

## **CHAPTER 3—PRENATAL DEVELOPMENT AND BIRTH**

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### **MULTIPLE CHOICE**

1. Prenatal development refers to development of
  - a. the social bond of the adult couple.
  - b. the newborn immediately after the birth.
  - c. the offspring during pregnancy, from conception until birth.
  - d. plans to become pregnant.

ANS: C                      DIF: easy                      REF: Introductory Section  
MSC: Conceptual

2. Identify the correct prenatal sequence of periods, from earliest to latest.
  - a. Fetal period :: embryonic period :: period of the zygote
  - b. Period of the zygote :: embryonic period :: fetal period
  - c. Embryonic period :: fetal period :: period of the zygote
  - d. Embryonic period :: period of the zygote :: fetal period

ANS: B                      DIF: moderate                      REF: From Conception to Birth  
MSC: Factual

3. Which of these periods of prenatal development is shortest, covering the fewest days?
  - a. Fetal period
  - b. Embryonic period
  - c. Period of the zygote
  - d. All are of equal duration

ANS: C                      DIF: easy                      REF: From Conception to Birth  
MSC: Factual

4. The prenatal period lasting from conception to implantation is referred to as the
  - a. period of cellular replication.
  - b. embryonic period.
  - c. period of the zygote.
  - d. fetal period.

ANS: C                      DIF: easy                      REF: From Conception to Birth  
MSC: Factual

5. During the first four days following conception, the structure of 60 to 80 cells is called the
  - a. homo spherical.
  - b. blobonoidal entity.
  - c. blastocyst.
  - d. zygotenoid.

ANS: C                      DIF: moderate                      REF: From Conception to Birth  
MSC: Factual                      NOT: New

6. The embryo develops from the embryonic disk, which is
- the inner layer of the blastocyst.
  - an inner organ of the fetus.
  - the unfertilized ovum.
  - a type of teratogen.

ANS: A                      DIF: moderate              REF: From Conception to Birth  
MSC: Factual

7. Implantation occurs about two \_\_\_\_ following conception.
- hours
  - days
  - weeks
  - months

ANS: C                      DIF: moderate              REF: From Conception to Birth  
MSC: Factual

8. The proper place for the blastocyst to implant itself is at the
- interior of a fallopian tube.
  - lining of the vagina.
  - outside of the ovary.
  - wall of the uterus.

ANS: D                      DIF: easy                      REF: From Conception to Birth  
MSC: Factual

9. About \_\_\_\_ percent of zygotes successfully complete the germinal period to enter the period of the embryo.
- 1
  - 10
  - 25
  - 70

ANS: C                      DIF: moderate              REF: From Conception to Birth  
MSC: Factual

10. Out of every four zygotes, \_\_\_\_ fail(s) to survive.
- none
  - one
  - two
  - three

ANS: D                      DIF: moderate              REF: From Conception to Birth  
MSC: Factual

11. Which of these is NOT among the four support structures that protect and nourish the developing organism?
- The placenta
  - The anoxia
  - The amnion
  - The chorion

ANS: B                      DIF: easy                      REF: From Conception to Birth  
MSC: Factual

12. The \_\_\_\_ is a watertight sac in which the developing child floats during its prenatal development.
- postpartum
  - lanugo
  - vernix
  - amnion

ANS: D                      DIF: moderate              REF: From Conception to Birth  
MSC: Factual

13. The \_\_\_\_ is a support structure that surrounds the amnion and later becomes the lining of the placenta.
- umbilical cord
  - lanugo
  - chorion
  - neural tube

ANS: C                      DIF: moderate              REF: From Conception to Birth  
MSC: Factual

14. The placenta serves as a semipermeable barrier between the mother's and the baby's
- nervous systems.
  - bowels.
  - visual systems.
  - blood supplies.

ANS: D                      DIF: moderate              REF: From Conception to Birth  
MSC: Factual

15. Of the following, the substance that typically CANNOT pass through the placenta to the developing embryo is
- oxygen.
  - maternal blood cells.
  - sugars, proteins, and fats.
  - viruses.

ANS: B                      DIF: moderate              REF: From Conception to Birth  
MSC: Factual

16. The period of the embryo occurs during the \_\_\_\_ weeks of pregnancy.
- first and second
  - third through eighth
  - ninth through 12th
  - 13th through 20th

ANS: B                      DIF: moderate              REF: From Conception to Birth  
MSC: Conceptual

17. During the period of the embryo, the neural tube develops from the
- pancreas, an important organ.
  - endoderm, the inner layer of the embryonic disk.
  - mesoderm, the middle layer of the embryonic disk.
  - ectoderm, the outer layer of the embryonic disk.

ANS: D                      DIF: difficult              REF: From Conception to Birth  
MSC: Factual

18. The placenta is like a
- cargo vessel that collects and delivers supplies.
  - sentinel who watches for danger.
  - teacher who explains difficult concepts.
  - manager who supervises a staff of workers.

ANS: A                      DIF: moderate              REF: From Conception to Birth  
MSC: Conceptual

19. \_\_\_\_ connects the embryo to the placenta and transports metabolic waste from the embryo to the mother's blood stream.
- The uterus
  - The umbilical cord
  - The fallopian tube
  - The intestine

ANS: B                      DIF: moderate              REF: From Conception to Birth  
MSC: Factual

20. During the period of the embryo, the muscles, circulatory system, and bones develop from the
- endoderm, the inner layer of the embryonic disk.
  - mesoderm, the middle layer of the embryonic disk.
  - ectoderm, the outer layer of the embryonic disk.
  - the placenta, which connects the embryo to the mother.

ANS: B                      DIF: difficult              REF: From Conception to Birth  
MSC: Factual

21. During the period of the embryo, the mesoderm, the middle layer of the embryonic disk, develops into the
- muscles, circulatory system, and bones.
  - neural tube.
  - fetus.
  - umbilical cord.

ANS: A                      DIF: difficult              REF: From Conception to Birth  
MSC: Factual

22. Magnetoencephalography (MEG) has revealed that the six-month-old human fetus has some ability to discriminate among
- tastes of the food the mother eats.
  - light and dark.
  - sounds.
  - different voices.

ANS: C                      DIF: difficult              REF: From Conception to Birth  
MSC: Factual

23. During embryonic development, ENDODERM is to ECTODERM as \_\_\_\_ is to \_\_\_\_.
- a. FAST :: SLOW
  - b. INNER :: OUTER
  - c. PASSIVE :: ACTIVE
  - d. PROGRESSIVE :: RECESSIVE

ANS: B                      DIF: difficult                      REF: From Conception to Birth  
MSC: Conceptual

24. What is indifferent about the “indifferent gonad” that develops near the end of the embryonic period?
- a. It does not yet have emotional feelings
  - b. It develops identically, regardless of the mother’s diet
  - c. It lacks any opinions on social science controversies
  - d. It can develop into either testes or ovaries

ANS: D                      DIF: moderate                      REF: From Conception to Birth  
MSC: Conceptual

25. The embryo’s neural tube develops eventually into
- a. the skin.
  - b. the central nervous system.
  - c. the arms and legs.
  - d. internal organs such as the heart, liver, and kidneys.

ANS: B                      DIF: moderate                      REF: From Conception to Birth  
MSC: Factual

26. The organism experiences its fastest relative rate of growth during the
- a. first prenatal month.
  - b. last trimester of pregnancy.
  - c. first month of infancy.
  - d. 10th month following birth.

ANS: A                      DIF: difficult                      REF: From Conception to Birth  
MSC: Factual

27. Gwen had an ultrasound done 60 days after conception. In the ultrasound image, she will see
- a. if the baby carries any recessive genes.
  - b. the sex of the preborn baby.
  - c. that it is a baby, not a cancerous tumor.
  - d. very little because the embryo is so small.

ANS: D                      DIF: difficult                      REF: From Conception to Birth  
MSC: Applied

28. In the absence of biochemical instructions, the embryo’s indifferent gonad will develop sexually
- a. in a masculine style.
  - b. in a neutral style that is neither male nor female.
  - c. in masculine as well as feminine styles.
  - d. in a feminine style.

