

Chapter 2—Biological Foundations: Heredity, Prenatal Development, and Birth

MULTIPLE CHOICE

1. In people with sickle-cell anemia, certain red blood cells in their bodies are different from normal. What is different about these red blood cells?
- their size
 - their shape
 - their density
 - their location

ANS: B PTS: 1 DIF: Moderate REF: p. 46
OBJ: 2-1 BLM: Conceptual

2. What do we call the threadlike structures in the nucleus of a cell that contain genetic material?
- chromosomes
 - germ discs
 - ectoderms
 - phenotypes

ANS: A PTS: 1 DIF: Easy REF: p. 47
OBJ: 2-1 BLM: Factual

3. Which chromosomes are known as autosomes?
- the first 2 pairs
 - the first 10 pairs
 - the first 22 pairs
 - the first 46 pairs

ANS: C PTS: 1 DIF: Moderate REF: p. 47
OBJ: 2-1 BLM: Factual

4. Ian is approached by a mad scientist who says he will pay Ian either \$100 for each pair of his autosomes or \$500 for each pair of his sex chromosomes. Assuming Ian wants to make as much money as possible, which offer should he take?
- \$100 for each pair of autosomes
 - \$500 for each pair of sex chromosomes
 - either one, because Ian will make the same amount with both offers
 - neither one, because unfortunately humans have neither autosomes nor sex chromosomes

ANS: A PTS: 1 DIF: Difficult REF: p. 47
OBJ: 2-1 BLM: Conceptual

5. What makes up DNA?
- red, blue, green and yellow proteins alternating on a helix
 - X and Y chromosomes
 - genotypes, phenotypes, and alleles alternating on fibrous nodes
 - adenine, thymine, guanine, and cytosine wrapped together on phosphate and sugar strands

ANS: D PTS: 1 DIF: Easy REF: p. 47
OBJ: 2-1 BLM: Factual

6. Which letter is used to designate one of the human sex chromosomes?
- a. B
 - b. O
 - c. Y
 - d. S

ANS: C PTS: 1 DIF: Easy REF: p. 47
OBJ: 2-1 BLM: Factual

7. Which term describes the functional units of heredity?
- a. gene
 - b. allele
 - c. DNA
 - d. chromosome

ANS: A PTS: 1 DIF: Moderate REF: p. 47
OBJ: 2-1 BLM: Factual

8. Genes provide the cell with a specific set of instructions. What kind of instructions are they?
- a. hormonal instructions
 - b. biochemical instructions
 - c. in vitro instructions
 - d. bioelectric instructions

ANS: B PTS: 1 DIF: Moderate REF: p. 47
OBJ: 2-1 BLM: Factual

9. Kali is 180 centimetres (5 feet, 11 inches) tall, plays tennis, and is an all around nice person. What is this a description of?
- a. Kali's allele
 - b. Kali's genotype
 - c. Kali's homozygosity
 - d. Kali's phenotype

ANS: D PTS: 1 DIF: Moderate REF: p. 48
OBJ: 2-1 BLM: Application

10. Which of the following analogies could be used to complete the phrase, "Genotype is to phenotype as"?
- a. homozygous is to heterozygous
 - b. nurture is to nature
 - c. DNA is to RNA
 - d. chromosome pattern is to facial features

ANS: D PTS: 1 DIF: Difficult REF: p. 48
OBJ: 2-1 BLM: Conceptual

11. Approximately how many genes does the average child have?
- 25
 - 25 000
 - 25 000 000
 - 25 000 000 000

ANS: B PTS: 1 DIF: Moderate REF: p. 48
OBJ: 2-1 BLM: Factual

12. Which process can best be explained by alleles?
- the fact that phenotypes produce genotypes
 - the formation of identical twins
 - the fact that red blood cells can be shaped differently
 - the teratogenic effects associated with fetal alcohol syndrome

ANS: C PTS: 1 DIF: Moderate REF: p. 48
OBJ: 2-1 BLM: Conceptual

13. Which of the following comparisons can be used to complete the phrase, "Homozygous is to heterozygous as"?
- same is to different
 - recessive is to dominant
 - genotype is to phenotype
 - many is to few

ANS: A PTS: 1 DIF: Moderate REF: p. 48
OBJ: 2-1 BLM: Conceptual

14. Linda has one allele for curly hair and another for straight hair. What kind of alleles are these?
- polyzygotic alleles
 - dizygotic alleles
 - homozygous alleles
 - heterozygous alleles

ANS: D PTS: 1 DIF: Moderate REF: p. 48
OBJ: 2-1 BLM: Conceptual

15. Joseph is homozygous for normal blood cells. What does this mean?
- He is an identical twin.
 - He has matching alleles.
 - He has recessive alleles.
 - He is likely to develop sickle-cell anemia.

