

CHAPTER 2: BIOLOGICAL BEGINNINGS

Multiple Choice Questions

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

- a. domain-specific
- b. maladjusted
- c. non-operational
- d. general purpose devices

Answer: a

Difficulty Level: Easy

Blooms: Remember

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2. The food-scarce environment of our ancestors likely led to humans' propensity to gorge when food is available and to crave high-caloric foods—a trait that might lead to an epidemic of obesity when food is plentiful. This illustrates how:

- a. socialization influences the development of behavior and cognitive skills in human beings.
- b. evolved mechanisms are not always adaptive in contemporary society.
- c. organisms pass on characteristics they had acquired during their lifetime to their offspring.
- d. the benefits of evolutionary selection decrease with age.

Answer: b

Difficulty Level: Medium

Blooms: Understand

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3. _____, the units of hereditary information, are short segments of DNA. They direct cells to reproduce themselves and to assemble proteins.

- a. Genes
- b. Chromosomes
- c. RNA
- d. Ribosomes

Answer: a

Difficulty Level: Easy

Blooms: Remember

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4. The nucleus of each human cell contains _____, which are threadlike structures made up of deoxyribonucleic acid (DNA).

- a. mitochondria
- b. ribosomes
- c. chromosomes
- d. mesosomes

Answer: c

Difficulty Level: Easy
Blooms: Remember
Page(s): 37

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

- a. Genes
- b. Proteins
- c. Ribosomes
- d. DNA

Answer: b

Difficulty Level: Easy
Blooms: Remember
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6. Which of the following statements about the activity of genes is true?

- a. Genes are not collaborative.
- b. A single gene codes for a single, specific protein.
- c. Genetic expression is unaffected by environmental factors.
- d. Events inside of the cell can excite or inhibit genetic expression.

Answer: d

Difficulty Level: Medium
Blooms: Understand
Page(s): 38

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

- a. Fertilization
- b. Osmosis
- c. Meiosis
- d. Mitosis

Answer: a

Difficulty Level: Easy
Blooms: Remember
Page(s): 38

8. During the process of _____, the cell's nucleus—including the chromosomes—duplicates itself and the cell divides resulting in the formation of two cells.

- a. meiosis
- b. osmosis
- c. fertilization
- d. mitosis

Answer: d

Difficulty Level: Easy
Blooms: Remember
Page(s): 38

9. Which of the following is true of mitosis in humans?

- a. Mitosis is the cellular reproduction occurs in the sperm and egg cells.
- b. Mitosis results in the formation of four new cells.
- c. Mitosis results in the formation of new cells with 23 pairs of chromosomes.
- d. Mitosis results in the formation of three new cells.

Answer: c

Difficulty Level: Medium

Blooms: Understand

Page(s): 38

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

- a. 12
- b. 23
- c. 6
- d. 48

Answer: a

Difficulty Level: Hard

Blooms: Apply

Page(s): 38

11. During _____, a cell of the testes in men or ovaries in women duplicates its chromosomes and then divides twice, thus forming four cells, each of which has only half the genetic material of the parent cell.

- a. meiosis
- b. mitosis
- c. osmosis
- d. fertilization

Answer: a

Difficulty Level: Easy

Blooms: Remember

Page(s): 38

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

- a. 46 paired
- b. 23 unpaired
- c. 23 paired
- d. 46 unpaired

Answer: b

Difficulty Level: Easy

Blooms: Remember

Page(s): 38

13. During fertilization, an egg and a sperm fuse to create a single cell called a _____.

- a. blastocyst
- b. fetus
- c. gamete

d. zygote

Answer: d

Difficulty Level: Easy

Blooms: Remember

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14. A mistake by the cellular machinery, or damage from an environmental agent such as radiation, may produce a _____, which is a permanently altered segment of DNA.

a. susceptibility gene

b. vulnerability gene

c. longevity gene

d. mutated gene

Answer: d

Difficulty Level: Easy

Blooms: Remember

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

a. Susceptibility

b. Longevity

c. Vulnerability

d. Mutated

Answer: a

Difficulty Level: Easy

Blooms: Remember

Page(s): 39

16. Ethel is 50-years-old but appears much more aged in appearance. Most of Ethel's relatives don't live past the age of 60. Which of the following genes are responsible for the accelerated aging that is observed in Ethel and her family members?

a. Susceptibility genes

b. Longevity genes

c. Vulnerability genes

d. Mutated genes

Answer: a

Difficulty Level: Hard

Blooms: Apply

Page(s): 39

17. _____ genes are those that make the individual less vulnerable to certain diseases and be more likely to live to an older age.

a. Susceptibility

b. Longevity

c. Vulnerability

d. Mutated

Answer: b
Difficulty Level: Easy
Blooms: Remember
Page(s): 39

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

Answer: b
Difficulty Level: Hard
Blooms: Apply
Page(s): 39

19. Emma and Anna are identical twins who were adopted by different families a few weeks after birth. Although genetically identical, they grew up with different physical and psychological characteristics. For example, though both inherited a tendency to grow large, Anna was slim and athletic due to the active lifestyle practiced in her adoptive family. This variability can be explained by how:
- a. each zygote is unique.
 - b. longevity genes can make an individual less vulnerable to certain diseases.
 - c. for each genotype, a range of phenotypes can be expressed .
 - d. mutated genes can be a source of genetic variability.