ANS: D                      DIF: moderate                      REF: From Conception to Birth  
MSC: Conceptual

29. A slogan that describes nature's rule for embryonic sexual development would be,
- "Nature abhors a vacuum."
  - "Lacking masculine instructions, develop as a female."
  - "Lacking feminine instructions, develop as a male."
  - "Sexual identity is unknowable prior to birth."

ANS: B                      DIF: moderate                      REF: From Conception to Birth  
MSC: Conceptual

30. A slogan for the neonate would be,
- "Originate!"
  - "Differentiate!"
  - "Rapid growth!"
  - "Welcome to the world!"

ANS: D                      DIF: easy                      REF: From Conception to Birth  
MSC: Conceptual

31. \_\_\_\_ is needed for the prenatal development of male sex organs in the fetus.
- The sound of men's voices
  - Salt in the mother's diet
  - Testosterone hormone
  - The absence of estrogen, a female hormone,

ANS: C                      DIF: moderate                      REF: From Conception to Birth  
MSC: Factual

32. As early as the end of the \_\_\_\_ gestational month, the male/female sexual identity of the fetus can be assessed with ultrasound imaging.
- second
  - third
  - fourth
  - fifth

ANS: B                      DIF: difficult                      REF: From Conception to Birth  
MSC: Factual

33. As early as the end of the \_\_\_\_ gestational month, the fetus's reproductive system already contains immature ova or sperm cells.
- third
  - fourth
  - fifth
  - sixth

ANS: A                      DIF: difficult                      REF: From Conception to Birth  
MSC: Factual

34. At the end of the \_\_\_\_, all the major structures of the human are formed.
- embryonic period
  - fetal period
  - period of the zygote
  - implantation

ANS: A                      DIF: moderate                      REF: From Conception to Birth  
MSC: Factual

35. The \_\_\_\_ is a time during which organ systems are refined and begin to function.
- embryonic period
  - fetal period
  - period of the zygote
  - implantation

ANS: B                      DIF: moderate              REF: From Conception to Birth  
MSC: Factual

36. Fetal movements are first felt by the mother and the fetal heartbeat can be heard at
- three to four weeks.
  - 25 to 38 weeks.
  - one week.
  - 13 to 24 weeks.

ANS: D                      DIF: moderate              REF: From Conception to Birth  
MSC: Factual

37. The white cheesy material that coats the fetus's body is called
- diethylstilbestrol.
  - placental ooze.
  - folic acid.
  - vernix.

ANS: D                      DIF: moderate              REF: From Conception to Birth  
MSC: Factual

38. During restorative fetal surgery, a surgeon declares, "The fetus's vernix appears abnormal!" To what does the doctor refer?
- Reflexes that respond to touch
  - Roundness of the facial features
  - A white cheesy coating on the skin
  - Muscle tension in the arms and legs

ANS: C                      DIF: moderate              REF: From Conception to Birth  
MSC: Applied

39. The 24th week is often set as the legal upper limit for medical abortion. At this point in time, the milestone that is reached by the developing fetus is
- the heart and circulatory system begin to function.
  - spontaneous movement is apparent for the first time.
  - sex differentiation and sex organ development is now completed.
  - the minimal age of viability has been reached.

ANS: D                      DIF: moderate              REF: From Conception to Birth  
MSC: Conceptual

40. The vernix protects the fetus against
- chapping by movements in the amniotic liquid.
  - temporary blinding by exposure to intense lights.
  - becoming engorged by fluids received from the umbilical cord.
  - annoying bites from mites that float in the womb.

ANS: A                      DIF: moderate                      REF: From Conception to Birth  
MSC: Factual

41. An older sibling asks her pregnant mother whether the baby has hair before it is born. "Yes," states her mother, "It is a fine layer of body hair called the
- prenatal fuzz."
  - lanugo."
  - shaggy encapsulation."
  - monkey's sweater."

ANS: B                      DIF: moderate                      REF: From Conception to Birth  
MSC: Applied

42. Suppose that your fetus lacks its lanugo. What would be missing?
- Capacity for intelligence
  - A particular pair of chromosomes
  - A fine layer of hair on the skin
  - An organ that inflates the lungs at birth

ANS: C                      DIF: moderate                      REF: From Conception to Birth  
MSC: Applied

43. The age of viability is a developmental milestone when
- survival outside the uterus is possible.
  - the fetus is recognized as being a person.
  - the fetus begins to have thoughts and intentions.
  - quickening movements are first noticed by the mother.

ANS: A                      DIF: easy                      REF: From Conception to Birth  
MSC: Conceptual

44. For most fetuses, the age of viability occurs during the \_\_\_\_ month after conception.
- fifth
  - sixth
  - seventh
  - ninth

ANS: C                      DIF: moderate                      REF: From Conception to Birth  
MSC: Factual

45. The fetal position, with the limbs folded up around the body, is especially characteristic of the
- first trimester.
  - second trimester.
  - early third trimester.
  - late third trimester.

ANS: D                      DIF: easy                      REF: From Conception to Birth  
MSC: Factual



46. A \_\_\_\_ is a substance or disease that causes developmental harm to the embryo or fetus.
- lanugo
  - thalidomizer
  - teratogen
  - prenatal degrader

ANS: C                      DIF: moderate                      REF: Potential Problems in Prenatal Development  
MSC: Conceptual

47. A teratogen is a(n)
- tool used to extract the head of the fetus during birth.
  - instrument for assessing an Apgar rating of the newborn.
  - specially shaped delivery table at birthing centers.
  - external agent that causes developmental harm at particular times during pregnancy.

ANS: D                      DIF: moderate                      REF: Potential Problems in Prenatal Development  
MSC: Conceptual

48. Pregnant mothers should \_\_\_\_ exposure to teratogens.
- avoid
  - be indifferent about
  - seek occasional
  - seek continual

ANS: A                      DIF: easy                      REF: Potential Problems in Prenatal Development  
MSC: Applied

49. The proportion of infants born with a defect is about \_\_\_\_ percent.
- 1
  - 5
  - 25
  - 50

ANS: B                      DIF: easy                      REF: Potential Problems in Prenatal Development  
MSC: Factual

50. Teratogens can be described with a single word as
- enhancing.
  - nutritious.
  - harmful.
  - expansive.

ANS: C                      DIF: easy                      REF: Potential Problems in Prenatal Development  
MSC: Conceptual

51. Which statement about teratogens is FALSE?
- Harmful effects are more likely when exposure is long.
  - Each teratogen causes a single defect.
  - Individual embryos or fetuses may react differently to a particular teratogen.
  - The effects on a body organ are worst when the organ is forming or growing rapidly.

ANS: B                      DIF: moderate                      REF: Potential Problems in Prenatal Development  
MSC: Conceptual

52. A teratogenic sensitive period is the time when
- developmental enhancements are likely to occur.
  - a body organ is most vulnerable to teratogenic injury.
  - the pregnant mother reacts strongly to emotional crises.
  - odors from the pregnant mother elicit protective actions by family pets.

ANS: B

DIF: easy

REF: Potential Problems in Prenatal Development

MSC: Conceptual

53. While pregnant, Terry was exposed briefly to a very small amount of a teratogen. The effects of exposure will be
- serious because teratogens, by definition, cause severe birth defects.
  - maximized, depending on her genetic makeup.
  - minimized by the small amount and brevity of exposure.
  - varied, depending on the timing of the exposure.

ANS: D

DIF: moderate

REF: Potential Problems in Prenatal Development

MSC: Applied

54. When the father's exposure to a teratogen has a harmful effect on the child, the transfer occurs during
- conception.
  - the germinal period.
  - the period of the embryo.
  - the period of the fetus.

ANS: A

DIF: moderate

REF: Potential Problems in Prenatal Development

MSC: Conceptual

55. Teratogenic effects resulting from the father's exposure to substances are most likely to exert influence on
- sperm cells.
  - the surface of his skin.
  - the child after birth.
  - organs that have been fully formed.

