66
Learning Objective: 2.11
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: CE 2.2.11

60. In recent years prenatal massage in developed countries has ____.
    a. increased
    b. decreased
    c. remained the same
    d. not been statistically tracked

Answer: A
Difficulty: 1
Page: 65
Learning Objective: 2.11

Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

61. Recent scientific studies have shown that women should gain ____ pounds during pregnancy.
    a. 15–20
    b. 25–35
    c. 35–40
    d. 45–50

Answer: B
Difficulty: 1
Page: 67
Learning Objective: 2.12
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Post 2.2.3; CE 2.2.9

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

Answer: C
Difficulty: 1
Page: 67
Learning Objective: 2.12
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

63. 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?
    a. Tell her to definitely diet, this will insure that her children will not be obese.
    b. Tell her that dieting increases intelligence in neonates.
    c. Tell her that dieting could lead to her baby being born preterm and having a low birth weight.
    d. That it would be a good idea to keep her weight gain under 20 pounds.

Answer: C. Women should gain 25–35 pounds during pregnancy.
Difficulty: 1
Page: 67
Learning Objective: 2.12
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: Pre 2.2.9

64. What are possible side effects for the baby of a woman who gains less than 20 pounds during her pregnancy?
    a. Down syndrome and Fragile X
    b. gestational diabetes
    c. high blood pressure and gastrointestinal problems
    d. the baby may be born preterm with a low birth weight

Answer: D

Difficulty: 2
Page: 67
Learning Objective: 2.12
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

65. Based upon the accumulated scientific knowledge on prenatal care, which of the following is the greatest thing a woman who is pregnant can do?
    a. avoid drinking of any alcohol
    b. minimize as much stress as possible
    c. receive regular evaluations from a health care professional
    d. cut all caffeine from her diet

Answer: C. The percentage of woman who receives regular prenatal care beginning early in pregnancy varies greatly based on ethnicity and SES.
Difficulty: 3
Page: 67
Learning Objective: 2.12
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: CE 2.2.12

66. Compared to developed countries, what percentage of maternal and infant deaths occur in developing countries?
    a. 99%
    b. 75%
    c. 50%
    d. 25%

Answer: A
Difficulty: 1
Page: 67
Learning Objective: 2.12
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Post 2.2.4

67. ____ % of maternal and infant deaths occur in developing countries; whereas, ____ % occur in developed countries.
    a. 1; 99
    b. 25; 75
    c. 75; 25
    d. 99; 1

Answer: D
Difficulty: 2
Page: 67
Learning Objective: 2.12
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

68. The guidelines for prenatal care focus mostly on three key areas ____.
    a. rest, stress reduction, and the avoidance of fatty foods
    b. diet, exercise, and avoidance of teratogens
    c. exercise, mental state, and relaxation
    d. prenatal vitamins, exercise, and avoidance of caffeine

Answer: B
Difficulty: 2
Page: 67
Learning Objective: 2.12
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

69. Although many people say that pregnant women should be "eating for two," how many more calories should a pregnant woman eat each day?
    a. 2,000
    b. 1,000
    c. 800
    d. 300

Answer: D
Difficulty: 1
Page: 67
Learning Objective: 2.12
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Pre 2.2.4

70. Your sister has been pregnant for a few months. She jokes that she is "eating for two" and has been eating quite a bit. You know that this is really not a good idea and are concerned that she will gain too much weight. How many more calories a day would you tell her that she would need to consume while she is pregnant?
    a. 2,000
    b. 1,000
    c. 800
    d. 300

Answer: D. A healthy weight gain during pregnancy is typically 25–35 pounds.
Difficulty: 1
Page: 67
Learning Objective: 2.12
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: N/A

71. Rosa is in her first trimester and her mother continually encourages her to eat more reminding her that she is now eating for two. Based upon the text, is Rosa's mother giving her sound advice?
    a. Yes, women who are pregnant should double their caloric intake.
    b. No, women who are pregnant only need about 300 more calories.
    c. Yes, pregnant women should eat more but it should come from grains.
    d. No, pregnant women should not eat more as their bodies do not need any more calories than an average woman.

Answer: B. A healthy weight gain during pregnancy is typically 25–35 pounds.
Difficulty: 3
Page: 67
Learning Objective: 2.12
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: N/A

72. 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 ____.
    a. build the blood supply of the mother and fetus
    b. increase the muscle mass of the fetus
    c. assist in visual development of the fetus
    d. provide nutrients for proper brain development

Answer: A. Iron deficiencies place women at risk of delivering preterm or low-birth-weight babies.
Difficulty: 1
Page: 67-68
Learning Objective: 2.12
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: CE 2.2.13

73. 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?
    a. women receive iodine injections
    b. salt has been iodized
    c. babies are given iodine baths after birth
    d. fetuses are examined with ultrasound

Answer: B. Iodine deficiencies are still a risk in developing countries.
Difficulty: 1
Page: 68
Learning Objective: 2.12
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Pre 2.2.10

74. As compared with developing nations, the rate of miscarriage, stillbirth, and abnormalities in fetal brain development have been lowered because iodine has been added to ____.
    a. salt
    b. school lunches
    c. bread
    d. the water supply

Answer: A
Difficulty: 2
Page: 68
Learning Objective: 2.12
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

75. 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 ____.
    a. in a physical state similar to a disability or illness
    b. too physically weak and could fall
    c. going to harm the baby while exercising
    d. going to stimulate a preterm birth

Answer: A. Until a few decades ago, it was widely believed in developed countries that pregnant women were too fragile to walk or carry groceries.
Difficulty: 2
Page: 68
Learning Objective: 2.12
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: N/A

76. According to the text, what enhances the health of the pregnant woman and her fetus?
    a. mild to moderate exercise
    b. drinking several cups of tea each day
    c. eating herbs
    d. conserving energy

Answer: A. One benefit is that mild to moderate oxygen increases a woman's ability to process oxygen for herself and her fetus.
Difficulty: 1
Page: 68
Learning Objective: 2.12
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Post 2.2.6

77. What is an example of an aerobic exercise?
    a. walking/jogging
    b. weight lifting
    c. sprinting
    d. jumping

Answer: A. These stimulate a woman's muscular and circulatory systems.
Difficulty: 1
Page: 68
Learning Objective: 2.12
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

78. Why is aerobic exercise important to a pregnant woman? It helps to ____.
    a. lower muscle mass
    b. increase fetal heart rate
    c. stops dangerous teratogens from reaching the fetus
    d. increase the woman's ability to process oxygen

Answer: D. This in turn benefits her fetus.
Difficulty: 1
Page: 68
Learning Objective: 2.12
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Post 2.2.7

79. 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 ____.
    a. be very careful in that this type of exercise during pregnancy could lower muscle mass

b. not run too quickly in that it could dangerously increase fetal heart rate
c. exercise regularly since it will stop dangerous teratogens from reaching the fetus
d. exercise regularly in that she will increase her ability to process oxygen

Answer: D. Moderate aerobic exercise increases a pregnant woman's ability to process oxygen, a benefit for both her and the fetus.
Difficulty: 1
Page: 68
Learning Objective: 2.12
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: Post 2.2.8

80. 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?
a. meditation
b. active Stretching
c. weight training
d. aerobic exercise

Answer: D. Moderate aerobic provides benefit for both a pregnant woman and her fetus.
Difficulty: 1
Page: 68
Learning Objective: 2.12
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Post 2.2.10

81. What exercise strengthens the vaginal muscles and helps prepare the mother for the delivery of the fetus?
a. bench presses
b. squats
c. Kegels
d. abdominal crunches

Answer: C
Difficulty: 1
Page: 68
Learning Objective: 2.12
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

82. How are Kegel exercises performed? By tensing the ____.
a. muscles of the vagina and anus repeatedly for 10-second intervals
b. abdominal muscles repeatedly for 15-second intervals
c. quadriceps and hamstrings repeatedly for 10-second intervals
d. muscles of the lower back repeatedly for 10-second intervals

Answer: A. This strengthens the vaginal muscles in preparation for delivery of the fetus.
Difficulty: 1
Page: 68
Learning Objective: 2.12
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

83. Your aunt is pregnant for the first time. She has heard that Kegel exercises are a good idea, but does not know how to perform them. You would tell her to tense the ____.
    a. muscles of the vagina and anus repeatedly for 10-second intervals
    b. abdominal muscles repeatedly for 15-second intervals
    c. quadriceps and hamstrings repeatedly for 10-second intervals
    d. muscles of the lower back repeatedly for 10-second intervals

Answer: A. This strengthens the vaginal muscles in preparation for delivery of the fetus.
Difficulty: 1
Page: 68
Learning Objective: 2.12
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: Post 2.2.9

84. Which of the following exercise should be avoided during pregnancy?
    a. any contact sports
    b. walking
    c. light jogging
    d. swimming