Answer: c
Difficulty Level: Hard
Blooms: Apply
Page(s): 39-40

20. _____ is the way an individual's genotype is expressed in observable and measurable characteristics.
- a. RNA
 - b. DNA
 - c. Phenotype
 - d. Stereotype

Answer: c
Difficulty Level: Easy
Blooms: Remember
Page(s): 39

21. Marly describes her friend, Gina, as having blonde hair, green eyes, and fair skin with freckles. Marly has described Gina's _____.
- a. genotype
 - b. genetic imprint
 - c. phenotype

d. X-linked inheritance

Answer: c

Difficulty Level: Medium

Blooms: Apply

Page (s): 39

22. In some cases, one gene of a pair always exerts its effects, overriding the potential influence of the other gene. This is the _____ principle.

a. sex-linked genes

b. dominant-recessive genes

c. genetic imprinting

d. polygenic inheritance

Answer: b

Difficulty Level: Easy

Blooms: Remember

Page(s): 40

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

a. black eyes

b. blue eyes

c. grey eyes

d. brown eyes

Answer: d

Difficulty Level: Hard

Blooms: Apply

Page(s): 40

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

a. dominant gene

b. recessive gene

c. susceptible gene

d. longevity gene

Answer: a

Difficulty Level: Hard

Blooms: Apply

Page(s): 40

25. Carrie's parents both have brown hair. However, Carrie gets genes for blond hair from both parents, and as result she has blonde hair. This indicates that the gene for blonde hair is a(n):

a. recessive gene.

b. dominant gene.

c. susceptibility gene.

d. longevity gene.

Answer: a

Difficulty Level: Hard

Blooms: Apply

Page(s): 40

26. A recessive gene exerts its influence only if:

a. both genes in a pair are recessive.

b. it is the stronger gene.

c. the environment is right.

d. the dominant gene is also present in the pair.

Answer: a

Difficulty Level: Easy

Blooms: Remember

Page(s): 40

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

a. Down syndrome

b. Hemophilia

c. Huntington's disease

d. Sickle-cell anemia

Answer: a

Difficulty Level: Medium

Blooms: Understand

Page(s): 41

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

a. fragile X syndrome

b. Klinefelter disease

c. Down syndrome

d. Tay Sach's disease

Answer: c

Difficulty Level: Medium

Blooms: Apply

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29. Which of the following is true of Down syndrome?

a. It primarily occurs in African American children.

b. It occurs when genetic imprinting goes awry.

c. Its symptoms include retardation of motor and mental abilities.

d. It is caused by the presence of an extra copy of chromosome Y.

Answer: c

Difficulty Level: Medium

Blooms: Understand

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30. Which of the following women has the highest probability of giving birth to a child with Down syndrome?

- a. Sarah, a 21-year-old Asian woman
- b. Jane, a 41-year-old Euro-American woman
- c. Ella, a 27-year-old African American woman
- d. Destiny, a 38-year-old African American woman

Answer: b

Difficulty Level: Hard

Blooms: Apply

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31. Klinefelter syndrome affects:

- a. only males.
- b. only females.
- c. both males and females equally.
- d. more females than males.

Answer: a

Difficulty Level: Easy

Blooms: Remember

Page(s): 42

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

- a. Fragile X syndrome.
- b. XYY syndrome.
- c. Turner syndrome.
- d. Tay-Sach's disease.

Answer: a

Difficulty Level: Medium

Blooms: Apply

Page(s): 42

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

- a. Fragile X syndrome
- b. The XYY syndrome
- c. Klinefelter syndrome
- d. Turner syndrome

Answer: d

Difficulty Level: Medium

Blooms: Apply

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34. Turner syndrome occurs exclusively in:

- a. females.
- b. males.
- c. people of Middle Eastern descent.
- d. people of Jewish descent.

Answer: a

Difficulty Level: Easy

Blooms: Remember

Page(s): 42

35. Which of the following is true of phenylketonuria?

- a. It results from a recessive gene.
- b. It is a chromosomal disorder.
- c. It results in death by 5 years of age.
- d. It is caused by an accumulation of lipids in the nervous system.

Answer: a

Difficulty Level: Medium

Blooms: Understand

Page(s): 42

36. Which of the following is a gene-linked abnormality?

- a. Down syndrome.
- b. Phenylketonuria (PKU).
- c. Turner syndrome
- d. Klinefelter syndrome

Answer: b

Difficulty Level: Medium

Blooms: Understand

Page(s): 42

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

- a. Tay-Sach's disease
- b. sickle-cell anemia
- c. leukemia
- d. Huntington's disease

Answer: b

Difficulty Level: Medium

Blooms: Apply

Page(s): 43

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

- a. Insulin
- b. Blood transfusions/injections
- c. Physical therapy
- d. Corrective surgery at birth

Answer: b

Difficulty Level: Medium

Blooms: Apply

Page(s): 43

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

- a. cystic fibrosis
- b. Huntington's disease
- c. PKU
- d. Tay-Sachs disease

Answer: a

Difficulty Level: Medium

Blooms: Apply

Page(s): 43

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

- a. spina bifida
- b. Tay-Sachs disease
- c. PKU
- d. Huntington's disease

Answer: a

Difficulty Level: Medium

Blooms: Apply

Page(s): 43

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

- a. spina bifida.
- b. hemophilia.
- c. PKU.
- d. diabetes.

Answer: d

Difficulty Level: Medium

Blooms: Apply

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42. Joshua, 2, has been diagnosed with _____, a blood disorder that limits the body's oxygen supply and can cause joint swelling and heart and kidney failure. This genetic disorder can be treated through penicillin, pain medication, antibiotics and blood transfusions, and his doctor has indicated that a study named Baby HUG may offer a better drug in the future.