ANS: A

DIF: moderate

REF: Potential Problems in Prenatal Development

MSC: Conceptual

56. Most of the sensitive periods for teratogenic injuries occur during the \_\_\_\_ period.
- germinal
  - embryonic
  - fetal
  - perinatal

ANS: B

DIF: moderate

REF: Potential Problems in Prenatal Development

MSC: Factual

57. At a prenatal clinic, expectant mothers are advised, “While pregnant, you must be most careful to avoid exposure to teratogens during the \_\_\_\_ period.”
- germinal
  - embryonic
  - fetal
  - perinatal

ANS: B                      DIF: moderate              REF: Potential Problems in Prenatal Development  
MSC: Applied

58. Of these various body parts, which has the longest duration high-sensitivity period for teratogenic injury?
- Arms
  - Teeth
  - Heart
  - Central nervous system

ANS: D                      DIF: moderate              REF: Potential Problems in Prenatal Development  
MSC: Factual

59. Teratogens are most likely to produce major structural abnormalities during the
- first two weeks after conception.
  - second to eighth weeks following conception.
  - 12th to 20th weeks following conception.
  - last trimester of pregnancy.

ANS: B                      DIF: moderate              REF: Potential Problems in Prenatal Development  
MSC: Factual

60. “Anytime malformations,” which occur from teratogen exposure during any week of the pregnancy, are LEAST applicable to which body organ?
- Palate
  - Eyes
  - Genitals
  - Nervous system

ANS: A                      DIF: difficult              REF: Potential Problems in Prenatal Development  
MSC: Factual

61. Consuming small amounts of alcohol (e.g., ounce/day) during pregnancy
- causes profound physical birth defects such as phocomelia.
  - causes psychosis and severe mental retardation in the mother and also in the baby.
  - may produce delayed developmental effects that appear months or years later, during childhood.
  - is harmless to development because the dosage is small.

ANS: C                      DIF: moderate              REF: Potential Problems in Prenatal Development  
MSC: Factual

62. Diseases tend to exert more harmful influences on the embryo or fetus than on the mother herself because
- a. mothers take many medications during pregnancy.
  - b. the unborn child's immune system is immature.
  - c. pregnant mothers are motivated to protect their health.
  - d. the embryo or fetus tries strongly to protect its mother.

ANS: B                      DIF: moderate              REF: Potential Problems in Prenatal Development  
MSC: Factual

63. Which of these is NOT a consequence common to babies whose mothers were exposed to rubella during pregnancy?
- a. Continual sneezing
  - b. Mental retardation
  - c. Deafness
  - d. Blindness

ANS: A                      DIF: easy                      REF: Potential Problems in Prenatal Development  
MSC: Factual

64. The developmental effects of rubella on the unborn child are \_\_\_\_ on the pregnant mother.
- a. much worse than
  - b. about the same as
  - c. milder than
  - d. of briefer duration than

ANS: A                      DIF: moderate              REF: Potential Problems in Prenatal Development  
MSC: Factual

65. The mother's rubella infection has its worst teratogenic effects on the offspring when the infection occurs
- a. in combination with alcohol.
  - b. during the first trimester.
  - c. during the second trimester.
  - d. during the third trimester.

ANS: B                      DIF: moderate              REF: Potential Problems in Prenatal Development  
MSC: Factual

66. Because the teratogenic effects of rubella are most severe during the first trimester, when pregnancy is not noticeable, one who is infected
- a. should plan to become pregnant soon.
  - b. must accept that willpower alone is the best treatment.
  - c. should keep distant from women of childbearing age.
  - d. should pass out rubella medications to everyone nearby.

ANS: C                      DIF: moderate              REF: Potential Problems in Prenatal Development  
MSC: Applied

67. Mother-to-child HIV/AIDS infection is most common among women who
- have a lesbian sexual orientation.
  - participate regularly in church choirs.
  - have avoided pregnancy until after age 35.
  - are involved with intravenous drug injection.

ANS: D

DIF: easy

REF: Potential Problems in Prenatal Development

MSC: Factual

68. The teratogenic disease \_\_\_\_ is transmitted to pregnant mothers who consume undercooked meat or who handle the feces of cats that were exposed to this infection.
- chicken pox
  - cholera
  - tuberculosis
  - toxoplasmosis

ANS: D

DIF: difficult

REF: Potential Problems in Prenatal Development

MSC: Factual

69. How do expectant mothers become infected with the teratogenic substance toxoplasmosis?
- Intimate relations with their infected husbands
  - Eating undercooked meat or by exposure to the feces of an infected cat
  - Breathing the airborne pollen of the acacia tree
  - Physical fatigue from excessive aerobic exercise

ANS: B

DIF: moderate

REF: Potential Problems in Prenatal Development

MSC: Factual

70. If you work in a pet shop and become pregnant, you should especially AVOID cleaning the cages of \_\_\_\_ because of the risk of catching toxoplasmosis from the droppings of an infected animal.
- monkeys
  - cats
  - dogs
  - reptiles or amphibians

ANS: B

DIF: difficult

REF: Potential Problems in Prenatal Development

MSC: Applied

71. Which mode of transmission is LEAST likely to infect the baby of a mother who is a carrier of the HIV/AIDS virus?
- Prenatal infection via the placenta
  - Via mother's milk during breastfeeding
  - Via mosquito bites to mother, then to baby
  - During birth, via blood exchange from the placenta

ANS: C

DIF: easy

REF: Potential Problems in Prenatal Development

MSC: Factual

72. When normal vaginal birth poses a risk of infecting the child with an STD such as genital herpes, the birth is
- a. preceded by massive fetal doses of analgesics.
  - b. delayed indefinitely until signs of infection are gone.
  - c. done via cesarean delivery to minimize infection risk.
  - d. recommended to be done at home to provide a soothing environment.

ANS: C                      DIF: moderate              REF: Potential Problems in Prenatal Development  
MSC: Factual

73. Syphilis, a sexually transmitted disease, is most harmful to infants during the
- a. period of the zygote.
  - b. birth.
  - c. embryonic stage.
  - d. period of the fetus.

ANS: D                      DIF: moderate              REF: Potential Problems in Prenatal Development  
MSC: Factual

74. Today, most babies who are born infected with HIV in the United States
- a. die shortly after birth.
  - b. will die by age 3.
  - c. are likely to live beyond the age of 6.
  - d. are able to live long and healthy lives.

ANS: C                      DIF: moderate              REF: Potential Problems in Prenatal Development  
MSC: Factual

75. The ancient Greek philosopher Aristotle observed that
- a. some teratogenic drugs prevent birth defects.
  - b. low-birth-weight babies commonly become obese adults.
  - c. on rare occasions, men become pregnant and give birth.
  - d. drunken mothers give birth to feeble-minded infants.

ANS: D                      DIF: difficult              REF: Potential Problems in Prenatal Development  
MSC: Factual

76. The teratogen thalidomide is a mild tranquilizer that was sold over the counter as a remedy for
- a. nausea and vomiting.
  - b. anxiety.
  - c. headaches.
  - d. diarrhea.

ANS: A                      DIF: moderate              REF: Potential Problems in Prenatal Development  
MSC: Factual

77. Thalidomide generated strong teratogenic effects on children whose mothers consumed the drug during \_\_\_\_ of pregnancy.
- a. the first two months
  - b. the second trimester
  - c. the third trimester
  - d. any interval

ANS: A                      DIF: moderate              REF: Potential Problems in Prenatal Development  
MSC: Factual

78. The thalidomide tragedy during the 1960s showed that
- saving money with low-cost drugs is no bargain.
  - sexually transmitted diseases exert harmful effects on the child even years after the disease was cured.
  - animal testing of new drugs does not guarantee their safety for humans.
  - dietary factors interact with drugs in unexpected ways.