Answer: A. Contact sports are too traumatic for pregnant women.
Difficulty: 1
Page: 68
Learning Objective: 2.12
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

85. Your sister works at the post office. She is pregnant and stands at the service desk for her entire shift. You are worried that this will affect her fetus's health. What do you tell her? That she should _____.
    a. take a break and sit for a couple of minutes every half an hour. Continuous standing has been linked to miscarriages and premature births
    b. try to relax, being pregnant is great
    c. continue working, staying active is great for pregnant women and their fetuses
    d. get a new job; working with the public exposes her to teratogens on a daily basis

Answer: A. Heavy lifting, continuous standing, and strenuous physical exertion raise the risks of miscarriage, preterm birth, and still birth.
Difficulty: 1
Page: 68
Learning Objective: 2.12
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: CE 2.2.1

86. Heavy lifting, continuous standing, and strenuous physical exertion raise the risks of _____.
    a. postmaturity in the fetus
    b. difficulties associated with neuronal development
    c. miscarriages and premature births
    d. chromosomal errors in the fetus

Answer: C. Pregnant women are advised to reduce strenuous physical activity.
Difficulty: 1
Page: 68
Learning Objective: 2.12
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Pre 2.2.6

87. ____ is described as behaviors, environments, and bodily conditions that could be harmful to a fetus.
    a. Lanugo
    b. Teratogens
    c. Vernix
    d. Trophoblast

Answer: B
Difficulty: 1
Page: 68
Learning Objective: 2.13
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

88. What term refers to malnutrition, disease, alcohol, tobacco, and other drugs that are harmful to the fetus?
    a. teratogens
    b. pathogens
    c. carcinogens
    d. fetogens

Answer: A
Difficulty: 1
Page: 68
Learning Objective: 2.13
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

89. Which of the following are examples of teratogens?
    a. calcium, iron, and iodine
    b. prenatal vitamins and micronutrients
    c. meats, grains, and legumes
    d. alcohol, tobacco, and other drugs

Answer: D
Difficulty: 2
Page: 68
Learning Objective: 2.13
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

90. 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?
    a. conception
    b. germinal period
    c. embryonic period
    d. fetal period

Answer: C. The embryonic period lasts from the third to the eighth week after conception.
Difficulty: 1
Page: 68
Learning Objective: 2.13
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

91. What describes the profound and enduring effect on later development that teratogens can have during the embryonic period?
    a. critical period
    b. sensitive period
    c. embryonic period
    d. fetal period

Answer: A. The embryonic period lasts from the third to the eighth week after conception.
Difficulty: 2
Page: 68
Learning Objective: 2.13
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

92. During which period are the major organs being formed at a rapid rate?
    a. zygotic
    b. embryonic
    c. fetal
    d. infancy

Answer: B
Difficulty: 2
Page: 69
Learning Objective: 2.13
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

93. What are the major teratogens during the fetal period?
    a. lack of maternal sleep and lack of exercise
    b. excessive maternal weight gain and maternal age
    c. malnutrition and tobacco
    d. sugar and starch

Answer: C. Malnutrition and tobacco use are the major teratogens during the fetal period.
Difficulty: 2
Page: 69
Learning Objective: 2.13
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

94. According to the text, what is the most common teratogen worldwide?
    a. malnutrition
    b. tobacco
    c. alcohol

d. infectious disease

Answer: A
Difficulty: 1
Page: 69
Learning Objective: 2.13
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

95. From a global perspective, which of the following is the most common teratogen to affect pregnancies?
    a. lead
    b. malnutrition
    c. alcohol
    d. rubella

Answer: B
Difficulty: 2
Page: 69
Learning Objective: 2.13
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

96. Prenatal health depends on proper prenatal nutrition. Since approximately 50% of the world's population is rural, pregnant women _____.
    a. have access to fruits and vegetables year round
    b. are malnourished regardless year round
    c. cannot afford required vitamins recommended by their physicians
    d. may only eat well only during the summer and fall

Answer: D. The diet of people in rural areas can vary dramatically depending on the season.
Difficulty: 2
Page: 69
Learning Objective: 2.13
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

97. What is the condition when infants are born with parts of their brain missing?
    a. spina bifida
    b. anencephaly
    c. microcephaly
    d. exoancephaly

Answer: B
Difficulty: 2
Page: 69
Learning Objective: 2.13
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

98. What is the condition in which the neonate is born with an extreme distortion in the shape of the spinal column?
    a. spina bifida
    b. anencephaly

c. microencephaly
d. exoancephaly

Answer: A
Difficulty: 2
Page: 69
Learning Objective: 2.13
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

99. During pregnancy, deficiencies in folic acid may result in ____.
a. low birth weight and premature delivery
b. anencephaly and spina bifida
c. Down syndrome and Turner syndrome
d. HIV and malaria

Answer: B. Folic acid is the key to preventing these conditions.
Difficulty: 3
Page: 69
Learning Objective: 2.13
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

100. What dietary substance has been found to reduce spina bifida and anencephaly?
a. pectin
b. vitamin D
c. iodine
d. folic acid

Answer: D
Difficulty: 1
Page: 69
Learning Objective: 2.13
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

101. Research conducted in Finland has shown that prenatal malnutrition is a risk factor in what disorder in emerging adulthood?
a. dissociative disorder
b. depression
c. schizophrenia
d. bipolar disorder

Answer: C
Difficulty: 2
Page: 70
Learning Objective: 2.13
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

102. What is another name for the German measles?
a. cephalopelvic disproportion
b. rubella
c. anencephaly
d. neurofibromatosis

Answer: B. The embryonic period is a critical period for exposure to rubella.
Difficulty: 2
Page: 70
Learning Objective: 2.13
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

103. Infants born with the effects of rubella (German measles) within the United States have greatly decreased since the 1960s because ____.
    a. vaccinations for infectious diseases have increased
    b. funding for Medicaid and Medicare have increased
    c. fluoride has been added to the water
    d. folic acid has been added to grain products

Answer: A
Difficulty: 3
Page: 70
Learning Objective: 2.13
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

104. What sexually transmitted infection is caused by the human immunodeficiency virus?
    a. syphilis
    b. herpes
    c. gonorrhea
    d. AIDS

Answer: D
Difficulty: 1
Page: 70
Learning Objective: 2.13
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

105. What sexually transmitted infection can be transmitted to the fetus during prenatal development and to the neonate during birth and later through breast milk?
    a. syphilis
    b. herpes
    c. gonorrhea
    d. AIDS

Answer: D. HIV/AIDS damages brain development prenatally and increases the risk that an infant will not live to adulthood.
Difficulty: 2
Page: 70
Learning Objective: 2.13
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

106. HIV/AIDS can be transmitted from the mother to the child ____.
    a. during prenatal development, birth, or through breast milk
    b. through casual skin-to-skin contact such as hugs and kisses

c. via bacterial infections during times of illness while pregnant
d. through HIV bacteria being transmitted via contaminated environmental objects

Answer: A. HIV/AIDS damages brain development prenatally and increases the risk that an infant will not live to adulthood.
Difficulty: 3
Page: 70
Learning Objective: 2.13
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

107. Where do 95% of all HIV infections take place?
a. North America
b. Asia
c. Africa
d. Europe

Answer: C
Difficulty: 1
Page: 70
Learning Objective: 2.13
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

108. HIV/AIDS have been dramatically reduced in recent years using three effective strategies: medicines, cesarean sections, and infant formula. Which of the following mothers or infants have little or no access to these strategies?
a. African mothers and infants
b. Micronesian mothers and infants
c. South American mothers and infants
d. Southeast Asian mothers and infants

Answer: A
Difficulty: 1
Page: 71
Learning Objective: 2.13
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

109. What common teratogens cause widespread damage to prenatal development in developed countries?
a. tobacco
b. cocaine
c. alcohol
d. all of the above

Answer: D. Common teratogens include malnutrition and disease (especially in developing countries), as well as alcohol, tobacco, and other drugs (especially in developed countries).
Difficulty: 1
Page: 71
Learning Objective: 2.13
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

110. According to the text, which of the following is a safe amount of alcohol an individual can consume during pregnancy?
    a. 1 glass of wine per week
    b. 1 glass of wine per week only after the second trimester
    c. 1 glass of wine per week only after the third trimester
    d. none at all

Answer: D. Research has shown that the only safe level of alcohol during pregnancy is none at all.
Difficulty: 1
Page: 71
Learning Objective: 2.13
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

111. What condition might occur in the fetus and later in the child if the pregnant mother consumes alcohol during her pregnancy?
    a. fibromyalgia
    b. alcoholism
    c. neuromuscular disorder
    d. fetal alcohol spectrum disorder

Answer: D. This disorder can result in facial deformities, heart problems, and cognitive problems.
Difficulty: 1
Page: 71
Learning Objective: 2.13
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

112. 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?
    a. fetal alcohol spectrum disorder
    b. autism
    c. Prader-Willi syndrome
    d. rubella

Answer: A. These conditions are characteristics of fetal alcohol spectrum disorder.
Difficulty: 2
Page: 71
Learning Objective: 2.13
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

113. What is the leading cause of low birth weight in developed countries?
    a. smoking
    b. cocaine use
    c. drinking alcohol
    d. mega-dosing of vitamins

Answer: A
Difficulty: 1
Page: 72

Learning Objective: 2.13
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

114. What maternal behavior during pregnancy was related to conduct disorders and substance abuse in adolescence?
    a. mega-dosing of vitamins
    b. drinking alcohol
    c. cocaine use
    d. smoking

Answer: D
Difficulty: 1
Page: 72
Learning Objective: 2.13
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

115. 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?
    a. "There are known side effects to smoking and no responsible physician would tell you that you can smoke if you are pregnant."
    b. "Okay, research has shown that smoking is harmless."
    c. "Most physicians would recommend that you wait until the third trimester to begin smoking again."
    d. "That makes sense; smoking is harmful if it is secondhand smoke."