- a. spina bifida
- b. Tay-Sachs disease

- c. sickle-cell anemia
- d. Huntington's disease

Answer: c

Difficulty Level: Medium

Blooms: Apply

Page(s): 43

43. Benny has been diagnosed with a gene-linked abnormality characterized by deceleration of mental and physical development caused by an accumulation of lipids in the nervous system. He has been put on medication and a special diet, but his family has been told that he will probably not live beyond the age of five. Benny is suffering from:

- a. spina bifida.
- b. Tay-Sachs disease.
- c. phenylketonuria.
- d. Huntington's disease.

Answer: b

Difficulty Level: Medium

Blooms: Apply

Page (s): 43

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

- a. Behavior influence
- b. Behavior therapy
- c. Behavior genetics
- d. Behavior development

Answer: c

Difficulty Level: Easy

Blooms: Remember

Page(s): 44

45. Rachel loves to read books and also encourages her daughter to read by regularly taking her to the local library and buying her lots of books. Rachel's daughter is now an avid reader. This reflects a _____ correlation.

- a. passive genotype-environment
- b. evocative genotype-environment
- c. influential genotype-environment
- d. active (niche-picking) genotype-environment

Answer: a

Difficulty Level: Medium

Blooms: Apply

Page(s): 45

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

she was old enough, her parents made her join the little league team at her school and she performed well. This is an example of a(n):

- a. evocative genotype–environment correlation.
- b. active (niche-picking) genotype–environment correlation.
- c. passive genotype–environment correlation.
- d. gene-gene correlation.

Answer: c

Difficulty Level: Medium

Blooms: Apply

Page(s): 45

47. _____ correlations occur because a child’s genetically influenced characteristics elicit certain types of environments.

- a. Passive genotype–environment
- b. Evocative genotype–environment
- c. Influential genotype–environment
- d. Active (niche-picking) genotype–environment

Answer: b

Difficulty Level: Easy

Blooms: Remember

Page(s): 45

48. Charlie is a cooperative, attentive child and is a favorite at home and school and receives positive, instructive responses from adults. This is indicative of a(n):

- a. passive genotype–environment correlation.
- b. evocative genotype–environment correlation.
- c. influential genotype–environment correlation.
- d. active (niche-picking) genotype–environment correlation.

Answer: b

Difficulty Level: Medium

Blooms: Apply

Page(s): 45

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

- a. passive genotype–environment correlation
- b. active (niche-picking) genotype–environment correlation
- c. gene x environment interaction
- d. evocative genotype–environment correlation

Answer: d

Difficulty Level: Medium

Blooms: Apply

Page(s): 45

50. Brad is an athletic boy who is on every sport team in school. Stephen loves math and is part of his school's math club. These instances reflect _____ correlations that occur when children seek out environments that they find compatible and stimulating.

- a. passive genotype–environment
- b. evocative genotype–environment
- c. active (niche-picking) genotype–environment
- d. influential genotype–environment

Answer: c

Difficulty Level: Medium

Blooms: Apply

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51. Which of the following is an example of a passive genotype–environment correlation?

- a. Uncooperative, distractible children receive more unpleasant and disciplinary action from parents and teachers.
- b. Outgoing children tend to seek out social contexts in which to interact with people.
- c. Parents who have a genetic predisposition to be musically inclined encourage their children to learn how to play a music instrument.
- d. Infants who smile more receive more attention from individuals in their social environment.

Answer: c

Difficulty Level: Medium

Blooms: Understand

Page(s): 45

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

- a. epigenetic
- b. biosocial
- c. sociogenetic
- d. congenital

Answer: a

Difficulty Level: Easy

Blooms: Remember

Page(s): 46

53. _____ is the interaction of a specific measured variation in the DNA and a specific measured aspect of the environment.

- a. Heredity–environment correlation
- b. Evocative genotype–environment correlation
- c. Gene $\times$ environment ($G \times E$) interaction
- d. Passive genotype–environment interaction

Answer: c

Difficulty Level: Easy

Blooms: Remember

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54. Prenatal development can be divided into three periods, which of the following is in the correct order from conception to birth?

- a. Fertile; embryonic; postterm
- b. Preterm; germinal; postterm
- c. Gestational; germinal; postnatal
- d. Germinal; embryonic; fetal

Answer: d

Difficulty Level: Easy

Blooms: Remember

Page(s): 48

55. Rachel is in the first period of prenatal development. Even though she doesn't know it, she is in the _____ stage of prenatal development.

- a. fetal period
- b. embryonic period
- c. implantation period
- d. germinal period

Answer: d

Difficulty Level: Medium

Blooms: Apply

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56. The creation of the fertilized egg takes place in the _____ period of prenatal development.

- a. fetal
- b. embryonic
- c. implantation
- d. germinal

Answer: d

Difficulty Level: Easy

Blooms: Remember

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57. _____ refers to the attachment of the blastocyst to the uterine wall.

- a. Implantation
- b. Conception
- c. Fertilization
- d. Involution

Answer: a

Difficulty Level: Easy

Blooms: Remember

Page(s): 48

58. The _____ is the outer layer of cells of the blastocyst that later provides nutrition and support for the embryo.

- a. ectoderm
- b. perineum

- c. cytotocyst
- d. trophoblast

Answer: d

Difficulty Level: Easy

Blooms: Remember

Page(s): 48

59. Which of the following is a feature of the embryonic period of prenatal development?

- a. The creation of the fertilized egg
- b. Formation of the blastocyst
- c. The attachment of the zygote to the uterine wall
- d. Formation of support systems for cells

Answer: d

Difficulty Level: Medium

Blooms: Understand

Page(s): 48

60. Wren is 4 weeks pregnant. Which of the following stages of prenatal development is Wren currently in?

- a. Embryonic
- b. Fetal
- c. Placental
- d. Germinal

Answer: a

Difficulty Level: Medium

Blooms: Apply

Page(s): 48

61. The _____ consists of three layers of cells: the endoderm, the mesoderm, and the ectoderm.

- a. blastocyst
- b. fetus
- c. embryo
- d. trophoblast

Answer: c

Difficulty Level: Easy

Blooms: Remember

Page(s): 49

62. The inner layer of cells of the embryo is referred to as the:

- a. mesoderm.
- b. epidermis.
- c. endometrium.
- d. endoderm.