ANS: C                      DIF: moderate              REF: Potential Problems in Prenatal Development  
MSC: Conceptual

79. Developmental injuries were caused by thalidomide to each of these organs EXCEPT the
- ears.
  - genitals.
  - arms.
  - legs.

ANS: B                      DIF: moderate              REF: Potential Problems in Prenatal Development  
MSC: Factual

80. The developmental disability called phocomelia affects
- the distribution and texture of hair on the head.
  - later intellectual abilities and performance.
  - the appearance of the face.
  - the development of legs or arms.

ANS: D                      DIF: moderate              REF: Potential Problems in Prenatal Development  
MSC: Factual

81. Which of these drugs is known to cause harmful effects when taken late in pregnancy, during the third trimester?
- Ibuprofen
  - Lithium antidepressants
  - Thalidomide
  - Sex hormones

ANS: A                      DIF: difficult              REF: Potential Problems in Prenatal Development  
MSC: Factual

82. The drug diethylstilbestrol (DES) generated unique teratogenic effects because the abnormalities
- affected the family's house pets, not the humans.
  - did not appear in the child until adolescence.
  - affected sons but not daughters.
  - improved the child's intelligence.

ANS: B                      DIF: moderate              REF: Potential Problems in Prenatal Development  
MSC: Factual

83. Diethylstilbestrol (DES) is a teratogen that results in
- deformities of the arms and legs.
  - abnormalities of the reproductive organs of female offspring.
  - mental retardation.
  - depression.

ANS: B                      DIF: moderate              REF: Potential Problems in Prenatal Development  
MSC: Factual

84. For child victims of fetal alcohol syndrome (FAS), physical malformations occur in all of these EXCEPT the
- a. face.
  - b. limbs.
  - c. heart.
  - d. genitals.

ANS: D                      DIF: easy                      REF: Potential Problems in Prenatal Development  
MSC: Factual

85. Fetal alcohol syndrome (FAS) is suffered by children
- a. who were bathed in alcohol at the time of birth.
  - b. who were fed bottled formula that contained small amounts of alcohol.
  - c. who were injected with medications suspended in an alcohol solution.
  - d. whose mothers consumed large amounts of alcoholic beverages during pregnancy.

ANS: D                      DIF: easy                      REF: Potential Problems in Prenatal Development  
MSC: Conceptual

86. FETAL ALCOHOL SYNDROME is to FETAL ALCOHOL EFFECT as \_\_\_\_ is to \_\_\_\_.
- a. BOY :: GIRL
  - b. BAD :: GOOD
  - c. SEVERE :: MILD
  - d. ABSTINENCE :: EXCESSIVE

ANS: C                      DIF: difficult                      REF: Potential Problems in Prenatal Development  
MSC: Conceptual

87. To avoid the risk of alcohol-related FAS or FAE disorders, pregnant women are advised to
- a. consume alcohol in small amounts throughout pregnancy.
  - b. eat nutritious foods on any day when alcohol is consumed.
  - c. totally abstain from alcohol during pregnancy.
  - d. abstain from intercourse when pregnancy is detected.

ANS: C                      DIF: easy                      REF: Potential Problems in Prenatal Development  
MSC: Applied

88. A pregnant woman tells her neighbor, "I know about fetal alcohol syndrome, and I've reduced my drinking. I now drink moderately with friends." Her social drinking
- a. is recommended because it relieves maternal stress.
  - b. is harmless to the developing child.
  - c. can cause symptoms of fetal alcohol effect (FAE), despite her moderation.
  - d. counteracts the harmful effects of other teratogens.

ANS: C                      DIF: moderate                      REF: Potential Problems in Prenatal Development  
MSC: Applied

89. Which of the following is NOT a consequence of FAE?
- a. Stunted growth
  - b. Learning deficits
  - c. Problems with attention
  - d. Mental retardation

ANS: D                      DIF: moderate                      REF: Potential Problems in Prenatal Development  
MSC: Factual



90. Babies who are born to cigarette-smoking mothers

- a. suffer from FAS or FAE.
- b. are normal in every respect.
- c. tend to have low birth weight.
- d. display the structural defects of phocomelia.

ANS: C

DIF: moderate

REF: Potential Problems in Prenatal Development

MSC: Factual

91. A preborn child is affected by its father's smoking because

- a. the pregnant mother inhales passive smoke, which is passed to the fetus.
- b. sperm cells are invigorated by smoke.
- c. fathers who smoke provide less nutritious food to pregnant mothers, to save money to buy cigarettes.
- d. smoking fathers are emotionally detached from the child.

ANS: A

DIF: moderate

REF: Potential Problems in Prenatal Development

MSC: Factual

92. All of the following complications have been associated with maternal smoking during pregnancy EXCEPT

- a. malformations of the ears.
- b. abnormal lung function.
- c. an increased risk of death shortly after birth.
- d. deformities of the palate.

ANS: A

DIF: moderate

REF: Potential Problems in Prenatal Development

MSC: Factual

93. Some of the long-term effects of prenatal exposure to tobacco products include

- a. a tendency to smoke in adulthood.
- b. an increased risk of conduct and other behavior problems.
- c. toxoplasmosis.
- d. depression.

ANS: B

DIF: moderate

REF: Potential Problems in Prenatal Development

MSC: Factual

94. Of the various illicit drugs, \_\_\_\_ clearly induces the worst physical defects on the preborn child.

- a. marijuana
- b. heroin
- c. cocaine
- d. methadone

ANS: C

DIF: difficult

REF: Potential Problems in Prenatal Development

MSC: Factual

95. Even when drugs fail to induce physical deformities, they may have harmful consequences by

- a. producing neonatal behaviors that reduce parental bonding with the child.
- b. deterring the infant's enrollment in daycare.
- c. triggering attentional craving, with sibling neglect.
- d. preventing the natural miscarriage of defective embryos.

ANS: A

DIF: moderate

REF: Potential Problems in Prenatal Development

MSC: Conceptual

96. Regarding alcohol, tobacco, and drugs, pregnant mothers are advised to
- consume these substances in moderation.
  - abstain entirely from these substances.
  - abstain from alcohol and drugs, but smoking is okay.
  - abstain, unless abstinence harms relations with the father.

ANS: B

DIF: easy

REF: Potential Problems in Prenatal Development

MSC: Applied

97. Recent research has revealed that marijuana use during pregnancy
- is associated with low birth weight.
  - has no noticeable effect.
  - should be recommended to alleviate maternal discomfort.
  - may impair the functioning of the areas of the brain responsible for emotional regulation.

ANS: D

DIF: moderate

REF: Potential Problems in Prenatal Development

MSC: Factual

98. Aspects of the postnatal environment that may influence the severity of deficits caused by prenatal exposure to cocaine include
- the quality of the home environment.
  - the extent to which the father is involved in caretaking.
  - the immediate response of medical personnel.
  - nutrition after birth.

ANS: A

DIF: moderate

REF: Potential Problems in Prenatal Development

MSC: Conceptual

99. Evidence that radiation exposure harms the embryo or fetus came from
- experiments done with test animals.
  - speculations of nuclear scientists at Los Alamos, NM.
  - monster movies of the 1950s.
  - deformities in children born to Japanese women following the atomic bombings of Japanese cities in World War II.

ANS: D

DIF: moderate

REF: Potential Problems in Prenatal Development

MSC: Factual

100. Exposure to radiation during pregnancy is a type of
- environmental hazard.
  - engrossment experience.
  - sexually transmitted disease.
  - cultural and historical variation.

ANS: A

DIF: easy

REF: Potential Problems in Prenatal Development

MSC: Conceptual

101. Pregnant women should generally avoid x-ray exposure, especially x-rays of the
- neck area.
  - head.
  - forearms or hands.
  - pelvis and abdomen.

ANS: D

DIF: easy

REF: Potential Problems in Prenatal Development

MSC: Applied

102. Exposure to heavy metals (mercury, antimony, lead, or zinc) is known to yield all of these effects EXCEPT
- physical deformities.
  - impaired physical health.
  - mental retardation.
  - faster learning.