ANS: B PTS: 1 DIF: Moderate REF: p. 48
OBJ: 2-1 BLM: Conceptual

16. Kirk is heterozygous for cheek dimples but is born with big dimples in both cheeks. What does this say about the allele for cheek dimples?
- It is dominant.
 - It is sex-linked.
 - It is recessive.
 - It is polygenetic.

ANS: A PTS: 1 DIF: Difficult REF: p. 48
OBJ: 2-1 BLM: Conceptual

17. If tallness is dominant and designated as "T," and shortness is recessive and designated as "s," who would likely be short?
- Brian, who is "sT"
 - Carrie, who is "Ts"
 - Danny, who is "ss"
 - Kris, who is "TT"

ANS: C PTS: 1 DIF: Moderate REF: p. 48
OBJ: 2-1 BLM: Application

18. Which of the following examples best illustrates the concept of genetic incomplete dominance?
- an individual with two alleles for baldness who has long hair
 - an individual with two alleles for shyness who is shy
 - an individual with one allele for obesity and another for thinness who is of average weight
 - an individual with a single allele for aggression who is violent

ANS: C PTS: 1 DIF: Moderate REF: p. 48
OBJ: 2-1 BLM: Conceptual

19. Which of the following statements best describes the sickle-cell trait?
- Individuals with the trait have the dominant phenotype but possess the recessive genotype.
 - Individuals with the trait have both a dominant and recessive allele for the disorder.
 - Individuals with the trait are genetically predisposed to the disorder but cannot display any symptoms.
 - Individuals with the trait tend to have the most severe form of the disease.

ANS: B PTS: 1 DIF: Moderate REF: p. 48
OBJ: 2-1 BLM: Factual

20. Torey and Bill consult a geneticist regarding the risk that their baby will inherit sickle-cell disease. They are told that Torey carries the affected allele and Bill does not. What does this mean?
- There is a 25% chance the baby will inherit sickle cell trait, and no chance of inheriting the disease.
 - There is a 100% chance the baby will inherit the sickle cell disease.
 - There is a 50% chance the baby will inherit sickle cell trait, and no chance of inheriting the disease.
 - There is a 25% chance the baby will inherit sickle cell trait, and a 25% chance of inheriting the disease.

ANS: C PTS: 1 DIF: Moderate REF: p. 48
OBJ: 2-1 BLM: Conceptual

21. Which of the following phenotypes is recessive?

- a. farsightedness
- b. Rh-negative blood
- c. dark hair
- d. thick lips

ANS: B PTS: 1 DIF: Moderate REF: p. 50
OBJ: 2-1 BLM: Application

22. Your friend's baby, Kayla, has been diagnosed with a disorder with which she is lacking an important liver enzyme. This enzyme has the potential to delay Kayla's cognitive development. What is this disorder?

- a. Huntington's disease
- b. Hodgkin's lymphoma
- c. Parkinson's disease
- d. Phenylketonuria

ANS: D PTS: 1 DIF: Moderate REF: p. 50
OBJ: 2-1 BLM: Application

23. Huntington's disease is an unusual genetic disorder. What happens with the dominant alleles in a person with this fatal disease?

- a. The impact is late enough in life that the individual can reproduce.
- b. The disease is controllable through diet.
- c. The alleles both must come from mom.
- d. The disease strikes only males.

ANS: A PTS: 1 DIF: Moderate REF: p. 50
OBJ: 2-1 BLM: Conceptual

24. After a prenatal exam, your physician remarks, "It appears as if your fetus has 47 chromosomes." What would be the most likely response to this information?

- a. concern, as this may indicate that your child has Down syndrome
- b. concern, as this may indicate that your child has sickle-cell anemia
- c. concern, as this may indicate that your child has PKU
- d. relief, since this is a normal number of chromosomes

ANS: A PTS: 1 DIF: Moderate REF: p. 50
OBJ: 2-1 BLM: Conceptual

25. When Danny is informed that his newborn son has PKU (phenylketonuria), how would he be most likely to react?

- a. He would very be concerned since PKU is an incurable genetic disorder that results in severe mental retardation.
- b. He would not be concerned since PKU can be cured with drug treatments.
- c. He would not be concerned since PKU is a sex-linked disorder that affects only females.
- d. He would not concerned since PKU can be controlled by a specific diet.