Answer: d

Difficulty Level: Easy

Blooms: Remember

Page(s): 49

63. The embryo's _____ develops into the digestive and respiratory systems.

- a. ectoderm
- b. endoderm
- c. trophoblast
- d. mesoderm

Answer: b

Difficulty Level: Easy

Blooms: Remember

Page(s): 49

64. The outermost layer of the embryo is called the _____.

- a. mesoderm
- b. cytoderm
- c. endoderm
- d. ectoderm

Answer: d

Difficulty Level: Easy

Blooms: Remember

Page(s): 49

65. The middle layer of the embryo is called the _____.

- a. mesoderm
- b. cytoderm
- c. endoderm
- d. ectoderm

Answer: a

Difficulty Level: Easy

Blooms: Remember

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66. The _____ is a layer of the embryo, which will become the circulatory system, bones, muscles, excretory system, and reproductive system.

- a. endoderm
- b. ectoderm
- c. mesoderm
- d. epidermis

Answer: c

Difficulty Level: Easy

Blooms: Remember

Page(s): 49

67. The _____ is a layer of the embryo, which will become the nervous system and brain, sensory receptors, and skin parts.

- a. mesoderm

- b. ectoderm
- c. trophoblast
- d. endoderm

Answer: b

Difficulty Level: Easy

Blooms: Remember

Page(s): 49

68. A group of tissues in which small blood vessels from the mother and offspring intertwine but do not connect is the _____.

- a. amnion
- b. placenta
- c. embryo
- d. umbilical cord

Answer: b

Difficulty Level: Easy

Blooms: Remember

Page(s): 49

69. The structure that contains two arteries and one vein, and connects the developing embryo to the mother's body, is called the _____.

- a. amnion
- b. placenta
- c. embryo
- d. umbilical cord

Answer: d

Difficulty Level: Easy

Blooms: Remember

Page(s): 49

70. The _____ prevents large molecules like red blood cells and harmful substances, such as most bacteria and maternal wastes, from entering the fetus.

- a. umbilical cord
- b. placental wall
- c. amniotic sheath
- d. ectoderm

Answer: b

Difficulty Level: Easy

Blooms: Remember

Page(s): 49

71. The _____ is like a bag or an envelope and contains a clear fluid in which the developing embryo floats.

- a. placenta
- b. umbilical cord
- c. amnion

d. cervix

Answer: c

Difficulty Level: Easy

Blooms: Remember

Page(s): 49

72. The _____ provides an environment that is temperature and humidity controlled, as well as shockproof.

a. placental wall

b. pericardial fluid

c. umbilical cord

d. amniotic fluid

Answer: d

Difficulty Level: Easy

Blooms: Remember

Page(s): 49

73. Which of the following is a small molecule that would be able to pass through the placental wall?

a. Red blood cells

b. Carbon dioxide

c. Hormones

d. Maternal wastes

Answer: b

Difficulty Level: Hard

Blooms: Understand

Page(s): 49

74. Which of the following substances is a large molecule that would NOT be able to pass through the placental wall?

a. Salt

b. Water

c. Hormones

d. Carbon dioxide

Answer: c

Difficulty Level: Hard

Blooms: Understand

Page(s): 49

75. Petra is at the fourth month of her pregnancy. Her unborn child is now referred to as a _____.

a. gamete

b. zygote

c. fetus

d. embryo

Answer: c

Difficulty Level: Medium

Blooms: Apply
Page(s): 49

76. The fetus that Calista is carrying has reached the age of viability, meaning that it has a chance of surviving outside of the womb. Therefore, it can be inferred that Calista is _____ weeks pregnant.

- a. 4 to 8
- b. 16 to 18
- c. 24 to 25
- d. 10 to 12

Answer: c
Difficulty Level: Hard
Blooms: Apply
Page(s): 50

77. Which of the following organs or systems develop FIRST in prenatal development?

- a. Visual system
- b. Spinal cord
- c. Urogenital system
- d. Liver

Answer: b
Difficulty Level: Hard
Blooms: Understand
Page(s): 50

78. By the time babies are born, they have approximately _____ neurons.

- a. 10 million
- b. 200 million
- c. 1 billion
- d. 100 billion

Answer: d
Difficulty Level: Hard
Blooms: Remember
Page(s): 51

79. A strategy that can help to prevent neural tube defects is for women to take:

- a. food rich in vitamin C.
- b. adequate amounts of the B vitamin folic acid.
- c. medication for diabetes.
- d. food that is not contaminated with mercury.