ANS: D                      DIF: easy                      REF: Potential Problems in Prenatal Development  
MSC: Factual

103. When the father's exposure to toxic chemicals or radiation affects the baby's prenatal development, the harmful effects most often arise from
- spouse beatings.
  - psychological expectations.
  - chromosomal damage in sperm cells.
  - medications taken to counteract the substances' effects.

ANS: C                      DIF: moderate                      REF: Potential Problems in Prenatal Development  
MSC: Factual

104. The teratogenic pathway for environmental hazards or substances from father to mother is via
- physical touching, which facilitates substance transfer.
  - conversations between husband and wife.
  - chromosomal damage to the man's sperm cells.
  - shared diet consumed at meals.

ANS: C                      DIF: easy                      REF: Potential Problems in Prenatal Development  
MSC: Factual

105. Environmental hazards that act as teratogens include chemicals and pollutants present in all of the following EXCEPT
- artificial sweeteners.
  - cosmetic products.
  - fruit juice.
  - food additives.

ANS: C                      DIF: moderate                      REF: Potential Problems in Prenatal Development  
MSC: Factual

106. Women today are advised that during the entire pregnancy, for a healthy baby, the mother should
- lose about 10 pounds.
  - maintain body weight at her pre-pregnancy level.
  - gain no more than 10 pounds.
  - gain 25 to 35 pounds.

ANS: D                      DIF: moderate                      REF: Potential Problems in Prenatal Development  
MSC: Factual

107. As contrasted with earlier decades, women today are told to gain moderate weight (25 to 35 pounds) during pregnancy
- under no circumstances.
  - to ensure that prenatal nutrition is sufficient to support prenatal growth.
  - only if multiple births are anticipated.
  - if the couples' older children are emaciated or weak.

ANS: B                      DIF: easy                      REF: Potential Problems in Prenatal Development  
MSC: Factual

108. A maternal diet that is rich in \_\_\_\_ helps minimize the risk of Down syndrome or spinal tube defects in the unborn child.
- starchy carbohydrates
  - sugar or other sweeteners
  - folic acid
  - fatty red meats

ANS: C                      DIF: moderate                      REF: Potential Problems in Prenatal Development  
MSC: Factual

109. The mother's consumption of folic acid in her diet is known to help prevent \_\_\_\_ in the child.
- phocomelia
  - FAE/FAS
  - sudden infant death syndrome
  - Down syndrome, anencephaly, or spinal bifida

ANS: D                      DIF: moderate                      REF: Potential Problems in Prenatal Development  
MSC: Factual

110. The beneficial effects of folic acid on prenatal growth are especially important during the
- preconceptual period.
  - first trimester.
  - second trimester.
  - third trimester.

ANS: B                      DIF: moderate                      REF: Potential Problems in Prenatal Development  
MSC: Factual

111. The unborn child is resilient and is unlikely to show harmful aftereffects to the mother's stress
- in any situation.
  - when the stressful episode is temporary.
  - when the stress is prolonged or severe.
  - in no situation.

ANS: B                      DIF: moderate                      REF: Potential Problems in Prenatal Development  
MSC: Conceptual

112. When stressors are prolonged or severe, the unborn child is likely to show all these symptoms EXCEPT
- a. premature delivery.
  - b. stunted prenatal growth.
  - c. regular sleep/wake cycles.
  - d. birth complications.

ANS: C                      DIF: easy                      REF: Potential Problems in Prenatal Development  
MSC: Conceptual

113. Having positive social support, such as interested and supportive friends, will \_\_\_\_ the harmful effects of maternal emotional stress on the fetus.
- a. reduce
  - b. have no impact on
  - c. intensify or prolong
  - d. obscure or mask

ANS: A                      DIF: easy                      REF: Potential Problems in Prenatal Development  
MSC: Conceptual

114. High levels of maternal stress are harmful to the fetus because
- a. maternal stress can result in postpartum depression.
  - b. a stressed mother will not love her infant.
  - c. stress hormones divert blood flow from the fetus and weaken the mother's immune system.
  - d. stress can harm the mother's liver.

ANS: C                      DIF: moderate                      REF: Potential Problems in Prenatal Development  
MSC: Factual

115. Temporarily stressful episodes such as a fall, argument, or frightening experience have
- a. been shown to stunt prenatal growth.
  - b. few if any harmful consequences for the mother or her fetus.
  - c. resulted in birth complications.
  - d. been linked to changes in fetal sensory reactivity.

ANS: B                      DIF: moderate                      REF: Potential Problems in Prenatal Development  
MSC: Factual

116. Recently, researcher Janet DiPietro uncovered that
- a. maternal stress has no impact on prenatal development.
  - b. maternal stress has a significant negative impact on prenatal growth.
  - c. maternal stress will impair fetal development when the mother is driven to drink alcohol.
  - d. moderate amounts of maternal stress may be necessary for healthy prenatal development.

ANS: D                      DIF: moderate                      REF: Potential Problems in Prenatal Development  
MSC: Factual

117. A neonate is an
- infant who was born early.
  - infant who has a low birth weight.
  - a newborn to one-month-old infant.
  - infant who is about to be born.

ANS: C                      DIF: moderate                      REF: Potential Problems in Prenatal Development  
MSC: Factual

118. Childbearing is safest when the mother's age is between \_\_\_\_ and \_\_\_\_ years.
- 13; 20
  - 16; 35
  - 25; 40
  - 30; 45

ANS: B                      DIF: moderate                      REF: Potential Problems in Prenatal Development  
MSC: Factual

119. Teenage mothers younger than age 16 tend to have
- devoted, attentive husbands.
  - premature deliveries of low-birth-weight babies.
  - increased risk that the baby will be born with the Down syndrome chromosomal defect.
  - more educational achievement than others their age.

ANS: B                      DIF: easy                      REF: Potential Problems in Prenatal Development  
MSC: Factual

120. When teenage mothers receive good prenatal care and proper attention at birth, the health of their neonate is \_\_\_\_ that for post-teenage mothers.
- better than
  - similar to
  - worse than
  - unable to be compared to

ANS: B                      DIF: easy                      REF: Potential Problems in Prenatal Development  
MSC: Factual

121. The prenatal/perinatal health problems of teenage mothers
- cannot be alleviated, even with proper healthcare.
  - are attributed to the mother's own chromosomal defects.
  - are the outcome of excessive attention to the pregnancy by the devoted father who lacks paternal knowledge.
  - are usually eliminated when the mother gets good prenatal care and attention at birth.

ANS: D                      DIF: moderate                      REF: Potential Problems in Prenatal Development  
MSC: Factual

122. Chromosomal abnormalities and miscarriage of the unborn child are most likely for
- teenage mothers.
  - mothers in their 20s.
  - mothers over the age of 35.
  - pregnant fathers.

ANS: C                      DIF: moderate                      REF: Potential Problems in Prenatal Development  
MSC: Factual

123. The majority of genetically defective embryos
- have the defects corrected prenatally and are born in normal condition.
  - transmit the defects back to the uterine wall, so that embryos conceived later also share that defect.
  - are born with the defective phenotypic trait.
  - are spontaneously miscarried.
- ANS: D                      DIF: moderate                      REF: Potential Problems in Prenatal Development  
MSC: Factual
124. Identify the correct sequence of developmental intervals, from youngest to oldest.
- Prenatal :: infantile :: perinatal
  - Infantile :: perinatal :: prenatal
  - Perinatal :: prenatal :: infantile
  - Prenatal :: perinatal :: infantile
- ANS: D                      DIF: easy                      REF: Birth and the Perinatal Environment  
MSC: Conceptual
125. Labor, delivery, and afterbirth are events of
- the prenatal period.
  - the perinatal environment.
  - infantile nurturance.
  - germinal implantation.
- ANS: B                      DIF: moderate                      REF: Birth and the Perinatal Environment  
MSC: Conceptual
126. Uterine contractions spaced at 10- to 15-minute intervals occur
- during afterbirth.
  - in the first stage of labor.
  - following the expulsion of the fetus from the mother's body.
  - during head crowning.
- ANS: B                      DIF: moderate                      REF: Birth and the Perinatal Environment  
MSC: Factual
127. PRENATAL is to PERINATAL as \_\_\_\_ is to \_\_\_\_.
- MOTHERHOOD :: FATHERHOOD
  - PERFECT :: DEFECTIVE
  - REFLEX :: LEARNING
  - PREGNANCY :: BIRTH
- ANS: D                      DIF: difficult                      REF: Birth and the Perinatal Environment  
MSC: Conceptual
128. A midwife is a specialist in
- genetic counseling.
  - "shotgun" forced weddings.
  - perinatal activities.
  - prenatal diagnostics.
- ANS: C                      DIF: moderate                      REF: Birth and the Perinatal Environment  
MSC: Conceptual