ANS: D PTS: 1 DIF: Moderate REF: p. 50
OBJ: 2-1 BLM: Application

26. Which maternal characteristic is most strongly associated with giving birth to a baby with Down syndrome?
- low levels of intelligence (i.e., mental retardation)
 - consumption of alcohol
 - advanced maternal age
 - exposure to lead or mercury

ANS: C PTS: 1 DIF: Easy REF: p. 51
OBJ: 2-1 BLM: Factual

27. Which combination of sex-chromosomes is unrealistic in a living human being?
- a single X-chromosome
 - XXY
 - XYY
 - a single Y-chromosome

ANS: D PTS: 1 DIF: Difficult REF: p. 51
OBJ: 2-1 BLM: Factual

28. Kim Lee has a disorder associated with the sex-chromosomes in which she has a normal physical appearance, but her motor and language development is delayed. What condition does Kim Lee have?
- Klinefelter's syndrome
 - XXY complement
 - Turner's syndrome
 - XXX syndrome

ANS: D PTS: 1 DIF: Difficult REF: p. 51
OBJ: 2-1 BLM: Application

29. Gloria has a rare sex chromosome disorder with which she has difficulty in perceiving spatial relations. What is the name of Gloria's disorder?
- Klinefelter's syndrome
 - XYY complement
 - Turner's syndrome
 - XXX syndrome

ANS: C PTS: 1 DIF: Moderate REF: p. 51
OBJ: 2-1 BLM: Application

30. You read in a book on behaviour genetics that intelligence is a polygenetic characteristic. What does this mean?
- It means that intelligent behaviour is the result of multiple genes.
 - It means that intelligent behaviour is caused by the impact of a single gene.
 - It means that intelligent behaviour is more a result of environment than it is the result of genes.
 - It means that intelligent behaviour is a sex-linked characteristic.

ANS: A PTS: 1 DIF: Moderate REF: p. 52
OBJ: 2-1 BLM: Conceptual

31. If a physician informed you that your speech disorder was the result of problems on chromosomes 4, 7, and 15, what could you rightly conclude that the disorder?
- It is always classifiable as recessive.
 - It is always classifiable as polygenetic.
 - It is always classifiable as dominant.
 - It is always classifiable as sex-linked.

ANS: B PTS: 1 DIF: Moderate REF: p. 52
OBJ: 2-1 BLM: Conceptual

32. Since John and Stan have the same genes, what must they be?
- dizygotic twins
 - monozygotic twins
 - heterozygous
 - codominant

ANS: B PTS: 1 DIF: Easy REF: p. 53
OBJ: 2-1 BLM: Conceptual

33. Jewel and Bjork are dizygotic twins. What does dizygotic mean?
- that Jewel and Bjork are genetically identical
 - that Jewel and Bjork must have come from the same fertilized egg
 - that Jewel and Bjork share all phenotypes
 - that Jewel and Bjork share about half of their genes

ANS: D PTS: 1 DIF: Moderate REF: p. 53
OBJ: 2-1 BLM: Application

34. José, who was adopted at birth, is found to have personality characteristics more similar to his biological mother than to his adoptive mother. How should you interpret these data?
- Personality appears to be a polygenetic characteristic.
 - Personality characteristics are learned.
 - Personality characteristics are influenced by genes.
 - Personality characteristics appear to be recessive.

ANS: C PTS: 1 DIF: Moderate REF: p. 53-54
OBJ: 2-1 BLM: Conceptual

35. Which results would be inaccurate regarding the idea that genes play a significant role in behaviour?
- finding dizygotic twins to be more similar than monozygotic twins
 - finding children to be more similar to their biological parents than to their adoptive parents
 - finding similarities between biological siblings
 - finding monozygotic twins to be more similar than pairs of unrelated individuals

ANS: A PTS: 1 DIF: Moderate REF: p. 53-54
OBJ: 2-1 BLM: Conceptual

36. What factor would play the largest role in determining the initial reaction range for any behaviour?
- available environments
 - personal motivation
 - genetics
 - arousal level

ANS: C PTS: 1 DIF: Moderate REF: p. 54-55
OBJ: 2-1 BLM: Factual

37. According to the textbook, which of the following test methods can be used to isolate particular segments of DNA in human chromosomes?
- a urine test
 - a cotton swab rubbed inside the mouth
 - a blood test for a particular blood type
 - an x-ray test

ANS: B PTS: 1 DIF: Moderate REF: p. 54
OBJ: 2-1 BLM: Factual

38. Dr. Smith has found that a certain genotype for depression may result in a wide variety of phenotypes, depending on environmental factors. What does this information say about this genotype?
- It has a large reaction range.
 - It is polygenetic.
 - It is sex-linked.
 - It is heterozygous for many traits.

ANS: A PTS: 1 DIF: Moderate REF: p. 55
OBJ: 2-1 BLM: Application

39. Despite being raised in two very different environments, identical twins Tina and Ginny receive a similar score on a shyness scale. What do these results suggest about the range of reactions for shyness?
- It is small.
 - It is large.
 - It is inverse.
 - It is polygenetic.