Answer: b
Difficulty Level: Medium
Blooms: Remember
Page(s): 51

80. Neuronal migration occurs at approximately _____ weeks after conception.

- a. 1 to 8
- b. 3 to 12
- c. 4 to 15
- d. 6 to 24

Answer: d

Difficulty Level: Hard

Blooms: Remember

Page(s): 51

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

- a. chorionic villus sampling
- b. triple screen
- c. amniocentesis
- d. ultrasound sonography

Answer: d

Difficulty Level: Medium

Blooms: Apply

Page(s): 51-52

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

- a. Chorionic villus sampling
- b. Amniocentesis
- c. NIPD
- d. Triple screen

Answer: a

Difficulty Level: Medium

Blooms: Apply

Page(s): 52

83. The current maternal blood-screening test is called the triple screen because:

- a. it is performed three times.
- b. it diagnoses three diseases.
- c. it measures three substances in the mother's blood.
- d. it is the third prenatal diagnostic test performed in a pregnancy.

Answer: c

Difficulty Level: Easy

Blooms: Remember

Page(s): 52

84. _____ mainly focuses on the isolation and examination of fetal cells circulating in the mother's blood and analysis of cell-free fetal DNA in maternal plasma.

- a. Amniocentesis
- b. Chorionic villus sampling (CVS)
- c. Noninvasive prenatal diagnosis (NIPD)

d. Triple screen

Answer: c

Difficulty Level: Easy

Blooms: Remember

Page(s): 52-53

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

a. Abnormal ova

b. Blocked fallopian tubes

c. Eggs lack motility

d. Disease of the uterus

Answer: c

Difficulty Level: Medium

Blooms: Understand

Page(s): 53

86. David and Kelly are seeking help for infertility. Under their physician's guidance, they decide to undergo a procedure in which Kelly's eggs are combined in a laboratory dish with her husband's sperms. What is this procedure called?

a. Gamete transfer

b. Intracytoplasmic sperm injection

c. Zygote intrafallopian transfer

d. In vitro fertilization

Answer: d

Difficulty Level: Medium

Blooms: Apply

Page(s): 53

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

a. High birth weight in babies conceived through such treatments.

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

c. Negative psychological impact on children conceived through such treatments.

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

Answer: b

Difficulty Level: Medium

Blooms: Apply

Page(s): 53

88. A teratogen is any agent that can cause:

a. organogenesis.

b. birth defects.

c. fetal movement.

d. maternal back pain.

Answer: b

Difficulty Level: Easy
Blooms: Remember
Page(s): 54

89. Which of the following statements is TRUE regarding the impact of teratogens?
- a. Very few fetuses are exposed to teratogens, so it is easy to determine which teratogen causes which defect.
 - b. Fetuses are safe from the effects of teratogens during the first trimester.
 - c. Teratogens cause anatomical defects only after organogenesis is complete.
 - d. Exposure to teratogens does more damage when it occurs at some points in development than at others.

Answer: d
Difficulty Level: Medium
Blooms: Understand
Page(s): 54

90. During which period of development is the unborn baby MOST at risk of developing a structural defect due to the effects of a teratogen?
- a. At conception
 - b. During the germinal period
 - c. During the embryonic period
 - d. During the fetal period

Answer: c
Difficulty Level: Medium
Blooms: Understand
Page(s): 54

91. _____ act on the nervous system to alter states of consciousness, modify perceptions, and change moods.
- a. Antiemetics
 - b. Biofeedback therapies
 - c. Antihypertensives
 - d. Psychoactive drugs

Answer: d
Difficulty Level: Easy
Blooms: Remember
Page(s): 54

92. Which of the following is recommended by the U.S. Food and Drug Administration?
- a. Pregnant women should consume no caffeine or consume it only sparingly.
 - b. Pregnant women can consume as much caffeine as they want in chocolate but not in coffee.
 - c. Pregnant women can safely drink three cups of coffee each day after the third month of pregnancy.
 - d. Pregnant women should avoid caffeine in soda or tea but can consume caffeine safely through coffee.

Answer: a

Difficulty Level: Medium
Blooms: Understand
Page(s): 54

93. Which of the following is the U.S. Surgeon General's recommendation regarding alcohol intake during pregnancy?
- a. It is wise to consume alcohol in moderation at the time of conception.
 - b. One or two servings of beer or wine a few days a week can have positive effects on the fetus.
 - c. No alcohol should be consumed during pregnancy.
 - d. One or two servings of hard liquor a few days a week can have positive effects on the fetus.

Answer: c
Difficulty Level: Easy
Blooms: Remember
Page(s): 55

94. Alicia is pregnant and a heavy smoker. Which of the following is her baby MORE likely to have than is the baby of a nonsmoker?
- a. Facial and limb deformities
 - b. Sudden infant death syndrome
 - c. Cleft palate
 - d. Tremors and increased general irritability

Answer: b
Difficulty Level: Hard
Blooms: Apply
Page(s): 55

95. Which of the following statements about cocaine use during pregnancy is TRUE?
- a. Cocaine quickly crosses the placenta to reach the fetus.
 - b. Cocaine is broken down in the mother's bloodstream before it can reach the fetus.
 - c. Cocaine molecules are too large to pass through the placenta.
 - d. Cocaine exposure during prenatal development has no negative effects on the fetus.

Answer: a
Difficulty Level: Medium
Blooms: Understand
Page(s): 55

96. Which of the following is true about the effects of cocaine use by pregnant women?
- a. Cocaine exposure during prenatal development is associated with increased birth weight.
 - b. Prenatal cocaine exposure has been linked to higher arousal.
 - c. Cocaine exposure during prenatal development is associated with reduced length and head circumference.
 - d. Children born to cocaine users exhibit higher quality of reflexes at 1 month of age.