Answer: A. Maternal smoking is the leading cause of low birth weight in developed countries.
Difficulty: 2
Page: 72
Learning Objective: 2.13
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: N/A

116. What paternal behavior during pregnancy leads to higher risks of low birth weight and childhood cancer?
    a. mega-dosing of vitamins
    b. drinking alcohol
    c. smoking
    d. cocaine use

Answer: C
Difficulty: 1
Page: 72
Learning Objective: 2.13
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

Short Answer Questions

117. 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: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Remember

118. 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: 65
Learning Objective: 2.11
Bloom's Taxonomy Level: Apply

119. 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: 65
Learning Objective: 2.11
Bloom's Taxonomy Level: Understand

120. 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: 68
Learning Objective: 2.12
Bloom's Taxonomy Level: Understand

121. 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: 67
Learning Objective: 2.12
Bloom's Taxonomy Level: Understand

122. 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: 69
Learning Objective: 2.13
Bloom's Taxonomy Level: Remember

123. 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: 69-70
Learning Objective: 2.13
Bloom's Taxonomy Level: Remember

124. What are the long-term effects 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: 71
Learning Objective: 2.13
Bloom's Taxonomy Level: Remember

Essay Questions

125. Choose one prenatal period and provide a detailed overview of what happens. Include when it occurs.
Answer: The germinal period (0- 2 wks. 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 (amnion, placental, umbilical cord). The inner layer becomes the embryonic disk, which eventually forms the embryo.
Page: 62-63
Learning Objective: 2.8
Bloom's Taxonomy Level: Understand

126. 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: 63
Learning Objective: 2.10
Bloom's Taxonomy Level: Apply

127. Explain how prenatal health can depend on when the child was conceived in places where diet varies greatly depending upon which foods are available at different times of the year.
Answer: If there are little or no fruits or vegetables available, as in China in the '80's, babies can be born with folic acid deficiencies. This caused anencephaly and spina bifida.
Page: 69-70
Learning Objective: 2.13
Bloom's Taxonomy Level: Understand

128. 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: 71
Learning Objective: 2.13
Bloom's Taxonomy Level: Apply

MyDevelopmentLab Question Bank

Section 2 Exam

1.0. Your sister is pregnant and has a job where she is constantly on her feet and works with the public. You are worried about her. What advice do you give your sister?

Take a break and sit for a couple of minutes every half hour. Continuous standing has been linked to miscarriages and premature births.
Continue working, staying on your feet all day is good for pregnant women and their fetuses.
Get a new job, working with the public exposes her to teratogens on a daily basis.
Try to relax, being pregnant is awesome!

QuestionID: CE 2.2.1
Page-Reference: 68

Answer: Take a break and sit for a couple of minutes every half hour. Continuous standing has been linked to miscarriages and premature births.

2.0. Which of the following represents the correct sequence of development during the germinal period?

blastocyst, implantation, placenta
placenta, implantation, blastocyst
placenta, blastocyst, implantation
implantation, placenta, blastocyst

QuestionID: CE 2.2.2
Page-Reference: 61-62

Answer: blastocyst, implantation, placenta

3.0. The blastocyst generally implants itself to the uterine wall during _____.

the 2nd week after conception
at conception
the 5th week after conception
the 7th week after conception

QuestionID: CE 2.2.3
Page-Reference: 62

Answer: the 2nd week after conception

4.0. It is during the ____ period of prenatal development that nearly all the major organs are formed.

embryonic
zygotic
fetal
chromosomal

QuestionID: CE 2.2.4
Page-Reference: 62

Answer: embryonic

5.0. After what month do women generally feel the fetus move?

2nd
4th
6th
8th

QuestionID: CE 2.2.5
Page-Reference: 63

Answer: 4th

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

hearing their mothers read *The Cat in the Hat.*
seeing their mothers read *The Cat in the Hat.*
hearing their mothers read any book.
seeing their mothers read any book.

QuestionID: CE 2.2.6
Page-Reference: 64

Answer: hearing their mothers read *The Cat in the Hat.*

7.0. Your pregnant cousin is hot-tempered and yells quite a bit; even over little things. Which of the following is good advice for your cousin?

She should try to relax. Whenever she gets really upset, her fetus' heart beats faster.
It is okay if she gets upset, but she should not yell. It will harm the fetus' hearing.
Getting angry and yelling is good for the fetus since it will raise the fetus' heart rate.
She should probably get a different job. Her current job doesn't pay very well and makes her upset.

QuestionID: CE 2.2.7
Page-Reference: 64

Answer: She should try to relax. Whenever she gets really upset, her fetus' heart beats faster.

8.0. One helpful method of prenatal care common in many traditional cultures is massage, which is typically performed by ____.

a midwife
paramedics
the woman's husband
staff from the World Health Organization

QuestionID: CE 2.2.8
Page-Reference: 65

Answer: a midwife

9.0. According to scientific studies, the average female should gain ____ pounds during pregnancy.

15-20
25-35
35-40
40-45

QuestionID: CE 2.2.9
Page-Reference: 67

Answer: 25-35

10.0. The Beng people have several suggestions for pregnant women. Which of the following is an example of a Beng suggestion that can be helpful for any pregnant woman?

Rub oil on your belly.
Avoid eating berries.
Take an afternoon nap every day.
Use mud to protect your skin from biting insects.

QuestionID: CE 2.2.10
Page-Reference: 65

Answer: Rub oil on your belly.

11.0. ____ has been used by many traditional cultures as a method of prenatal care and is now in vogue with many midwives, nurses, and physicians in developed countries.

Massage
Dancing
Daily napping
Singing

QuestionID: CE 2.2.11
Page-Reference: 65

Answer: Massage

12.0. Which of the following is the single greatest thing a woman who is pregnant can do to take care of herself and her unborn child?

Receive regular evaluations from a healthcare professional.
Avoid drinking alcohol.
Minimize exercise.
Cut out all caffeine from her diet.

QuestionID: CE 2.2.12
Page-Reference: 67

Answer: Receive regular evaluations from a healthcare professional.

13.0. During pregnancy, iron-rich foods help to _____.

build the blood supply of the mother and fetus
increase the muscle mass of the fetus
assist in visual development of the fetus
provide nutrients for proper brain development

QuestionID: CE 2.2.13
Page-Reference: 67-68

Answer: build the blood supply of the mother and fetus

14.0. Your nephew was present at the birth of his new brother. Immediately after the baby traveled through the birth canal, your nephew looks horrified when he sees his new sibling. Looking at you, he asks, "What is that white, fuzzy stuff all over the baby?" You tell him _____.

that it is amniotic fluid
it is lanugo, and that many babies have it at birth as it protects their skin in utero
that it is lactate because the baby was suckling while in vitro
that it is probably an excess of white blood cells that became stuck to the baby

QuestionID: CE 2.2.14
Page-Reference: 63

Answer: it is lanugo, and that many babies have it at birth as it protects their skin in utero

15.0. Researchers have concluded that by the end of the second trimester, fetuses respond to sounds, including voices and music, showing a preference for _____ .

the sound of their mother's voice
the sound of classical music
the sound of rock and roll music
the sound of naturescapes and animals

QuestionID: CE 2.2.15
Page-Reference: 63

Answer: the sound of their mother's voice

Section 2 Study Plan

1.0 - Remember the Facts

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

the germinal period
the embryonic period
the fetal period
Sequence-one pregnancy period

QuestionID: Pre 2.2.1.1
Page-Reference: 61

Answer: the germinal period

1.0.2. The _____ form from the outer layer of the embryonic disk.

skin, hair, nails, sensory organs, and nervous system
brain and spinal cord
lungs and heart
digestive and respiratory systems

QuestionID: Pre 2.2.1.2
Page-Reference: 62

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

1.0.3. According to the text, when a pregnant mother becomes highly stressed a fetus may _____.

develop a faster heart rate and move more frequently
become very ill and sick
hold their hands over their eyes, covering them
suck their fingers and bite their nails

QuestionID: Pre 2.2.1.3
Page-Reference: 64

Answer: develop a faster heart rate and move more frequently

1.0.4. There is a rumor that pregnant women should dramatically increase their caloric intake and "eat for two"; however, it is known that pregnant women need about ____ more calories than those who are not pregnant.