ANS: A PTS: 1 DIF: Moderate REF: p. 55
OBJ: 2-1 BLM: Conceptual

40. Which individual with a genetic predisposition toward being extroverted is demonstrating successful niche-picking?
- Rick, who is a game show host
 - Wilbur, who is a horse trainer
 - Sebastian, who is a hermit who lives in a cave by himself
 - Dexter, who spends a lot of time studying in the library

ANS: A PTS: 1 DIF: Moderate REF: p. 56
OBJ: 2-1 BLM: Application

41. Jane is an introverted artist who prefers the solitude of her painting studio to the limelight of the art gallery. What term best describes this example of seeking the environment that fits Jane's heredity?
- environmental sculpting
 - eccentricity
 - niche-picking
 - nonshared environmental influence

ANS: C PTS: 1 DIF: Moderate REF: p. 56
OBJ: 2-1 BLM: Application

42. Jack and Emily are twins. Because he is a boy, Jack's dad and mom encourage him to run. On the other hand, Jack's mom and dad discourage Emily from engaging in athletic activity. As a result Jack is much faster at running than Emily is. What best explains the difference in Jack and Emily's behaviour?
- nonshared environmental influences
 - active gene-environment relations
 - polygenetic effects
 - niche-picking

ANS: A PTS: 1 DIF: Moderate REF: p. 57
OBJ: 2-1 BLM: Application

43. Which period is considered to be the first part of prenatal development?
- the fetal period
 - the zygote period
 - the neonatal period
 - the embryonic period

ANS: B PTS: 1 DIF: Easy REF: p. 59
OBJ: 2-2 BLM: Conceptual

44. Which period lasts for approximately two weeks?
- the embryonic period
 - the zygote period
 - the fetal period
 - the neonatal period

ANS: B PTS: 1 DIF: Easy REF: p. 59
OBJ: 2-2 BLM: Factual

45. If Angela found out that she was conceived through in vitro fertilization, what would she know for certain?
- She was conceived in a petri dish.
 - She was conceived inside a fallopian tube.
 - Her biological parents were not the same as the parents who reared her.
 - The woman who carried her as a baby was not the woman who reared her.

ANS: A PTS: 1 DIF: Moderate REF: p. 59
OBJ: 2-2 BLM: Application

46. Approximately how many "test tube" babies are born each year around the world?
- a. 45 000
 - b. 50 000
 - c. 55 000
 - d. 60 000

ANS: C PTS: 1 DIF: Moderate REF: p. 59
OBJ: 2-2 BLM: Factual

47. What does the period of the zygote begin with?
- a. ovulation
 - b. ejaculation
 - c. implantation
 - d. fertilization

ANS: D PTS: 1 DIF: Easy REF: p. 59
OBJ: 2-2 BLM: Factual

48. What do we call a developing human being that is travelling from a fallopian tube to the uterus?
- a. an embryo
 - b. a fetus
 - c. a zygote
 - d. an amnion

ANS: C PTS: 1 DIF: Moderate REF: p. 59
OBJ: 2-2 BLM: Conceptual

49. Whose behaviour best exemplifies eugenics?
- a. Dr. Green, who uses an in vitro fertilization technique
 - b. Dr. Black, who allows only certain individuals to mate in an effort to build a master race
 - c. Dr. White, who studies the effects of thalidomide on prenatal development
 - d. Dr. Brown, who closely monitors the nutrition of expecting mothers

ANS: B PTS: 1 DIF: Moderate REF: p. 60
OBJ: 2-2 BLM: Application

50. What do we call the point at which a zygote burrows into the uterine wall?
- a. fertilization
 - b. implantation
 - c. niche-picking
 - d. dilation

ANS: B PTS: 1 DIF: Easy REF: p. 61
OBJ: 2-2 BLM: Factual

51. Patty is pregnant, and her body is currently experiencing the event that triggers hormonal changes that will prevent further menstruation. What is this event called?
- a. implantation
 - b. conception
 - c. dilation
 - d. effacement

ANS: A PTS: 1 DIF: Moderate REF: p. 61
OBJ: 2-2 BLM: Conceptual

52. What do we call the cluster of cells in the centre of the zygote that will eventually develop into the body?
- a. the amnion
 - b. the stem cell
 - c. the germ disc
 - d. the placenta

ANS: C PTS: 1 DIF: Moderate REF: p. 61
OBJ: 2-2 BLM: Factual

53. What do we call the structure through which a pregnant woman and an embryo exchange waste and nutrients?
- a. the amnion
 - b. the stem cell
 - c. the germ disc
 - d. the placenta