Answer: c
Difficulty Level: Medium
Blooms: Understand
Page(s): 55

97. Which of the following statements about the effects of marijuana exposure on offspring is true?

- a. Research has concluded that marijuana use by pregnant women is associated with memory deficits in their offspring.
- b. Research has indicated that mothers who use marijuana while pregnant have a higher risk of having a child who develops depression by age 10.
- c. Research has shown that mothers who use marijuana while pregnant risk their offspring using marijuana by age 14.
- d. Research has concluded that controlled doses of marijuana are associated with increased memory in the developing offspring.

Answer: c

Difficulty Level: Medium

Blooms: Understand

Page(s): 56

98. The most common treatment for heroin addiction, methadone, is associated with:

- a. very low birth weight in newborns.
- b. very severe withdrawal symptoms in newborns.
- c. lower intelligence in children.
- d. lower quality of reflexes at 1 month of age.

Answer: b

Difficulty Level: Medium

Blooms: Understand

Page(s): 56

99. Jasmine and her fetus are Rh incompatible. This means that:

- a. the fetus will need a blood transfusion immediately after birth.
- b. the fetus' immune system will attack the mother's blood during the fetal stage.
- c. Jasmine has type A blood, whereas her fetus has type B blood.
- d. Jasmine may produce antibodies that will attack the fetus.

Answer: d

Difficulty Level: Hard

Blooms: Apply

Page(s): 56

100. Which of the following diseases is transmitted to the newborn during delivery through the birth canal?

- a. Diabetes
- b. West Nile Virus
- c. Rubella
- d. Genital herpes

Answer: d

Difficulty Level: Easy

Blooms: Remember

Page(s): 57

101. Sylvia is almost nine months pregnant and very close to her delivery date. The doctors have found that she has an active case of genital herpes. Which of the following is the best course of action to prevent Sylvia's baby from contracting the disease?

- a. Perform a cesarean section
- b. Terminate the pregnancy
- c. Deliver the baby through the birth canal
- d. Give the baby blood transfusions

Answer: a

Difficulty Level: Hard

Blooms: Apply

Page(s): 57

102. Which of the following maternal diseases is likely to be transmitted to the infant through breast-feeding?

- a. Rubella
- b. Syphilis
- c. Genital herpes
- d. AIDS

Answer: d

Difficulty Level: Medium

Blooms: Understand

Page(s): 57

103. Which of the following maternal diseases carries the risk of delivering very large infants, weighing 10 pounds or more?

- a. Genital herpes
- b. AIDS
- c. Gestational diabetes
- d. Syphilis

Answer: c

Difficulty Level: Medium

Blooms: Understand

Page(s): 57

104. Marlana, who just found out she is pregnant, has very poor eating habits. Her total calorie intake is very low. She eats very little protein and unbalanced amounts of vitamins and minerals. If she continues her present eating habits, which of the following is MOST likely to occur?

- a. The baby will not be affected.
- b. The baby will develop Down syndrome.
- c. The baby is more likely to be malformed.
- d. The baby is more likely to have severe withdrawal symptoms.

Answer: c

Difficulty Level: Hard

Blooms: Apply

Page(s): 57

105. Priscilla just found out she was pregnant and her doctor prescribed a B-complex vitamin that promotes normal prenatal development and reduces the risk of preterm deliveries. Which of the following is the vitamin that Priscilla's doctor has prescribed?

- a. Thiamine
- b. Riboflavin
- c. Pantothenic acid
- d. Folic acid

Answer: d

Difficulty Level: Hard

Blooms: Apply

Page(s): 58

106. What is the recommended daily dosage of folic acid for pregnant women, as issued the U.S. Department of Health and Human Services?

- a. 100 milligrams
- b. 200 micrograms
- c. 200 milligrams
- d. 400 micrograms

Answer: d

Difficulty Level: Hard

Blooms: Understand

Page(s): 58

107. Identify the age group of women who are LEAST likely to obtain prenatal care.

- a. Late twenties
- b. Early thirties
- c. Adolescence
- d. Early forties

Answer: c

Difficulty Level: Hard

Blooms: Understand

Page(s): 58

108. Which maternal age group has increased risk of low birth weight, preterm delivery, and fetal death?

- a. Eighteen years or younger
- b. Between 18 and 25 years
- c. Between 19 and 30 years
- d. Thirty-five years and older

Answer: d

Difficulty Level: Medium

Blooms: Understand

Page(s): 58

109. Julianne lost her baby early in her pregnancy. Which of the following paternal factors could have possibly led to this outcome?

- a. Her partner was overweight.
- b. Her partner was a heavy smoker, even during her pregnancy.
- c. Her partner is deficient in vitamin C.
- d. Her partner was undergoing severe emotional stress during her pregnancy.

Answer: b

Difficulty Level: Medium

Blooms: Apply

Page(s): 59

110. _____ replaces traditional 15-minute physician visits with 90-minute peer group support settings and self-examination led by a physician or certified nurse-midwife.

- a. CenteringPregnancy
- b. The use of doulas
- c. The use of professional midwives
- d. Nurse Family Partnership

Answer: a

Difficulty Level: Easy

Blooms: Remember

Page(s): 60

111. This prenatal care program consists of approximately 50 home visits from the prenatal period through two years of age.

- a. The Nurse Family Partnership
- b. CenteringPregnancy
- c. Maxx Family Life
- d. Prenatal Care Assistance Program

Answer: a

Difficulty Level: Easy

Blooms: Remember

Page(s): 60

112. The second stage of childbirth begins with the _____ and ends with the _____.

- a. emergence of the child's head; delivery of the placenta
- b. opening of the cervix; delivery of the child out of the mother
- c. emergence of the child's head; delivery of the child out of the mother
- d. opening of the cervix; delivery of the placenta

Answer: c

Difficulty Level: Easy

Blooms: Remember

Page(s): 61

113. Naveen is entering the third stage of childbirth, also known as the _____ stage.

- a. postpartum
- b. umbilical procedure

- c. afterbirth
- d. detachment

Answer: c

Difficulty Level: Medium

Blooms: Apply

Page(s): 61

114. _____ is the shortest of the three birth stages.