300
600
900
1200

QuestionID: Pre 2.2.1.4
Page-Reference: 67

Answer: 300

1.0.5. By the 8th day after conception, the fertilized egg has approximately 100 cells and is known as the _____.

blastocyst
fetus
embryo
neonate

QuestionID: Post 2.2.1.1
Page-Reference: 62

Answer: blastocyst

1.0.6. ____ is the embryonic structure that develops into the brain and spinal cord.

Neural tube
Cerebral cortex
Neuroblast
Brainstem

QuestionID: Post 2.2.1.2
Page-Reference: 62

Answer: Neural tube

1.0.7. Recent scientific studies have concluded that most women should gain ____ pounds during pregnancy.

15 to 20
25 to 35
35 to 40
45 to 50

QuestionID: Post 2.2.1.3
Page-Reference: 67

Answer: 25 to 35

1.0.8. Which percent of maternal and infant deaths occur in developing countries?

99
75
50
15

QuestionID: Post 2.2.1.4
Page-Reference: 67

Answer: 99

2.0 - Understand the Concepts

2.0.1. What is the last major organ system to develop during the fetal period?

lungs
heart
intestines
kidneys

QuestionID: Pre 2.2.2.5
Page-Reference: 64

Answer: lungs

2.0.2. For women who are pregnant, heavy lifting, strenuous physical exertion, and continuous standing can raise the risk of _____.

miscarriages, preterm birth, and stillbirth
Fetal Alcohol Syndrome
difficulties associated with neuronal migration
chromosomal errors in fetal development

QuestionID: Pre 2.2.2.6
Page-Reference: 68

Answer: miscarriages, preterm birth, and stillbirth

2.0.3. The embryonic disk forms from the _____ of the blastocyst and develops to become the embryo.

inner layer
outer layer
right-lateral side
dorsal-lateral side

QuestionID: Pre 2.2.2.7
Page-Reference: 62

Answer: inner layer

2.0.4. The skin, hair, nails, sensory organs, and nervous system were all originally which structure?

ectoderm
mesoderm
neuralblast
limbic covering

QuestionID: Pre 2.2.2.8
Page-Reference: 62

Answer: ectoderm

2.0.5. ____ provides a protective environment in which the fetus' temperature is regulated and protects the fetus from friction caused by the mother's movements.

The amnion
The placenta
The umbilical cord
The germinal structure

QuestionID: Post 2.2.2.5
Page-Reference: 62

Answer: The amnion

2.0.6. Which of the following enhances the health of a pregnant woman and the fetus?

Mild to moderate exercise
Drinking several cups of tea each day
Consuming coffee and eating herbs
Conserving energy and eating fatty foods

QuestionID: Post 2.2.2.6
Page-Reference: 68

Answer: Mild to moderate exercise

2.0.7. Aerobic exercise is important to pregnant women because it helps to _____.

lower muscle mass and increase fat mass
increase fetal heart rate and blood pressure
stop dangerous teratogens from reaching the fetus
increase the woman's ability to process oxygen

QuestionID: Post 2.2.2.7
Page-Reference: 68

Answer: increase the woman's ability to process oxygen

3.0 - Apply What You Know and Analyze It

3.0.1. Your friend is pregnant and worried that she will gain weight. Having been extremely thin, she is planning to diet to maintain her figure. Considering what you have learned from your text, what is your advice to her?

Avoid dieting. It could lead to her baby being born preterm and having low birth weight.
Definitely diet, as this will insure that her children will not be obese.
Definitely diet; it increases intelligence and test scores later in life.
Dieting is a good idea because it increases muscle tone in the baby.

QuestionID: Pre 2.2.3.9
Page-Reference: 67

Answer: Avoid dieting. It could lead to her baby being born preterm and having low birth weight.

3.0.2. Low iodine intake during pregnancy increases the risks of miscarriage, stillbirth, and abnormalities in fetal brain development. Since the 1920s, the United States has required table salt to have iodine, which is a similar practice to many countries that have economic wealth and resources. In what country is the lack of iodine most likely still an issue for pregnant women?

Cambodia, which is a developing country.
Canada, which is a developed country.
Great Britain, which is a Western country.
Japan, which is a Non-western country.

QuestionID: Pre 2.2.3.10
Page-Reference: 68

Answer: Cambodia, which is a developing country.

3.0.3. 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. What would be your advice to her? She should _____.

exercise regularly as she will increase her ability to process oxygen
be very careful as this type of exercise during pregnancy could lower muscle mass
not run too quickly as it could dangerously increase fetal heart rate
exercise regularly since it will stop dangerous teratogens from reaching the fetus

QuestionID: Post 2.2.3.8
Page-Reference: 68

Answer: exercise regularly as she will increase her ability to process oxygen

3.0.4. Your niece is pregnant. She has heard that Kegel exercises are a good idea, but does not know how to perform them. Having a very close relationship, you would tell her to tense the _____.

muscles of the vagina and anus repeatedly for 10-second intervals
abdominal muscles repeatedly for 15-second intervals
quadriceps and hamstrings repeatedly for 10-second intervals
muscles of the lower back repeatedly for 10-second intervals

QuestionID: Post 2.2.3.9
Page-Reference: 68

Answer: muscles of the vagina and anus repeatedly for 10-second intervals

3.0.5. Samantha has always been a very active person and exercises regularly. During pregnancy she was concerned that maybe she was doing too much and it could be harmful for the fetus. Her physician told her that her exercise routine, which consisted of meditation, active stretching, yoga, and aerobic exercise, was fine. He even suggested that one of the activities positively stimulated her circulatory and muscular systems. According to the text, which of the following is Samantha's physician referring to?

Meditation
Active stretching
Yoga
Aerobic exercise

QuestionID: Post 2.2.3.10
Page-Reference: 68

Answer: Aerobic exercise

4.0 - Section 2 Formative Assessment

4.0.1. Shannon and Thomas are enjoying every minute of their first pregnancy, especially when they can feel the baby kicking, moving around, and even hiccupping inside Shannon's belly. Given the types of activities that are happening inside Shannon's belly at the moment, what period of prenatal development is their baby in?
the implantation period
the germinal period
the embryonic period
the fetal period

QuestionID: FA_Apply_q1
Page-Reference: 63

Answer: the fetal period

4.0.2. Trina is pregnant and has been researching various methods of prenatal care across cultures. She asks her midwife about _____, and her midwife explains that this helpful method of prenatal care is quite common in traditional cultures and increasingly in developed countries.
avoiding "hot" and "cold" foods
wearing a magic charm
avoiding any sexual contact
prenatal massage

QuestionID: FA_Apply_q2
Page-Reference: 65

Answer: prenatal massage

4.0.3. During pregnancy, Jody has been careful to avoid anything that could be potentially harmful to her developing baby, such as breathing in secondhand smoke, drinking cocktails, and having x-rays taken. The inclusive term for these dangers to the baby is _____.
kegels
microgens
androgens
teratogens

QuestionID: FA_Apply_q3
Page-Reference: 68

Answer: teratogens

4.0.4. Natalia is trying to keep her weight on target during her pregnancy because she knows the weight might be difficult to lose after the baby is born. According to Natalia's doctor, a healthy weight gain during pregnancy is _____ pounds.

55-65
45-55
35-45
25-35

QuestionID: FA_Apply_q4
Page-Reference: 67

Answer: 25-35

4.0.5. What happens during the embryonic stage of prenatal development?

The fetus kicks, turns, hiccups, sucks its thumb, and breathes amniotic fluid.
The zygote divides and forms the blastocyst, which implants in the uterus and begins forming the amnion, placenta, and umbilical cord.
Vernix and lanugo develop on the skin to protect against the amniotic fluid.
The arms and legs develop, then fingers and toes.

QuestionID: FA 1.2_Analyze1
Page-Reference: 62-63

Answer: The arms and legs develop, then fingers and toes.

Video Guide Questions

Short Answer Questions

1. In the *Pregnancy and Prenatal Care Across Cultures* video [page 73], do you think the American expectant mother's experience is typical of most expectant mothers in the U.S.? Why or why not?
Answer: Answers will vary.