129. Identify the correct sequence of childbirth events, from earliest to last.

- a. Contractions :: delivery :: afterbirth
- b. Afterbirth :: contractions :: delivery
- c. Contractions :: afterbirth :: delivery
- d. Delivery :: contractions :: afterbirth

ANS: A

DIF: easy

REF: Birth and the Perinatal Environment

MSC: Factual

130. Which of these events happens earliest during the first stage of labor?

- a. Full dilation (enlargement) of the cervix
- b. Intense, frequent uterine contractions
- c. Mild, infrequent uterine contractions
- d. Fetus's head positioned at the cervix

ANS: C

DIF: moderate

REF: Birth and the Perinatal Environment

MSC: Factual

131. During \_\_\_\_, the fetus is expelled from the mother's body.

- a. implantation
- b. uterine contractions
- c. delivery
- d. afterbirth

ANS: C

DIF: easy

REF: Birth and the Perinatal Environment

MSC: Factual

132. Which perinatal stage is completed most slowly?

- a. Labor
- b. Delivery
- c. Afterbirth
- d. All stages have equal duration

ANS: A

DIF: easy

REF: Birth and the Perinatal Environment

MSC: Factual

133. Which perinatal stage is most quickly finished?

- a. Labor
- b. Delivery
- c. Afterbirth
- d. All stages have equal duration

ANS: C

DIF: easy

REF: Birth and the Perinatal Environment

MSC: Factual

134. Sam and Nina are in the delivery room, waiting for their child's birth. The doctor tells them that the child's head has just passed through the cervix and has entered the vagina. Nina is in the

- a. first stage of labor.
- b. second stage of labor.
- c. third stage of labor.
- d. fourth stage of labor.

ANS: B

DIF: moderate

REF: Birth and the Perinatal Environment

MSC: Applied



135. What happens to the placenta following the delivery?

- a. It travels to the ovaries and wraps around them
- b. It becomes part of the mother's digestive tract
- c. It is slowly reabsorbed into the uterine lining
- d. It is expelled during the afterbirth stage

ANS: D

DIF: easy

REF: Birth and the Perinatal Environment

MSC: Factual

136. When Junior is born, he is bluish in color with a flattened nose and misshapen forehead. Junior shows all the physical signs of

- a. suffering from severe anoxia.
- b. Down syndrome.
- c. being a normal baby.
- d. trisomy-21.

ANS: C

DIF: moderate

REF: Birth and the Perinatal Environment

MSC: Applied

137. For the fetus, the stressful experience of birth is useful because it

- a. eliminates the weakest who are in the worst health.
- b. ensures that it is fully awake and ready to breathe.
- c. discourages the parents from having too many children.
- d. prevents the fetus from returning to the womb's comfort.

ANS: B

DIF: easy

REF: Birth and the Perinatal Environment

MSC: Conceptual

138. Which of these is LEAST characteristic of the neonate's immediate appearance?

- a. Clean skin
- b. Bruises and bumps
- c. Flattened nose
- d. Misshapen forehead

ANS: A

DIF: easy

REF: Birth and the Perinatal Environment

MSC: Factual

139. The weight of the average full-term neonate is about

- a. 5 pounds.
- b. 6 pounds.
- c. 7 1/2 pounds.
- d. 8 1/2 pounds.

ANS: C

DIF: moderate

REF: Birth and the Perinatal Environment

MSC: Factual

140. Cinderella's new baby is 20 inches long, which is \_\_\_\_ for a full-term neonate.

- a. small
- b. average size
- c. slightly large
- d. exceptionally large

ANS: B

DIF: moderate

REF: Birth and the Perinatal Environment

MSC: Applied

141. Which of these is NOT among the five measurements that make up the Apgar test for neonates?
- a. Muscle tone
  - b. Heart rate
  - c. Reflex irritability
  - d. Attention span

ANS: D                      DIF: moderate              REF: Birth and the Perinatal Environment  
MSC: Factual

142. The Apgar test is used for assessing
- a. the neonate's physical health.
  - b. a couple's suitability for parenthood.
  - c. the presence or absence of genetic defects.
  - d. the neonate's level of psychological knowledge.

ANS: A                      DIF: moderate              REF: Birth and the Perinatal Environment  
MSC: Factual

143. Margaret's newborn baby is crying loudly in the delivery room and has turned pink all over. When a nurse extends the baby's leg, the infant pulls away. Margaret's newborn would score
- a. 0 to 3 points on the Apgar scale.
  - b. 4 or 5 points on the Apgar scale.
  - c. 8 to 10 points on the Apgar scale.
  - d. 15 or more points on the Apgar scale.

ANS: C                      DIF: difficult              REF: Birth and the Perinatal Environment  
MSC: Applied

144. Brazelton's Neonatal Behavioral Assessment Scale (NBAS) is applied to assess the newborn infant's
- a. basic bodily functions such as digestion or excretion.
  - b. vital life signs that are needed for survival.
  - c. reflexes and psychological responses.
  - d. social attachment to the mother.

ANS: C                      DIF: moderate              REF: Birth and the Perinatal Environment  
MSC: Conceptual

145. A beneficial effect of using Brazelton's NBAS scale is that parents who involve themselves in its ratings
- a. learn how best to respond to their neonate's traits.
  - b. quarrel less often with their spouse.
  - c. feed their neonate on an optimized timetable.
  - d. understand how best to handle grandparents' intrusions.

ANS: A                      DIF: moderate              REF: Birth and the Perinatal Environment  
MSC: Applied

146. About \_\_\_\_ percent of American mothers are given drugs during the birthing process.
- a. 35
  - b. 55
  - c. 75
  - d. 95

ANS: D                      DIF: moderate              REF: Birth and the Perinatal Environment  
MSC: Factual

147. The obstetrical \_\_\_\_ resemble a pair of salad tongs and are used to pull the head through the birth canal during delivery; it is easily misused.
- a. gondola
  - b. forceps
  - c. debilitator
  - d. nutcracker

ANS: B                      DIF: easy                      REF: Birth and the Perinatal Environment  
MSC: Factual

148. Which two obstetrical tools are applied to help pull the fetus through the birth canal during delivery?
- a. Vacuum extractor and forceps
  - b. Scalpel and orthopedic saw
  - c. Expirator and cannula
  - d. Trocar and lancet

ANS: A                      DIF: easy                      REF: Birth and the Perinatal Environment  
MSC: Factual

149. In addition to being lethargic during the birthing experience, babies of heavily medicated mothers
- a. exhibit unmistakable signs of mental retardation.
  - b. forget learned responses acquired in the womb.
  - c. emit behaviors that inhibit the mother's bonding.
  - d. show long-delayed jealousy reactions to later siblings.

ANS: C                      DIF: moderate                      REF: Birth and the Perinatal Environment  
MSC: Factual

150. During natural or prepared childbirth,
- a. the mother delivers her neonate by herself.
  - b. painkilling analgesic drugs are given in moderate doses.
  - c. the couple practices exercises for weeks prior to birth.
  - d. the birth occurs outdoors, preferably during a full moon.