- a. Involution
- b. Afterbirth
- c. Implantation
- d. Waterbirth

Answer: b

Difficulty Level: Easy

Blooms: Remember

Page(s): 61

115. Which of the following is TRUE of the stages of childbirth?

- a. The first stage terminates when the baby completely emerges from the mother's body.
- b. Uterine contractions start in the final stage of the birth process.
- c. The first stage is the longest of the three birth stages.
- d. The first stage of birth is longer for a woman who is having her second or third child.

Answer: c

Difficulty Level: Medium

Blooms: Understand

Page(s): 61

116. _____ position refers to the baby's position in the uterus that causes the buttocks to be the first part to emerge from the vagina.

- a. Fetal
- b. Breech
- c. Asynclitic
- d. Standard

Answer: b

Difficulty Level: Easy

Blooms: Remember

Page(s): 63

117. Which of the following techniques is used to overcome the threat of problems related to the breech position during delivery?

- a. Massage therapy
- b. Music therapy
- c. Acupuncture
- d. Cesarean section

Answer: d

Difficulty Level: Easy

Blooms: Remember

Page(s): 63

118. Which of the following is a threat to the infant caused by the breech position?

- a. Bone malformation
- b. Down syndrome
- c. Respiratory problems
- d. Spina bifida

Answer: c

Difficulty Level: Medium

Blooms: Understand

Page(s): 63

119. Pilar is using non-medical techniques for pain management during labor; she has someone insert fine needles into specific locations of her body. She is most likely using ____.

- a. acupressure
- b. acupuncture
- c. aromatherapy
- d. allostasis

Answer: b

Difficulty Level: Medium

Blooms: Apply

Page(s): 63

120. What is the rationale for the practice of waterbirth?

- a. Water pressure reduces the strain of contractions.
- b. It creates an environment similar to that inside the amniotic sac.
- c. Getting into water speeds up the labor process.
- d. Water makes the contractions more intense.

Answer: b

Difficulty Level: Medium

Blooms: Understand

Page(s): 64

121. The Apgar Scale is a method used to assess the health of newborns. A score of 3 would indicate:

- a. that the newborn's condition is good.
- b. that there may be some developmental difficulties.
- c. an emergency because the baby's survival is in doubt.
- d. that the evaluator has not made a proper reading.

Answer: c

Difficulty Level: Medium

Blooms: Understand

Page(s): 64

122. In assessing the health of newborns, the _____ identifies high-risk infants who need resuscitation.

- a. Rogers-Randall Assessment
- b. Brazelton Neonatal Behavioral Assessment Scale
- c. Wechsler Infant Intelligence Scale
- d. Apgar Scale

Answer: d

Difficulty Level: Easy

Blooms: Remember

Page(s): 64

123. Which of the following is the Apgar Scale especially good at determining?

- a. The severity of limb deformities of the newborn
- b. Identifying the newborn's susceptibility to common postnatal complications
- c. The newborn's ability to respond to stress of delivery
- d. The newborn's lactose tolerance

Answer: c

Difficulty Level: Hard

Blooms: Understand

Page(s): 64

124. Dakota was born after 40 weeks of gestation and weighed 4 pounds. Dakota would be considered:

- a. preterm.
- b. premature.
- c. low birth weight.
- d. normal and average for babies born today.

Answer: c

Difficulty Level: Hard

Blooms: Apply

Page(s): 64

125. Malorie was born during her mother's 32nd week of pregnancy. Malorie would be termed a _____ baby.

- a. preterm
- b. premature
- c. low birth weight
- d. normal and average

Answer: a

Difficulty Level: Hard

Blooms: Apply

Page(s): 64

126. Juan-Carlos was born full term but was underweight for his gestational age. He would be considered:

- a. preterm.

- b. premature.
- c. normal.
- d. small for date.

Answer: d

Difficulty Level: Hard

Blooms: Apply

Page(s): 64

127. Sidra has a baby that was born at 27 weeks. Her baby is considered:

- a. very preterm infants.
- b. moderately preterm infants.
- c. mildly preterm infants.
- d. extremely preterm infants.

Answer: d

Difficulty Level: Medium

Blooms: Apply

Page(s): 65

128. Mariah has given birth to a baby girl. Even one month after delivery, she is experiencing very strong feelings of sadness and anxiety. She is so morose that she is having trouble coping with daily tasks. Mariah is most likely suffering from:

- a. posttraumatic stress disorder.
- b. postpartum blues.
- c. paranoid schizophrenia.
- d. postpartum depression.

Answer: d

Difficulty Level: Medium

Blooms: Apply

Page(s): 68

Identification Questions

129. Behavior that promotes an organism's survival in the natural habitat.

Answer: Adaptive behavior

Difficulty Level: Easy

Blooms: Remember

Page(s): 34

130. A psychological perspective that emphasizes the importance of adaptation, reproduction, and "survival of the fittest" in shaping human behavior.

Answer: Evolutionary psychology

Difficulty Level: Medium

Blooms: Understand

Page(s): 35

131. A complex molecule, with a double helix shape, that contains genetic information.

Answer: DNA (deoxyribonucleic acid)

Difficulty Level: Easy

Blooms: Remember

Page(s): 37

132. Short segments of DNA which are located on the chromosomes. These are considered to be the basic units of hereditary information.