2. Using the *Pregnancy and Prenatal Care Across Cultures* video [page 73] as meaningful support , compare and contrast the American expectant mother's experience with the Mayan expectant mother's experience.
Answer: The expectant American mother and the Mayan mother both seem very up-beat and excited about being pregnant. Both of the expectant mothers discuss eating healthy fruits and vegetables. Both expectant mothers discuss the fact that they see a doctor for routine visits. The Mayan expectant mother tells the viewers that she is also seeing a midwife for massage. The American expectant mother tells the viewers that she has a number of routine tests performed at her doctor visits as well as two ultrasounds that have been conducted to view the baby. The American expectant mother discusses exercise and yoga.

3. Describe the role of the midwife interviewed in *Pregnancy and Prenatal Care Across Cultures* video [page 73]here. What are some advantages of seeing a doctor vs. a midwife as listed by the mothers in this clip?
Answer: The role of the midwife from this video is to provide, quite literally, a hands-on experience to the expectant mothers. She discusses that she checks the baby with her hands and massages to help maintain a good position. She can reposition the baby if it is not in the appropriate position. She also discusses the use of an herb that can very effectively change the gender of the fetus. One of the expectant mothers in the clip states that she is seeing a physician because it is her first child and therefore more risk is involved. She adds that if there is trouble while she is in labor the doctor can perform a Caesarian section while a midwife would not have that capability. The American expectant mother discusses the testing that her physician is able to perform, and does not make mention of the use of a midwife.

Multiple Choice Questions

1. According to the video, which of the following is an important part of prenatal care in rural Mayan Mexico?
    a. drinking 10 glasses of water a day
    b. prenatal massage
    c. prayer
    d. eating two additional meals

Answer: B

2. Which of the following was not mentioned by the American expectant mother as part of the routine visits to her doctor?
   a. cardiovascular check
   b. blood pressure check
   c. weight check
   d. measure fundal height

Answer: A

3. The American expectant mother mentioned all of the following ways that she maintains her healthy pregnancy except for which of the following?
   a. goes to the gym twice per week
   b. yoga
   c. jogging
   d. eating a healthier diet

Answer: C

Chapter 2-Section 3

Pregnancy Problems

Learning Objective		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, 18	4
	Short Answer	56		
	Essay			
Learning Objective 2.15	Multiple Choice	21, 23, 24, 25	19, 20, 22, 26	27, 28
	Short Answer		57	
	Essay			
Learning Objective 2.16	Multiple Choice	30, 31, 32, 33, 34, 37	29, 35, 36	
	Short Answer			
	Essay			
Learning Objective 2.17	Multiple Choice	38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 50, 51	52	49
	Short Answer			
	Essay			
Learning Objective 2.18	Multiple Choice	53, 54, 55		
	Short Answer			
	Essay			

Section 3 Pregnancy Problems

Test Item File

Multiple Choice Questions

1. During meiosis, at times chromosomes sometimes fail to divide properly and as a result the person may have 45 or 47 chromosomes (or even, in rare cases, 48 or 49). Which of the following best describes this phenomenon?
    a. chromosomal disorder
    b. genetic misprinting
    c. mitosis error
    d. gene displacement

Answer: A
Difficulty: 1
Page: 74
Learning Objective: 2.14
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Post 2.3.1

2. 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?
    a. They are spontaneously aborted.
    b. They result in neonates with birth defects.
    c. They result in twins.
    d. They have no problems.

Answer: A
Difficulty: 1
Page: 74
Learning Objective: 2.14
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: CE 2.3.2

3. Approximately how many live births does the child have a chromosomal disorder?
    a. 1 in 10
    b. 1 in 200
    c. 1 in 500
    d. 1 in 1,000

Answer: B
Difficulty: 1
Page: 74
Learning Objective: 2.14
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: CE 2.3.15, Pre 2.3.1

4. 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 _____.

a. 1 in 10
b. 1 in 200
c. 1 in 500
d. 1 in 1,000

Answer: B. 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.
Difficulty: 1
Page: 74
Learning Objective: 2.14
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: CE 2.3.15

5. Approximately how many infants have some type of sex chromosome disorder?

a. 1 in 10
b. 1 in 200
c. 1 in 500
d. 1 in 1,000

Answer: C
Difficulty: 1
Page: 74
Learning Objective: 2.14
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

6. What are two common consequences of sex chromosome disorders?

a. Shortened stature and the likelihood to develop nonorganic failure to thrive.
b. An increased likelihood to have a pregnancy that is preterm and an infant with low birth weight.
c. The infant is more likely to have a difficult temperament and an insecure attachment.
d. Cognitive deficits and abnormal development of the reproductive system at puberty.

Answer: D. Mental retardation, learning disabilities, and speech impairments are all common.
Difficulty: 2
Page: 74
Learning Objective: 2.14
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

7. 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
b. Hormone replacement treatment
c. Group therapy
d. Strenuous exercise

Answer: B. This can often effectively correct the problems caused by a sex chromosomal disorder.
Difficulty: 2
Page: 75
Learning Objective: 2.14
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

8. An individual with Down syndrome has how many chromosomes?
    a. 45
    b. 46
    c. 47
    d. 48

Answer: C
Difficulty: 1
Page: 75
Learning Objective: 2.14
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

9. Down syndrome is also known as trisomy-21 because individuals with Down syndrome ____.
    a. have three distinct facial features by the 21st week of pregnancy
    b. show three distinct temperament patterns by the 21st week of infancy
    c. have a third chromosome on the 21st pair
    d. have 21 genes on the 3rd pair of chromosomes

Answer: C. Individuals with Down syndrome have an extra chromosome on the 21st pair.
Difficulty: 3
Page: 75
Learning Objective: 2.14
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Pre 2.3.7; Post 2.3.2

10. What is another name for trisomy-21?
    a. Non Sex-linked-21
    b. intellectual disability
    c. Edward's syndrome
    d. Down syndrome

Answer: D
Difficulty: 1
Page: 75
Learning Objective: 2.14
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: QR 2.3.7

11. 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?
    a. Non Sex-linked-21
    b. Down syndrome

c. Edward's syndrome
d. intellectual disability

Answer: B
Difficulty: 2
Page: 75
Learning Objective: 2.14
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

12. What helps children with trisomy-21 develop more favorably?
a. hormone replacement therapy
b. weekly motor treatments
c. a heart transplant
d. supportive and encouraging parents

Answer: D. Intervention programs in infancy and childhood have also been shown to have positive effects.
Difficulty: 2
Page: 75
Learning Objective: 2.14
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

13. Adult individuals with trisomy-21 are _____.
a. often able to hold a job that is highly structured with simple tasks
b. most likely institutionalized
c. not likely to make it to age 30
d. as likely as individuals who do not have trisomy-21 to enter college

Answer: A. With adequate social support an adult with Down syndrome can often successfully hold a job.
Difficulty: 2
Page: 75
Learning Objective: 2.14
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

14. Individuals who have what disorder are more likely to develop leukemia, cancer, Alzheimer's disease, or heart disease at earlier ages than usual (in their thirties and forties)?
a. Non Sex-linked-21
b. Down syndrome
c. Edward's syndrome
d. intellectual disability

Answer: B
Difficulty: 2
Page: 75
Learning Objective: 2.14
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

15. Children born with chromosomal problems are almost always born to parents with ____.

a. the very same chromosomal problem
b. similar genetic disorders
c. above average intelligence
d. no genetic or chromosomal problems

Answer: D
Difficulty: 2
Page: 75
Learning Objective: 2.14
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

16. Which of the following increases the risk of having a child with Down syndrome?
a. smoking while pregnant
b. alcohol consumption
c. maternal age
d. paternal stress

Answer: C
Difficulty: 2
Page: 75
Learning Objective: 2.14
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Pre 2.3.2

17. How old are the ova of a 42 year-old woman trying to conceive?
a. 2 weeks
b. 2 months
c. 2 years
d. 42 years

Answer: D. As we learned earlier in the chapter, a female produces all the ova she will ever have while she is still in the womb.
Difficulty: 2
Page: 75
Learning Objective: 2.14
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

18. Many countries have a lower rate of pregnancies resulting in spina bifida because ____.
a. iodine is added to table salt
b. fluoride is added to drinking water
c. folic acid is added to grain products
d. school immunizations are required

Answer: C. Many countries passed laws requiring folic acid to be added to grain products such as cereals, bread, pasta, flour, and rice.
Difficulty: 3
Page: 69
Learning Objective: 2.14
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

19. Which of the following are three techniques used to monitor pregnancy?
    a. fetal heart rate, blood pressure, and CT scans
    b. ultrasounds, amniocentesis, and chorionic villus sampling
    c. genetic counseling, amniocentesis, and epidural
    d. fMRI, CT, and PET scans

Answer: B. All three of these methods are commonly available in developed countries.
Difficulty: 2
Page: 76
Learning Objective: 2.15
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

20. What prenatal technique uses high-frequency waves to examine the characteristics of the fetus in-utero?
    a. amniocentesis
    b. chorionic villus sampling
    c. alphafetal protein
    d. ultrasound