ANS: D PTS: 1 DIF: Moderate REF: p. 61
OBJ: 2-2 BLM: Factual

54. What do we call the developing human organism that has just become completely embedded in the wall of the uterus?
- a. the amnion
 - b. the fetus
 - c. the zygote
 - d. the embryo

ANS: D PTS: 1 DIF: Moderate REF: p. 61
OBJ: 2-2 BLM: Factual

55. During the embryonic period, what forms the hair and the nervous system?
- a. cells in the mesoderm layer
 - b. cells in the endoderm layer
 - c. cells in the placenta layer
 - d. cells in the ectoderm layer

ANS: D PTS: 1 DIF: Moderate REF: p. 61
OBJ: 2-2 BLM: Factual

56. What forms the embryo's digestive system?
- a. cells in the mesoderm layer
 - b. cells in the endoderm layer
 - c. cells in the placenta layer
 - d. cells in the ectoderm layer

ANS: B PTS: 1 DIF: Moderate REF: p. 61
OBJ: 2-2 BLM: Factual

57. Dr. Proctor tells Uma that the embryo developing in Uma is showing distortions in the development of its circulatory system. Where is this problem located?
- within cells of the placenta layer
 - within cells of the mesoderm layer
 - within cells of the ectoderm layer
 - within cells of the endoderm layer

ANS: B PTS: 1 DIF: Difficult REF: p. 61
OBJ: 2-2 BLM: Conceptual

58. While observing a special monitor, a physician tells an expectant mother, "As you can see, the legs and arms have just begun to emerge." From this description, what are they looking at?
- the zygote
 - the fetus
 - the embryo
 - the germ disc

ANS: C PTS: 1 DIF: Moderate REF: p. 61
OBJ: 2-2 BLM: Conceptual

59. What do we call the sac in which the embryo resides?
- the ectoderm
 - the amnion
 - the germ disc
 - the placenta

ANS: B PTS: 1 DIF: Easy REF: p. 62
OBJ: 2-2 BLM: Factual

60. What is one key purpose of the amniotic fluid?
- to provide the embryo with nutrients
 - to stimulate development of neurotransmitters
 - to screen the flow of blood between the mother and the embryo
 - to maintain a constant temperature for the embryo

ANS: D PTS: 1 DIF: Moderate REF: p. 62
OBJ: 2-2 BLM: Factual

61. What houses the blood vessels that connect the embryo and its mother?
- the umbilical cord
 - the amnion
 - the germ disc
 - the mesoderm

ANS: A PTS: 1 DIF: Moderate REF: p. 62
OBJ: 2-2 BLM: Factual

62. Marsha's doctor informs her that her child is just entering the longest period of prenatal development. About how long has Marsha been carrying her unborn child?
- 1 day
 - 3 weeks
 - 9 weeks
 - 28 weeks

ANS: C PTS: 1 DIF: Moderate REF: p. 62
OBJ: 2-2 BLM: Application

63. What do we call the thick, "greasy" substance that covers the fetus around five to six months after conception?
- placenta
 - vernix
 - amnion
 - endoderm

ANS: B PTS: 1 DIF: Easy REF: p. 63
OBJ: 2-2 BLM: Factual

64. Dr. Cortez informs Julia that her fetus has developed a fine, silky hair that covers the majority of her baby's skin surface. While Julia is concerned about this, Dr. Cortez informs her that the hair will be mostly shed before the baby's birth. What is the name of this hair?
- baby hair
 - fetal hair
 - down
 - lanugo

ANS: D PTS: 1 DIF: Moderate REF: p. 63
OBJ: 2-2 BLM: Factual

65. Currently, what is the earliest "age of viability"?
- about 14 weeks after conception
 - about 22 weeks after conception
 - about 30 weeks after conception
 - about 38 weeks after conception

ANS: B PTS: 1 DIF: Moderate REF: p. 63
OBJ: 2-2 BLM: Factual

66. Gregg and Gracie were relaxing while watching TV, when suddenly their fetus began to kick for the first time. At approximately what age does a fetus begin to kick, punch, or turn somersaults?
- 5 months
 - 6 months
 - 7 months
 - 8 months

ANS: A PTS: 1 DIF: Moderate REF: p. 64
OBJ: 2-2 BLM: Factual

67. What was the main finding of DeCasper and Spence's (1986) study in which pregnant mothers read the story *The Cat in the Hat*?
- Prior to birth, the fetuses began to mimic the sounds their mothers were making.
 - After birth, the infants appeared to recognize the rhythm at which the mothers had read the stories.
 - After birth, the infants showed no reaction when they once again heard the story.
 - After birth, the infants who had been read to began to speak at an earlier age than a control group that had not been read to.