ANS: C                      DIF: easy                      REF: Birth and the Perinatal Environment  
MSC: Factual

151. The father is encouraged to perform an active role during the birthing process when
- a. cultural traditions discourage or ban such behavior.
  - b. HMO insurance rules permit charging for this option.
  - c. the couple selects natural or prepared childbirth.
  - d. hospital rules restrict fathers to the waiting room.

ANS: C                      DIF: easy                      REF: Birth and the Perinatal Environment  
MSC: Factual

152. The current popularity in the United States of giving birth at home is
- a. low, but on the rise.
  - b. remaining stable at about 80 percent of all births.
  - c. remaining stable at about 40 percent of all births.
  - d. high, but falling.

ANS: A                      DIF: difficult                      REF: Birth and the Perinatal Environment  
MSC: Factual

153. The biggest risk/disadvantage of giving birth at home is its
- unsanitary conditions.
  - unnecessary high costs.
  - absence of familiar social support.
  - lack of specialists in case of complications.

ANS: D                      DIF: moderate                      REF: Birth and the Perinatal Environment  
MSC: Conceptual

154. "Alternative birth centers" are typically operated by
- cost-conscious HMO insurance providers.
  - hospitals or certified nurse-midwives.
  - self-isolated secretive communities.
  - vegetarian healthfood stores.

ANS: B                      DIF: easy                      REF: Birth and the Perinatal Environment  
MSC: Factual

155. Following the birth, a strong sensitive period for maternal bonding to the child occurs during the
- first six to 12 hours.
  - third to sixth day.
  - second to third week.
  - second to third month.

ANS: A                      DIF: moderate                      REF: Birth and the Perinatal Environment  
MSC: Factual

156. Suppose that the baby is withheld from the mother's cuddling for the first three days. Even when given to the mother's care on the fourth day, the neonate has missed
- the chance to learn to enjoy breastfeeding.
  - the most sensitive period for maternal bonding.
  - the risk of injury by any teratogens.
  - the opportunity to learn reflexes.

ANS: B                      DIF: moderate                      REF: Birth and the Perinatal Environment  
MSC: Applied

157. Early immediate contact with the neonate is \_\_\_\_ for forming emotional bonds between mother and child.
- absolutely essential
  - helpful but not obligatory
  - counterproductive
  - irrelevant

ANS: B                      DIF: moderate                      REF: Birth and the Perinatal Environment  
MSC: Factual

158. MATERNITY BLUES are to POSTPARTUM DEPRESSION as \_\_\_\_ is to \_\_\_\_.
- PRIMATE :: HUMAN
  - POSITIVE :: NEGATIVE
  - FATHER :: MOTHER
  - MILD :: INTENSE

ANS: D                      DIF: difficult                      REF: Birth and the Perinatal Environment  
MSC: Conceptual

159. The debilitating effects of postpartum depression are suffered by about \_\_\_\_ percent of mothers after the birth.
- a. 10
  - b. 30
  - c. 50
  - d. 70

ANS: A                      DIF: moderate              REF: Birth and the Perinatal Environment  
MSC: Factual

160. \_\_\_\_ is a strong predictor of postpartum depression.
- a. Positive maternal interaction with the infant
  - b. The mother's lack of social support within the family
  - c. A maternal diet consisting mainly of greasy foods
  - d. The presence of cats within the home

ANS: B                      DIF: moderate              REF: Birth and the Perinatal Environment  
MSC: Conceptual

161. The father's experience of engrossment
- a. is a positive fascination with the child.
  - b. when intense, predicts later paternal abusive actions.
  - c. generally triggers disapproval from the mother.
  - d. reflects interest in bonding family pets to the infant.

ANS: A                      DIF: easy                      REF: Birth and the Perinatal Environment  
MSC: Conceptual

162. EMOTIONAL BONDING is to ENGROSSMENT as \_\_\_\_ is to \_\_\_\_.
- a. AFFECTION :: ABUSE
  - b. NURTURANCE :: NEGLECT
  - c. BRIEF :: ENDURING
  - d. MOTHER :: FATHER

ANS: D                      DIF: difficult              REF: Birth and the Perinatal Environment  
MSC: Conceptual

163. Research suggests that fathers who have helped care for their infants soon after birth
- a. will be less likely to experience postpartum depression.
  - b. will be more understanding of their spouses.
  - c. tend to avoid engrossment.
  - d. may spend more time interacting with their infants at home.

ANS: D                      DIF: moderate              REF: Birth and the Perinatal Environment  
MSC: Factual

164. A spirit of competition, jealousy, and resentment that arises between two or more siblings is known as
- a. sibling rivalry.
  - b. a sensitive period.
  - c. anoxia.
  - d. engrossment.

ANS: A                      DIF: easy                      REF: Birth and the Perinatal Environment  
MSC: Factual              NOT: New

165. Which of the following children is likely to experience the LEAST sibling rivalry?
- a. Joe, who had an insecure attachment to his mother before his baby brother was born
  - b. Jayne, who had a secure attachment but whose mother was ill after the baby was born so routines are disrupted
  - c. Miranda, who is one year old when her baby sister is born
  - d. Casey, who is three years old when her baby brother is born

ANS: C                      DIF: difficult                      REF: Birth and the Perinatal Environment  
MSC: Applied                      NOT: New

166. A common cause of anoxia in the neonate is
- a. lack of sufficient sleep following the birth.
  - b. squeezing of the umbilical cord during delivery.
  - c. mother's excessive breath-holding during delivery.
  - d. pollutants breathed by the mother the first trimester.

ANS: B                      DIF: moderate                      REF: Potential Problems at Birth  
MSC: Factual

167. The breech position of delivery means that the fetus's \_\_\_\_ is/are passed through the cervix first.
- a. feet or buttocks
  - b. hands or arms
  - c. shoulders
  - d. head

ANS: A                      DIF: easy                      REF: Potential Problems at Birth  
MSC: Factual

168. When anoxia is predicted to be a risk during delivery, the doctor/midwife is likely to recommend
- a. perfusion of liquid oxygen into the womb.
  - b. early inducement of labor.
  - c. delivery via cesarean section.
  - d. maternal injection of massive doses of vitamin A.

ANS: C                      DIF: moderate                      REF: Potential Problems at Birth  
MSC: Factual

169. Permanent brain injury is likely when the infant's brain has been oxygen-starved for as brief an interval as
- a. 10 seconds.
  - b. one minute.
  - c. three minutes.
  - d. eight minutes.

ANS: C                      DIF: moderate                      REF: Potential Problems at Birth  
MSC: Factual

170. An indirect but serious side-effect of Rh-factor blood incompatibility between mother and child is the baby's
- a. secure temperament.
  - b. highly sensitive hearing.
  - c. oxygen deprivation from anoxia.
  - d. excessive and insatiable hunger drive.

ANS: C                      DIF: difficult                      REF: Potential Problems at Birth  
MSC: Factual

171. Rh-incompatibility is treated with
- a. anesthesia.
  - b. rhogam.
  - c. surfactin.
  - d. isolettes.

ANS: B                      DIF: easy                      REF: Birth and the Perinatal Environment  
MSC: Factual                      NOT: New

172. Which of these is LEAST characteristic of timely (full-term) neonates at birth?
- a. Gestational age since conception of 35 weeks
  - b. Average weight of 7 1/2 pounds
  - c. Average height of 20 inches
  - d. Free from anoxia

ANS: A                      DIF: moderate                      REF: Potential Problems at Birth  
OBJ: 1                      MSC: Conceptual

173. Which neonate is relatively SMALLEST in weight for its gestational age since conception?
- a. Timely
  - b. Preterm
  - c. Small for date
  - d. Postmature

ANS: C                      DIF: easy                      REF: Potential Problems at Birth  
MSC: Factual

174. \_\_\_\_ neonates have shown prenatal growth at the usual rate but were delivered too early.
- a. Preterm
  - b. Small-for-date
  - c. Timely
  - d. Postmature

ANS: A                      DIF: moderate                      REF: Potential Problems at Birth  
MSC: Conceptual

175. Which of these is LEAST related to low birth weight of the neonate?
- a. Mother smokes or consumes alcohol heavily
  - b. Mother has low income and is from an ethnic minority
  - c. Twins, triplets, or quadruplets were delivered
  - d. Mother is calm and free from stress

ANS: D                      DIF: easy                      REF: Potential Problems at Birth  
MSC: Factual

176. The correlation between birth weight and the likelihood of infant death is
- positive; heavier babies have greatest death risk.
  - nonexistent; birth weight is unrelated to death risk.
  - negative; the lightest babies have the greatest death risk.
  - unknown for human infants.