Answer: D. Today ultrasound is used for most pregnancies in developed countries.
Difficulty: 1
Page: 76
Learning Objective: 2.15
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: N/A

21. ____ 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 a screen.
    a. Genetic counseling
    b. Ultrasound
    c. Chorionic villus sampling
    d. Amniocentesis

Answer: B
Difficulty: 1
Page: 76
Learning Objective: 2.15
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

22. Which of the following is the cheapest, easiest, and safest way for physicians to monitor fetal development?
    a. genetic counseling
    b. amniocentesis
    c. ultrasound
    d. chorionic villus sampling

Answer: C. Today ultrasound is used for most pregnancies in developed countries.
Difficulty: 1
Page: 76
Learning Objective: 2.15
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Pre 2.3.6

23. What prenatal technique uses a long hollow needle to extract amniotic fluid to examine the fetus's genotype?
    a. amniocentesis
    b. chorionic villus sampling
    c. alphafetal protein
    d. ultrasound

Answer: A
Difficulty: 1
Page: 76
Learning Objective: 2.15
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: CE 2.3.7

24. 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?
    a. amniocentesis
    b. chorionic villus sampling
    c. alphafetal protein
    d. ultrasound

Answer: B
Difficulty: 1
Page: 76
Learning Objective: 2.15
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

25. 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?
    a. CT scan
    b. ultrasound
    c. amniocentesis
    d. chorionic villus sampling

Answer: D
Difficulty: 2
Page: 76
Learning Objective: 2.15
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: CE 2.3.6

26. Why would some couples seek genetic counseling before attempting a pregnancy?
    a. They believe that they might be carriers for a genetic disorder.
    b. They live in a high-risk area.
    c. They want to have a high-IQ baby.
    d. They want a particular characteristic in their offspring.

Answer: A. Genetic counseling involves analyzing the family history and genotype of prospective parents.
Difficulty: 1
Page: 77

Learning Objective: 2.15
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: CE 2.3.8

27. 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?
    a. an amniocentesis and PET scan
    b. an ultrasound and genetic counseling
    c. an amniocentesis and ultrasound
    d. a chorionic villus sampling and fMRI

Answer: B. Those who are at risk for Down syndrome would use an ultrasound because it the safest approach.
Difficulty: 3
Page: 76-77
Learning Objective: 2.15
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: Post 2.3.8

28. 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.
    b. 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.
    c. Merriam and Samir, who are in their early 40s and have a history of miscarriages and infertility.
    d. Nguyen and Pham, who are in their early 30s and both have a history of diabetes.

Answer: C. 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.
Difficulty: 2
Page: 77
Learning Objective: 2.15
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: Pre 2.3.9; Post 2.3.10

29. How is infertility defined?
    a. the presence of endometriosis
    b. when the male has a low sperm count
    c. inability to conceive after trying for a year
    d. no desire to have children

Answer: C. Most women of reproductive age will become pregnant with a year or two of trying to conceive.
Difficulty: 1
Page: 77
Learning Objective: 2.16
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Pre 2.3.4

30. According to the text, infertility rates have remained constant over the past century at the rate of ____.
    a. 1–5%
    b. 10–15%
    c. 20–25%
    d. 30–35%

Answer: B
Difficulty: 1
Page: 77
Learning Objective: 2.16
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: CE 2.3.5

31. Over the past century, the rate of infertility in the United States has ____.
    a. remained the same at 35%
    b. declined to 5%
    c. remained the same at 10–15%
    d. declined to 10–25%

Answer: C
Difficulty: 3
Page: 77
Learning Objective: 2.16
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

32. What percent of infertility problems are related to the male?
    a. 10%
    b. 30%
    c. 50%
    d. 70%

Answer: C
Difficulty: 1
Page: 77
Learning Objective: 2.16
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: CE 2.3.9

33. It is a misconception that females are primarily responsible for infertility, because ____% of the time it is the male who is the source of a couple's infertility.
    a. 40
    b. 50
    c. 60
    d. 70

Answer: B
Difficulty: 2
Page: 77
Learning Objective: 2.16
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

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

a. erectile difficulties, decreased libido, and low sperm count
b. sperm death, poor sperm mobility, and low seminal fluid
c. low sperm production, poor sperm quality, and poor sperm movement
d. low sperm production, increased libido, and poor sperm movement

Answer: B
Difficulty: 2
Page: 77
Learning Objective: 2.16
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

35. 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?
a. lack of libido
b. endometriosis
c. decrease in the quantity and quality of their sperm
d. their partner's fertility

Answer: C. Men's sperm count decreases with age.
Difficulty: 1
Page: 77
Learning Objective: 2.16
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Post 2.3.5

36. 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?
a. Quit smoking, decrease alcohol consumption, and do not abuse drugs.
b. Start a calcium regimen, consume more iron, and take a multivitamin.
c. Exercise daily, increase caffeine consumption, and reduce stress,
d. Avoid wearing boxers shorts and switch to tighter underwear,

Answer: A. These behavioral factors are among the most common sources of infertility.
Difficulty: 2
Page: 77
Learning Objective: 2.16
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: CE 2.3.10

37. ____ is the most common cause of infertility in women.
a. Alcohol
b. Stress
c. Age
d. Smoking

Answer: C
Difficulty: 2
Page: 78
Learning Objective: 2.16
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Post 2.3.3

38. In most cultures and throughout history, infertility has been regarded mostly as a problem that originates from ____.
    a. a lack of spiritual commitment
    b. the male
    c. the female
    d. both the male and female

Answer: C
Difficulty: 1
Page: 78
Learning Objective: 2.17
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: CE 2.3.11

39. Based on historical misconception of infertility, which of the following was one of the most dangerous treatments as described by the text?
    a. encouraging men to refrain from climaxing too quickly
    b. the practice of bloodletting to increase fertility
    c. encouraging women to reach orgasm
    d. encouraging men to bring more attention to sexual pleasure for their wife

Answer: B
Difficulty: 1
Page: 77
Learning Objective: 2.17
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

40. Of the following, which is a modern technique used for fertility treatment?
    a. artificial insemination
    b. an infertility belt
    c. a chastity belt
    d. colonoscopy

Answer: A
Difficulty: 2
Page: 78
Learning Objective: 2.17
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

41. What is the oldest effective treatment for infertility?
    a. in vitro fertilization
    b. nutritional supplements
    c. surrogate motherhood
    d. artificial insemination

Answer: D
Difficulty: 1
Page: 78
Learning Objective: 2.17
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

42. ____ is the process in which sperm is injected directly into the uterus, and is the simplest and most effective reproductive treatment.
    a. In vitro fertilization
    b. Artificial insemination
    c. Amniocentesis
    d. Infertility injections

Answer: B
Difficulty: 2
Page: 78
Learning Objective: 2.17
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

43. What is the success rate of artificial insemination?
    a. 10%
    b. 40%
    c. 70%
    d. 100%

Answer: C
Difficulty: 1
Page: 79
Learning Objective: 2.17
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: CE 2.3.1

44. What is the most common approach to female infertility if the woman cannot ovulate properly?
    a. eliminating nutritional deficiencies
    b. fertility drugs
    c. increasing the frequency of intercourse
    d. herbal therapy

Answer: B
Difficulty: 1
Page: 79
Learning Objective: 2.17
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Post 2.3.4; CE 2.3.12

45. More than half of the women who take fertility drugs become pregnant in how many cycles (months)?
    a. 2
    b. 6
    c. 10
    d. 20

Answer: B
Difficulty: 1
Page: 79
Learning Objective: 2.17
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Post 2.3.9

46. The use of fertility drugs increases the likelihood of all of the following except ____.
    a. blood clots
    b. decreased bone density
    c. kidney damage
    d. damage to the ovaries

Answer: B
Difficulty: 1
Page: 79
Learning Objective: 2.17
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

47. Which of the following are known risks associated with fertility drugs?
    a. hypertension, cardiac arrhythmias, and gastrointestinal problems
    b. depression, anxiety, and suicidal thoughts
    c. blood clots, kidney damage, and damage to the ovaries
    d. diabetes, endometriosis, and eczema

Answer: C
Difficulty: 3
Page: 79
Learning Objective: 2.17
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Pre 2.3.3; CE 2.3.3

48. Depending on the drug, what percentage of multiple births results from using fertility drugs?
    a. 1–2%
    b. 10–25%
    c. 40–55%
    d. 60–75%

Answer: B
Difficulty: 1
Page: 79
Learning Objective: 2.17
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

49. 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?
    a. 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.
    b. No, the use of fertility drugs is in no way related in giving birth to twins.
    c. No, having twins is unpredictable and modern medicine has not been able to alter the process in any way.
    d. 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. Depending on the drug, 10–25% of multiple births result from using fertility drugs.
Difficulty: 3
Page: 79
Learning Objective: 2.17
Bloom's Taxonomy Level: Apply
MDL Parallel Question ID: Pre 2.3.10