ANS: B PTS: 1 DIF: Moderate REF: p. 64
OBJ: 2-2 BLM: Conceptual

68. Just after the birth of her son Nick, mom Kelly was informed that little Nick's neural tube did not properly close during his prenatal development. What condition does Nick appear to have?
- spina bifida
 - muscular dystrophy
 - cerebral palsy
 - sickle-cell anemia

ANS: A PTS: 1 DIF: Moderate REF: p. 66
OBJ: 2-3 BLM: Conceptual

69. When is maternal stress most likely to negatively impact a developing embryo/fetus?
- when that stress is intermittent and extreme
 - when that stress is intermittent and moderate
 - when that stress is chronic and extreme
 - when that stress is chronic and moderate

ANS: C PTS: 1 DIF: Moderate REF: p. 66
OBJ: 2-3 BLM: Conceptual

70. Why do teenage mothers tend to give birth to less healthy infants than mothers in their 20s?
- because the teens tend to neither seek nor receive good prenatal care
 - because the teens take too many vitamins
 - because the teens have more genetically defective eggs
 - because the teens are more likely to smoke while pregnant

ANS: A PTS: 1 DIF: Easy REF: p. 67
OBJ: 2-3 BLM: Factual

71. What is a teratogen?
- any agent that increases the likelihood of abnormal prenatal development
 - any agent that enhances the flow of oxygen across the placental barrier
 - any agent that decreases the chances of having a child with a genetic disorder
 - any agent that inhibits the impact of drugs on the developing embryo

ANS: A PTS: 1 DIF: Moderate REF: p. 67
OBJ: 2-3 BLM: Factual

72. Whose mother most likely took thalidomide while pregnant?

- a. Dean, who has a heart defect
- b. Michael, who has deformed arms and legs
- c. Jerry, who is deaf
- d. Larry, who is severely mentally retarded

ANS: B PTS: 1 DIF: Moderate REF: p. 67
OBJ: 2-3 BLM: Application

73. Which of the following is a teratogen?

- a. jelly beans
- b. energy drinks
- c. vitamin supplements
- d. nicotine

ANS: D PTS: 1 DIF: Moderate REF: p. 68
OBJ: 2-3 BLM: Application

74. While JoEllen did not smoke during her pregnancy, her husband, Jerry did. What effect does second hand smoke have on a child?

- a. impaired motor skills
- b. deformed limbs
- c. smaller birthweight
- d. breathing difficulties

ANS: C PTS: 1 DIF: Moderate REF: p. 68
OBJ: 2-3 BLM: Factual

75. Bryant has unusual facial features (i.e., short nose and wide-set eyes) and shows signs of mental retardation. What did Bryant's mother most likely do while she was pregnant?

- a. She consumed alcohol.
- b. She injected heroin.
- c. She smoked marijuana.
- d. She consumed an excessive amount of caffeine.

ANS: A PTS: 1 DIF: Moderate REF: p. 69
OBJ: 2-3 BLM: Application

76. What do AIDS and genital herpes have in common?

- a. They can be passed along to an infant as they pass through the birth canal.
- b. They typically result in blindness.
- c. They cannot be transmitted to a fetus through the placenta.
- d. They can be eliminated by maternal inoculation.

ANS: A PTS: 1 DIF: Moderate REF: p. 69
OBJ: 2-3 BLM: Factual

77. What has research on prenatal exposure to cell phone usage found?
- The most likely impact involves mental retardation.
 - Cell phone exposure has more impact on the mother than the fetus.
 - Research has been inconclusive up to this point in time.
 - The radiation levels of cell phones are similar to those of a common x-ray.

ANS: C PTS: 1 DIF: Moderate REF: p. 70
OBJ: 2-3 BLM: Factual

78. What did the Jacobson, Jacobson, and Humphrey (1990) study on the effects of prenatal exposure to PCBs find?
- Any level of exposure led to blindness and retardation.
 - Low and high levels of exposure led to retardation but not blindness.
 - High levels of exposure led to blindness and retardation.
 - A woman may be unable to protect herself from invisible environmental teratogens.

ANS: D PTS: 1 DIF: Moderate REF: p. 70
OBJ: 2-3 BLM: Factual

79. Which of the following characteristics can cause a person to be more susceptible to a teratogen?
- gender
 - overall health status
 - age
 - heredity

ANS: D PTS: 1 DIF: Moderate REF: p. 71
OBJ: 2-3 BLM: Factual

80. What was the most critical lesson about teratogens learned from the use of the drug DES?
- Sometimes what appear to be teratogens actually are harmless drugs.
 - Infants in the late fetal period appear to be the most at-risk for impact from drug-related teratogens.
 - Sometimes the effects of teratogens are not apparent until long after exposure.
 - Females appear to be at much greater risk from teratogens.