Answer: Genes

Difficulty Level: Easy

Blooms: Remember

Page(s): 37

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

Answer: Meiosis

Difficulty Level: Easy

Blooms: Remember

Page(s): 38

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

Answer: Phenotype

Difficulty Level: Medium

Blooms: Apply

Page(s): 39-40

135. A chromosomal abnormality that is characterized by an extra copy of chromosome 21. A person with this disorder typically has a round face, a flattened skull, an extra fold of skin over the eyelids, a protruding tongue, short limbs, and retardation of motor and mental abilities.

Answer: Down syndrome

Difficulty Level: Easy

Blooms: Remember

Page(s): 41

136. The period of prenatal development that occurs two to eight weeks after conception. During this time, the rate of cell differentiation intensifies, support systems for the cells form, and organs appear.

Answer: Embryonic period

Difficulty Level: Easy

Blooms: Remember

Page(s): 48

137. This process, which takes place at approximately 6 to 24 weeks after conception, involves cells moving from their point of origin to their appropriate locations and creating the different levels, structures, and regions of the brain.

Answer: Neuronal migration

Difficulty Level: Easy

Blooms: Remember

Page(s): 51

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

Answer: Amniocentesis

Difficulty Level: Easy

Blooms: Remember

Page(s): 52

Short Answer Questions

139. List five gene-linked abnormalities.

Answer: Cystic fibrosis, diabetes, hemophilia, Huntington's disease, sickle-cell anemia, spina bifida, Tay-Sachs disease, and phenylketonuria (PKU) are all gene-linked abnormalities.

Difficulty Level: Easy

Blooms: Remember

Page(s): 43

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

Answer: Behavior geneticist Sandra Scarr described three ways that heredity and environment are correlated:

- 1) Passive genotype-environment correlations that occur because biological parents, who are genetically related to the child, provide a rearing environment for the child.
- 2) Evocative genotype-environment correlations that occur because a child's characteristics elicit certain types of environments.
- 3) Active (niche-picking) genotype-environment correlations that occur when children seek out environments that they find compatible and stimulating.

Difficulty Level: Easy

Blooms: Remember

Page(s): 45

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

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

Difficulty Level: Hard

Blooms: Apply

Page(s): 45

142. Define gene×environment (G×E) interaction. Give an example of a study (either your own or one from the book) that could illustrate the interaction between genes and the environment.
 Answer: Gene×environment (G×E) interaction refers to the interaction of a specific measured variation in the DNA and a specific measured aspect of the environment. In a study, adults who experienced parental loss as young children were more likely to have unresolved attachment issues as adults only when they had the short version of the 5-HTTLPR gene (Caspers & others, 2009). The long version of the serotonin transporter gene apparently provided some protection and ability to cope better with parental loss.

Difficulty Level: Medium

Blooms: Apply

Page(s): 46-47

143. List three possible causes of infertility in women and in men.

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

Difficulty Level: Easy

Blooms: Remember

Page(s): 53

144. Define and give an example of a teratogen.

Answer: A teratogen is any agent that can potentially cause a birth defect or negatively alter cognitive and behavioral outcomes. Teratogens include drugs, incompatible blood types, environmental pollutants, infectious diseases, nutritional deficiencies, maternal stress, and advanced maternal and paternal age.

Difficulty Level: Medium

Blooms: Apply

Page(s): 54

145. Describe the effect of alcohol on pregnancy.

Answer: Heavy drinking by pregnant women can be devastating to their offspring. Fetal alcohol spectrum disorders (FASD) are a cluster of abnormalities and problems that appear in the offspring of mothers who drink alcohol heavily during pregnancy. The abnormalities include facial deformities and defective limbs, face, and heart. Most children with FASD have learning problems and many are below average in intelligence with some that are mentally retarded.

Difficulty Level: Medium

Blooms: Understand

Page(s): 54

146. Teji's doctor is testing her Rh factor to determine compatibility. Based on the test results, the mother and fetus are incompatible. Give a brief description of Rh incompatibility and discuss the dangers associated with it.

Answer: Incompatibility between the mother's and father's blood type poses a risk to prenatal development. If a pregnant woman is Rh-negative and her partner is Rh-positive, the fetus may be Rh-positive. If the fetus' blood is Rh-positive and the mother's is Rh-negative, the mother's immune system may produce antibodies that will attack the fetus. This can result in any number of problems, including miscarriage or stillbirth, anemia, jaundice, heart defects, brain damage, or death soon after birth.

Difficulty Level: Hard

Blooms: Understand

Page(s): 56

147. Xiomara is considering hiring a doula to help with childbirth. What is a doula and how is they different from midwives?

Answer: Doula is a Greek word that means "a woman who helps." A doula is a caregiver who provides continuous physical, emotional, and educational support for the mother before, during, and after childbirth. Doulas remain with the parents throughout labor, assessing and responding to the mother's needs. In the United States, most doulas work as independent providers hired by the expectant parents. Doulas typically function as part of a "birthing team," serving as an adjunct to the midwife or the hospital's obstetric staff.

Difficulty Level: Medium

Blooms: Understand

Page(s): 61-62

148. Bronwyn is interested in using non-medical techniques to assist her with dealing with pain during childbirth. Based on the text and class discussion what are the two best options available to her, and why?

Answer: Some new nonmedicated techniques used in childbirth to reduce stress and pain are waterbirth, massage, acupuncture, hypnosis, and music therapy.

Difficulty Level: Medium

Blooms: Apply

Page(s): 63