50. What fertility technique extracts ova, combines them with sperm, and, after a few days, implants two or three blastocysts into the woman's uterus?
    a. in vitro fertilization
    b. nutritional supplements
    c. surrogate motherhood
    d. artificial insemination

Answer: A
Difficulty: 1
Page: 79
Learning Objective: 2.17
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

51. In vitro fertilization, or IVF, has improved in recent years. What is the current rate of success of IVF?
    a. 15%
    b. 35%
    c. 55%
    d. 75%

Answer: B. Success rates for IVF are about 35% for women under 35.
Difficulty: 1
Page: 79
Learning Objective: 2.17
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Post 2.3.7

52. What theory argued that for conception to occur, both the man and the woman had to emit a "seed" and that the "seed" was only released through orgasm?
    a. mutual orgasm theory
    b. animal theory
    c. ovist theory
    d. semence theory

Answer: D. This was the dominant theory of conception in the West for more than two millennia.
Difficulty: 1
Page: 80
Learning Objective: 2.17
Bloom's Taxonomy Level: Understand
MDL Parallel Question ID: Pre 2.3.5

53. Which of the following countries are included within the *infertility belt* across central Africa?
    a. Ethiopia, South Africa, and Liberia

b. Cameroon, Sudan, and the Republic of the Congo
c. Cambodia, Thailand, and Vietnam
d. Nigeria, Chad, and Libya

Answer: B
Difficulty: 2
Page: 80
Learning Objective: 2.18
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: N/A

54. ____ are two possible causes for the higher rates of infertility in countries found in Africa.
a. Malnutrition and sexually transmitted infections
b. Warmer climate and higher levels of libido
c. Religious attitude on sexuality and encouragement of larger families
d. Poor sanitation and dietary habits

Answer: A
Difficulty: 2
Page: 80
Learning Objective: 2.18
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: Pre 2.3.8; CE 2.3.4

55. In most collectivist cultures, motherhood is an essential part of a female's identity and if infertility occurs she may ____.
a. travel to the city and seek fertility treatment
b. use herbal remedies and consult a shaman
c. become anxious and overly depressed
d. divorce her husband and seek another who is more fertile

Answer: B
Difficulty: 2
Page: 81
Learning Objective: 2.18
Bloom's Taxonomy Level: Remember
MDL Parallel Question ID: CE 2.3.13

Short Answer Questions

56. 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 of heart problems, leukemia, cancer and their life expectancy is lower than average.
Page: 74-75
Learning Objective: 2.14
Bloom's Taxonomy Level: Remember

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

Answer: CVS can be done earlier, at about 5-10sssss 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 the umbilical cord. Amniocentesis involves inserting a needle into abdomen to remove amniotic fluid that contains cells that have been sloughed off from the developing organism. Both are used to detect genetic problems.
Page: 76
Learning Objective: 2.15
Bloom's Taxonomy Level: Understand

MyDevelopmentLab Question Bank

Section 3 Exam

1.0. The success rate for artificial insemination is approximately ___?

15%
70%
35%
95%

QuestionID: CE 2.3.1
Page-Reference: 79

Answer: 70%

2.0. According to the text, during conception what happens to most zygotes that have too many or too few chromosomes?

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

QuestionID: CE 2.3.2
Page-Reference: 74

Answer: They are spontaneously aborted.

3.0. _____ are known risk factors associated with fertility drugs.

Blood clots, kidney damage, and damage to the ovaries
Hypertension, cardiac arrhythmias, and gastrointestinal problems
Diabetes, endometriosis, and eczema
Depression, anxiety, and suicidal thoughts

QuestionID: CE 2.3.3
Page-Reference: 79

Answer: Blood clots, kidney damage, and damage to the ovaries

4.0. Which of the following are two possible causes for high infertility rates in some African countries?

Malnutrition and sexually transmitted infections
Warmer climates and higher levels of libido
Religious attitude on sexuality and encouragement of large families
Poor sanitation and dietary habits

QuestionID: CE 2.3.4
Page-Reference: 80

Answer: Malnutrition and sexually transmitted infections

5.0. Infertility rates, according to the text, have remained constant over the past one hundred years at the rate of ___.
1-5%
10-15%
20-25%
30-25%

QuestionID: CE 2.3.5
Page-Reference: 77

Answer: 10-15%

6.0. Which of the following prenatal procedures, although 99% accurate, is used infrequently due to the risk of miscarriage or damage to the fetus?
alphafetal protein sampling
ultrasound
amniocentesis
Chorionic villus sampling

QuestionID: CE 2.3.6
Page-Reference: 76

Answer: Chorionic villus sampling

7.0. Your sister is pregnant and learns that she will have to some prenatal exams. She has always been terrified of needles. Which procedure is she most unhappy about?
chorionic villus sampling
ultrasound
amniocentesis
urinalysis

QuestionID: CE 2.3.7
Page-Reference: 76

Answer: amniocentesis

8.0. Which of the following is a reason for a couple to seek genetic counseling before attempting to conceive?
They might be carriers for a genetic disorder.
They live in a high-risk area.
They want to have a high IQ baby.
They want a particular characteristic in their offspring.

QuestionID: CE 2.3.8
Page-Reference: 77

Answer: They might be carriers for a genetic disorder.

9.0. The percentage of infertility problems that can be traced back to the male is which of the following?

20%
30%
40%
50%

QuestionID: CE 2.3.9
Page-Reference: 77

Answer: 50%

10.0. Mehrak and Emma are seeking fertility treatment and were informed by their physician that Mehrak's sperm count is low and the quality is poor. Which of the following suggestions might help increase his sperm production and quality?

Quit smoking, decrease alcohol consumption, and do not abuse drugs
Start a vitamin C regimen, consume more folic acid, and take a multivitamin
Exercise daily, increase nicotine consumption, and reduce stress
Avoid wearing boxer shorts and switch to tighter underwear

QuestionID: CE 2.3.10
Page-Reference: 73

Answer: Quit smoking, decrease alcohol consumption, and do not abuse drugs

11.0. Throughout history and in most cultures, infertility has been considered mostly as a problem caused by _____.

a lack of spiritual commitment
the male
the female
both the male and the female

QuestionID: CE 2.3.11
Page-Reference: 81

Answer: the female

12.0. Sara was informed by her physician that she is not ovulating properly. Which of the following is her physician's most likely course of treatment?

Fertility drugs
Eliminating nutritional deficiencies
Increasing herbal consumption
Decreasing stress and increasing caffeine intake

QuestionID: CE 2.3.12
Page-Reference: 79

Answer: Fertility drugs

13.0. In developing countries, if a female is childless and desires to conceive, she may:

use herbal remedies and consult a Shaman.
travel to the city and seek fertility treatment.
become depressed or even suicidal.
divorce her husband and seek a younger partner.

QuestionID: CE 2.3.13
Page-Reference: 81

Answer: use herbal remedies and consult a Shaman.

14.0. The chances of an infant being born with some type of sex chromosome disorder is which of the following?

1 in 500
1 in 1000
1 in 1500
1 in 5000

QuestionID: CE 2.3.14
Page-Reference: 74

Answer: 1 in 500

15.0. Your sister just found out that she is pregnant and she fears 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 200
1 in 2,000
1 in 20,000
1 in 20

QuestionID: CE 2.3.15
Page-Reference: 74

Answer: 1 in 200

Section 3 Study Plan

1.0 - Remember the Facts

1.0.1. One in ____ children are born with a chromosomal disorder.

20
200
2,000
20,000

QuestionID: Pre 2.3.1.1
Page-Reference: 74

Answer: 200

1.0.2. Which of the following is a correlating factor with Down syndrome?

Maternal exposure to radiation
A family's socioeconomic status
The mother's age
The father's sperm count

QuestionID: Pre 2.3.1.2
Page-Reference: 75

Answer: The mother's age

1.0.3. Drugs that are used for infertility have been shown to increase the likelihood of _____.

blood clots
diabetes
near sightedness
ear infections

QuestionID: Pre 2.3.1.3
Page-Reference: 79

Answer: blood clots

1.0.4. Infertility is defined as _____.

low sperm count
the presence of endometriosis
the inability to conceive after trying for a year
low desire to conceive

QuestionID: Pre 2.3.1.4
Page-Reference: 78

Answer: the inability to conceive after trying for a year

1.0.5. During meiosis, which of the following best describes a chromosome's failure to divide properly resulting in a person having 45 or 47 chromosomes?