ANS: C PTS: 1 DIF: Difficult REF: p. 72
OBJ: 2-3 BLM: Factual

81. Because there is a history of hereditary disease in the families of Alan and Veronica, they have arranged a meeting with a specialist at which they construct a family tree concerning the odds of them having a child with a birth defect. What do we call such an event?
- amniocentesis
 - chorionic villus sampling
 - ancestry medical examination
 - genetic counselling

ANS: D PTS: 1 DIF: Moderate REF: p. 73
OBJ: 2-3 BLM: Application

82. Gary and Shelley are undergoing genetic counselling to determine if their baby is at risk. What test is used to determine the parents' genotypes?
- x-ray
 - blood test
 - urine test
 - DNA swab test

ANS: B PTS: 1 DIF: Moderate REF: p. 73
OBJ: 2-3 BLM: Application

83. Claire is very concerned about the position of the child she is carrying. Which technique would be the best for determining whether Claire's concerns are warranted?
- genetic counselling
 - ultrasound
 - chorionic villus sampling
 - amniocentesis

ANS: B PTS: 1 DIF: Moderate REF: p. 73
OBJ: 2-3 BLM: Application

84. Which prenatal assessment technique requires the culturing of skin cells acquired from a fluid sample?
- genetic screening
 - ultrasound
 - chorionic villus sampling
 - amniocentesis

ANS: D PTS: 1 DIF: Difficult REF: p. 74
OBJ: 2-3 BLM: Factual

85. Mia and her doctor need to know as quickly as possible (hopefully within 24 hours) whether the child she has been carrying for only nine weeks has any genetic abnormalities. Which technique is Mia's doctor most likely to employ?
- chorionic villus sampling
 - ultrasound
 - amniocentesis
 - genetic counselling

ANS: A PTS: 1 DIF: Difficult REF: p. 74
OBJ: 2-3 BLM: Application

86. Troy is very interested in the field of fetal medicine. Given this information, which of the following books would he be most likely to read?
- Afterbirth Care and You*
 - The Benefits of Healthy Eating Before Pregnancy*
 - Fixing Birth Defects Before Birth*
 - The Importance of Childhood Inoculations*

ANS: C PTS: 1 DIF: Moderate REF: p. 74-75
OBJ: 2-3 BLM: Conceptual

87. Physicians are currently able to correct fetal hypothyroidism before birth using a certain procedure. What is the procedure?
- genetic engineering
 - injection of hormones into the amniotic cavity
 - chorionic villus sampling
 - administration of drugs to the pregnant mother

ANS: B PTS: 1 DIF: Moderate REF: p. 75
OBJ: 2-3 BLM: Factual

88. In congenital adrenal hyperplasia, the fetal adrenal glands have produced too much androgen. What is the effect upon the child with this condition?
- cognitive impairment of boys
 - speech impediments
 - behavioural problems
 - masculinization of girls

ANS: D PTS: 1 DIF: Moderate REF: p. 75
OBJ: 2-3 BLM: Factual

89. For approximately how long does Stage 1 labour last for a first baby?
- 6 - 10 hours
 - 8 - 12 hours
 - 10 - 20 hours
 - 12 - 24 hours

ANS: D PTS: 1 DIF: Easy REF: p. 76
OBJ: 2-4 BLM: Factual

90. By the time Debbie got to the hospital to deliver her child, the child had entered the vagina. What stage of labour was Debbie in?
- first stage
 - second stage
 - third stage
 - fourth stage

ANS: B PTS: 1 DIF: Difficult REF: p. 76
OBJ: 2-4 BLM: Application

91. What does the term "crowning" mean?
- The cervix has just fully dilated.
 - Uterine contractions are about to start.
 - The baby's head has just reached the vaginal opening.
 - The placenta is about to be delivered.

ANS: C PTS: 1 DIF: Moderate REF: p. 76
OBJ: 2-4 BLM: Conceptual

92. Wilma is afraid of the pain involved in delivering her baby. Are childbirth classes likely to help her?
- Yes, because women who take these courses report experiencing less pain than women who don't.
 - Yes, because women who take these courses qualify for pain-killing medications they would not usually receive.
 - No, because childbirth courses only make people more knowledgeable about the birthing process and can have no effect on pain.
 - No, because individuals who know most about the birthing process experience the most pain.

ANS: A PTS: 1 DIF: Difficult REF: p. 77
OBJ: 2-4 BLM: Application

93. Which of the following statements most accurately describes the relationship between home and hospital delivery for healthy pregnant women?
- Home and hospital delivery carry the same birth defect risk.
 - Hospital delivery is safer than home delivery.
 - Home delivery is safer than hospital delivery.
 - The difference in risk factor between the two methods are unknown.

ANS: A PTS: 1 DIF: Moderate REF: p. 78
OBJ: 2-4 BLM: Factual

94. Kim gave birth to a healthy, happy baby boy. And while he has brought joy to her life, Kim has remained irritable, apathetic, and she is not eating or resting properly. What is the name for Kim's condition?
- neonatal nerves
 - postpartum depression
 - postpartum anxiety disorder
 - baby blues

ANS: B PTS: 1 DIF: Moderate REF: p. 79
OBJ: 2-4 BLM: Application

95. After learning that his newborn son's birth involved hypoxia, what would Stan (a knowledgeable nurse) most likely ask?
- "Will my son be intellectually impaired?"
 - "How long was the cord wrapped around his neck?"
 - "Did the cervix ever dilate?"
 - "Is such a premature birth normal?"

ANS: B PTS: 1 DIF: Moderate REF: p. 79
OBJ: 2-4 BLM: Conceptual

96. How is a physician most likely to guard against fetal hypoxia?
- monitor the fetus's heart rate
 - avoid exposing the fetus to tainted blood
 - encourage the mother to deliver vaginally
 - conduct a genetic screen of the mother and father

ANS: A PTS: 1 DIF: Moderate REF: p. 79
OBJ: 2-4 BLM: Conceptual

97. During her pregnancy, Toni develops high blood pressure and experiences severe swelling of her extremities. What is Toni most likely to be diagnosed with?

- a. pre-eclampsia
- b. cephalopelvic disproportion
- c. irregular position
- d. prolapsed umbilical cord

ANS: A PTS: 1 DIF: Difficult REF: p. 80
OBJ: 2-4 BLM: Conceptual

98. How is a C-Section is best described?
- a. as vaginal childbirth
 - b. as a technique for determining possible birth defects in an embryo
 - c. as a common form of teratogen
 - d. as the surgical removal of a fetus

ANS: D PTS: 1 DIF: Easy REF: p. 80
OBJ: 2-4 BLM: Factual

99. By definition, what are premature infants?
- a. those born prior to 42 weeks after conception
 - b. those born prior to 40 weeks after conception
 - c. those born prior to 38 weeks after conception
 - d. those born prior to 36 weeks after conception

ANS: D PTS: 1 DIF: Easy REF: p. 80
OBJ: 2-4 BLM: Factual

100. What is the cut-off between normal and low birth weight?
- a. About 3500 grams (7.7 pounds)
 - b. About 2500 grams (5.5 pounds)
 - c. About 1500 grams (3.3 pounds)
 - d. About 1000 grams (2.2 pounds)

ANS: B PTS: 1 DIF: Moderate REF: p. 80
OBJ: 2-4 BLM: Factual

101. At a birth weight of 1200 grams (about 3 pounds), how would Kia be correctly classified?
- a. normal birth weight
 - b. low birth weight
 - c. very low birth weight
 - d. extremely low birth weight

ANS: C PTS: 1 DIF: Moderate REF: p. 80
OBJ: 2-4 BLM: Factual

102. Born 39 weeks after conception, Sasha weighs in at 900 grams (around 2 pounds). Given this information, what can we say about Sasha?
- She is full-term and normal birth weight.
 - She is preterm and normal birth weight.
 - She is preterm and very low birth weight.
 - She is preterm and extremely low birth weight.

ANS: D PTS: 1 DIF: Difficult REF: p. 80
OBJ: 2-4 BLM: Application

103. According to Werner's 1989 and 1995 longitudinal studies, what problems were associated with low birth weight?
- They were typically life-long.
 - They had no impact on social or cognitive abilities.
 - They were only found in males.
 - They could be overcome if the child was raised in a stable family environment.

ANS: D PTS: 1 DIF: Moderate REF: p. 81
OBJ: 2-4 BLM: Factual

104. What is the current infant mortality rate in Canada?
- about 2 out of 1000 live births
 - about 5 out of 1000 live births
 - about 20 out of 1000 live births
 - about 90 out of 1000 live births

ANS: B PTS: 1 DIF: Moderate REF: p. 83
OBJ: 2-4 BLM: Factual

105. What can most effectively increase the chances of giving birth to a healthy baby?
- regular prenatal care
 - avoiding teratogens
 - maternal inoculations
 - chorionic villus sampling

ANS: A PTS: 1 DIF: Easy REF: p. 83
OBJ: 2-4 BLM: Factual

106. According to the textbook, which Canadian province/territory currently has the lowest infant mortality rate?
- British Columbia
 - Nunavut
 - Nova Scotia
 - Quebec

ANS: C PTS: 1 DIF: Easy REF: p. 83
OBJ: 2-4 BLM: Factual