Chromosomal disorder
Genetic misprinting
Mitosis air
Gene displacement

QuestionID: Post 2.3.1.1
Page-Reference: 74

Answer: Chromosomal disorder

1.0.6. According to the text, ____ is the most common cause of infertility in women.

alcohol
stress
inability to ovulate
smoking

QuestionID: Post 2.3.1.3
Page-Reference: 78

Answer: inability to ovulate

1.0.7. If a woman cannot ovulate properly, which of the following is the most common approach to her infertility?

Fertility drugs
Herbal therapy
Stress management and reduction
Eliminating nutritional deficiencies

QuestionID: Post 2.3.1.4
Page-Reference: 79

Answer: Fertility drugs

1.0.8. A common belief in many cultures throughout the world is that infertility _____.

is a failure of the man.
is a failure of the woman.
is the product of eating hormonally imbalanced foods.
is caused because the couple doesn't want it badly enough.

QuestionID: Post 2.3.1.6
Page-Reference: 81

Answer: is a failure of the woman.

1.0.9. In vitro fertilization has steadily increased its success rate throughout the years. For a woman under the age of 35 her success percentage for this technique would be which of the following?

55%
75%
35%
12%

QuestionID: Post 2.3.1.7
Page-Reference: 79

Answer: 35%

2.0 - Understand the Concepts

2.0.1. The ____ theory proposed that conception occurs when both the male and female emit their "seeds" during intercourse.

mutual orgasm
animal
ovist
semence

QuestionID: Pre 2.3.2.5
Page-Reference: 80

Answer: semence

2.0.2. The cheapest, easiest, and safest way for physicians to monitor fetal development is by performing which of the following?

Ultrasound
Amniocentesis
Spinal tap
Genetic counseling

QuestionID: Pre 2.3.2.6
Page-Reference: 76

Answer: Ultrasound

2.0.3. Down syndrome is sometimes referred to as trisomy-21 because individuals who have 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
have 21 genes on the 3rd pair of chromosomes

QuestionID: Pre 2.3.2.7
Page-Reference: 75

Answer: have a third chromosome on the 21st pair

2.0.4. Individuals with Down syndrome have and extra chromosome on the _____ pair.

10th
26th
21st
18th

QuestionID: Post 2.3.2.2
Page-Reference: 75

Answer: 21st

2.0.5. In regards to pregnancy and infertility, why does it take a male who is 40 longer than a male who is 25 to impregnate his partner?

Decrease in the quantity and quality of sperm
Lack of libido
Endometriosis
Partner's fertility

QuestionID: Post 2.3.2.5
Page-Reference: 77-78

Answer: Decrease in the quantity and quality of sperm

3.0 - Apply What You Know and Analyze It

3.0.1. While working in a village in Cameroon you notice that a young wife is consulting shamans and taking herbal remedies in efforts to help her become pregnant. This has been going on for over a year. You become concerned because of which of the most likely reason?

You are afraid that she may be malnourished and/or have a sexually transmitted infection.
You are worried about the long term effects of the homeopathic medicines she is taking.
You are actually not concerned at all as her infertility marks her as a future shaman.
You are fearful that she will have to be sent to a place with infertility treatments which will ostracize her from the community.

QuestionID: Pre 2.3.3.8
Page-Reference: 80

Answer: You are afraid that she may be malnourished and/or have a sexually transmitted infection.

3.0.2. Which of the following couples is most suited for genetic counseling? Merriam and Samir who are in their early 40s and have a history of miscarriages and infertility. JJ and Jennifer who are in their early 30s and have just completed an unsuccessful round of artificial insemination. 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. Ngyuen and Pham who are in their early 30s but both have a history of diabetes.

Merriam and Samir
JJ and Jennifer
Stephen and Kerry
Ngyuen and Pham

QuestionID: Pre 2.3.3.9
Page-Reference: 77

Answer: Merriam and Samir

3.0.3. In speaking with a friend, she tells you that she is on a fertility drug and is excited to have twins. Which of the following is the most appropriate way to respond, based on what you have learned from the text?

Fertility drugs increase the rate of multiple births by increasing the probability of releasing more than one ovum, which might lead to fraternal twins. But there are no guarantees.

The use of fertility drugs is in no way related to giving birth to twins.

Having twins is unpredictable, and modern medicine has not been able to alter the process in any way.

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

QuestionID: Pre 2.3.3.10
Page-Reference: 79

Answer: Fertility drugs increase the rate of multiple births by increasing the probability of releasing more than one ovum, which might lead to fraternal twins. But there are no guarantees.

3.0.4. You have a couple with whom you are friends, and they are trying to conceive their first child. The wife is over 40 years old and they are concerned that they may have a child with Down syndrome. Which of the following would be most beneficial for your friends?

An ultrasound and genetic counseling

An amniocentesis and PET scan

An amniocentesis and ultrasound

A chorinic villus sampling and fMRI

QuestionID: Post 2.3.3.8
Page-Reference: 76-77

Answer: An ultrasound and genetic counseling

3.0.5. Your friend has started taking fertility drugs in hopes to get pregnant. It has been one month and she hasn't gotten pregnant yet. In efforts to bolster her spirits you remember something you read from this text that may help her. What is it you say?

More than half the women who take fertility drugs become pregnant in 6 months, so stay patient.

Fertility drugs are a great way to diet as they increase your metabolism.

Children conceived with fertility drugs tend to have higher IQs.

The longer it takes for fertility drugs to work, the more successful the outcome.

QuestionID: Post 2.3.3.9
Page-Reference: 79

Answer: More than half the women who take fertility drugs become pregnant in 6 months, so stay patient.

3.0.6. The following couples are attempting to conceive a child. Based on your understanding of the text, which of the following couples would be the most appropriate candidate for genetic counseling?

Jennifer and Jess who are in their early 30s but both have a history of diabetes. Vicky and Steven who are in their early 40s and have a history of miscarriages and infertility. Lashandra and Lamar who are in their early 20s and have been trying to become pregnant but have been unsuccessful for the last two months. Avery and Miley who are in their early 30s and have just completed an unsuccessful round of artificial insemination.

Vicky and Steven
Lashandra and Lamar
Avery and Miley
Jennifer and Jess

QuestionID: Post 2.3.3.10
Page-Reference: 77

Answer: Vicky and Steven

4.0 - Section 3 Formative Assessment

4.0.1. Jessica's son Aleks was born with _____. He has a short, stocky build, an unusually flat face, and an extra fold of skin over his eyelids. Aleks is an exceptionally loving and happy child, and Jessica encourages and supports him in everything he does to foster a healthy developmental environment.

spina bifida
fragile x syndrome
fetal alcohol spectrum disorder
Down syndrome

QuestionID: FA_Apply_q1
Page-Reference: 75

Answer: Down syndrome

4.0.2. It's 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?

potassium
calcium
vitamin D
folic acid

QuestionID: FA_Apply_q2
Page-Reference: 69

Answer: folic acid

4.0.3. Todd and Laura have decided they are ready to have a baby, but before they start trying, they want to consult a(n) _____. Genetic conditions run in both Todd's and Laura's family, and they want to identify the possible risks of passing one of these conditions on to their child.

genetician
gynecologist
obstetrician
genetic counselor

Difficulty:
QuestionID: FA_Apply_q3
Page- 77
Reference:
Topic:
Skill:
Objective:

Answer: genetic counselor

4.0.4. 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
in vitro fertilization
fertility drugs
artificial insemination

QuestionID: FA_Apply_q4
Page- 78
Reference:

Answer: artificial insemination

4.0.5. Which part of the world do population experts call "the infertility belt"?

South America
Northern Europe
East Asia
Central Africa

QuestionID: FA_Analyze_q1
Page- 80
Reference:

Answer: Central Africa

Video Guide Questions

Short Answer Questions

1. What are your thoughts on genetic counseling after viewing this clip? Did you have any thoughts or opinions on genetic counseling prior to viewing the clip? If so, did viewing this clip change your opinion?
Answer: Answers will vary.

2. Would you/Did you seek genetic counseling during your pregnancy? Why or why not? Would you recommend it to others?
Answer: Answers will vary.

3. The professional interviewed in this clip lists several reasons why individuals might consider genetic counseling. List and describe at least three of these reasons.
Answer: Answers will vary, but should include at least 3 of the following: Genetic counselors can provide information about a diagnosis to help individuals better understand it. They can provide testing to help in the diagnosis of a child. Genetic counseling can help diagnose an adult onset disorder, or conduct prenatal testing. Individuals carry approximately 5-8 lethal recessive genes, and genetic counseling can help individuals better understand through testing and physical exams as well as information gathering.

Multiple Choice Questions

1. How many lethal recessive genes would a typical person carry?
   a. 0-1
   b. 5-8
   c. 25-50
   d. 100-200

Answer: B

2. According to the genetic counselor interviewed in this video segment, about how many human genes are there?
   a. 20,000
   b. 30,000
   c. 45,000
   d. 90,000

Answer: B

3. Who generally has the right to decide the course of treatment, should a genetic condition be diagnosed prenatally?
   a. the doctor
   b. the genetic counselor
   c. the family
   d. It depends on the severity of the condition and the cause of the condition.

Answer: C