ANS: C                      DIF: moderate              REF: Potential Problems at Birth  
MSC: Factual

177. Which statement about isolettes is FALSE?
- Parents cuddle and hug their neonate in the isolette.
  - The isolette protects the neonate from infections.
  - Cleaning, feeding, and diaper changing is done through a hole in the isolette.
  - Preterm neonates are nurtured in the isolette.

ANS: A                      DIF: moderate              REF: Potential Problems at Birth  
MSC: Factual

178. In addition to their physical health problems, preterm babies are difficult to raise because they
- emit behaviors that aggravate their caregivers.
  - habitually crawl away from adults, then get “lost.”
  - rarely ever recover fully from their chronic diarrhea.
  - hold their breath to gain resuscitative attention.

ANS: A                      DIF: moderate              REF: Potential Problems at Birth  
MSC: Factual

179. At hospitals, parents today are encouraged to \_\_\_\_ their hospitalized preterm neonate.
- visit frequently with
  - teach traditional male/female gender roles to
  - instruct hospital staff on care preferences for
  - delegate to staff all decisions on nurturant care for

ANS: A                      DIF: moderate              REF: Potential Problems at Birth  
MSC: Factual

180. What is known about the long-term prognosis for development of low-birth-weight babies?
- They are doomed to a lifetime of retardation
  - Enriched later environments can compensate for deficits
  - The notion of a “self-righting tendency” is a delusion
  - Very few low-birth-weight babies survive to age three

ANS: B                      DIF: moderate              REF: Potential Problems at Birth  
MSC: Factual



181. Low-birth-weight babies of educated parents are resilient and improve on intellectual deficits, while similar kids born to parents with less education. This outcome implies that
- the quality of the postnatal environment can have a strong influence on the extent to which the development of low-birth-weight babies will be compromised.
  - the healthcare available to healthy families provides effective treatment of low birth weight.
  - low-income parents ignore the results of the Apgar test.
  - reflexes are deficient in poor children.

ANS: A                      DIF: moderate              REF: Potential Problems at Birth  
MSC: Conceptual        NOT: New

182. Which birth defect can best be reversed by later enriched experiences or diet?
- Neonatal low birth weight
  - Blindness caused by rubella
  - Mental retardation from anoxia
  - Mental retardation from fetal alcohol syndrome

ANS: A                      DIF: difficult              REF: Potential Problems at Birth  
MSC: Factual

183. Children respond variously to teratogens or to other harmful influences of early development. The variations of outcomes attest that
- religious faith is essential to overcome disability.
  - individual differences among children are important.
  - the so-called “self-righting tendency” is a myth.
  - nature is developmental destiny.

ANS: B                      DIF: moderate  
REF: Applying Developmental Themes to Prenatal Development and Birth  
MSC: Conceptual

184. When we recall that prenatal development affects a child’s future physical, emotional, and cognitive development, this is an example of
- the developmental theme of the active child.
  - qualitative stage progression.
  - the holistic nature of child development.
  - biological determinism.

ANS: C                      DIF: difficult  
REF: Applying Developmental Themes to Prenatal Development and Birth  
MSC: Conceptual

185. Which of the following is NOT an example of qualitative stage progression?
- Endoderm :: mesoderm :: ectoderm
  - Zygote :: embryo :: fetus
  - First :: second :: third trimesters
  - Labor :: birth :: afterbirth

ANS: A                      DIF: difficult  
REF: Applying Developmental Themes to Prenatal Development and Birth  
MSC: Applied

## SHORT ANSWER

1. Identify the three stages of prenatal development, and indicate the timespan that each stage covers.

ANS: Answer not provided.

DIF: moderate      REF: From Conception to Birth      MSC: Conceptual

2. The outer layer of the blastocyst forms four major support structures that protect and nourish the developing embryo or fetus. Name each structure, and explain its function.

ANS: Answer not provided.

DIF: difficult      REF: From Conception to Birth      MSC: Factual

3. Describe the process of sexual development that occurs during the prenatal period.

ANS: Answer not provided.

DIF: difficult      REF: From Conception to Birth      MSC: Conceptual

4. Describe fetal development during the second and third trimesters, and explain the term “age of viability.”

ANS: Answer not provided.

DIF: difficult      REF: From Conception to Birth      MSC: Factual

5. Define the term “teratogen,” and list eight generalizations about the effects of teratogens.

ANS: Answer not provided.

DIF: difficult      REF: Potential Problems in Prenatal Development  
MSC: Factual

6. Use the concept of sensitive period to explain why the developing baby is most vulnerable to the effects of teratogens during the embryonic stage of prenatal development.

ANS: Answer not provided.

DIF: easy      REF: Potential Problems in Prenatal Development  
MSC: Conceptual

7. Alcoholic beverages now carry a government warning that states, “Women should not drink alcoholic beverages during pregnancy because of the risk of birth defects.” What types of defects have been associated with heavy alcohol consumption during pregnancy? What types of defects have been associated with social drinking during pregnancy?

ANS: Answer not provided.

DIF: moderate      REF: Potential Problems in Prenatal Development  
MSC: Factual

8. Physicians now routinely advise pregnant women to stop smoking, at least during the pregnancy. What impact does exposure to cigarette smoke have on the developing embryo or fetus?

ANS: Answer not provided.

DIF: moderate      REF: Potential Problems in Prenatal Development  
MSC: Factual

9. Maternal malnutrition can disrupt prenatal development. What is the likely developmental outcome if the mother is malnourished during the first trimester? What is the likely developmental outcome if the mother is malnourished during the third trimester?

ANS: Answer not provided.

DIF: difficult      REF: Potential Problems in Prenatal Development  
MSC: Factual

10. Describe the ways in which the virus causing genital herpes infect the fetus or newborn. What can be the consequences of such infection be?

ANS: Answer not provided

DIF: difficult      REF: Potential Problems in Prenatal Development  
MSC: Conceptual

11. Discuss the implications that a woman's age has for childbirth.

ANS: Answer not provided

DIF: easy      REF: Potential Problems in Prenatal Development  
MSC: Factual

12. Compare and contrast fetal alcohol syndrome (FAS) and fetal alcohol effects (FAE).

ANS: Answer not provided

DIF: moderate      REF: Potential Problems in Prenatal Development  
MSC: Conceptual

13. Identify the three stages of childbirth, and indicate what occurs during each stage.

ANS: Answer not provided.

DIF: easy      REF: Birth and the Perinatal Environment  
MSC: Factual

14. Explain how the Neonatal Behavioral Assessment Scale (NBAS) differs from the Apgar test.

ANS: Answer not provided.

DIF: difficult      REF: Birth and the Perinatal Environment  
MSC: Conceptual

15. What are the pros and cons associated with administering medications to the mother during the birthing process?

ANS: Answer not provided.

DIF: moderate      REF: Birth and the Perinatal Environment  
MSC: Conceptual

16. Describe alternatives to a standard hospital birth.

ANS: Answer not provided.

DIF: easy      REF: Birth and the Perinatal Environment  
MSC: Factual

17. Describe postpartum depression, and identify the factors that have been related to its development.

ANS: Answer not provided.

DIF: moderate      REF: Birth and the Perinatal Environment  
MSC: Conceptual

18. Discuss the Apgar test, including the different characteristics evaluated and what the different scores tell us about the newborn baby.

ANS: Answer not provided

DIF: difficult      REF: Birth and the Perinatal Environment  
MSC: Factual

19. What is known about sibling rivalry and how it might be minimized?

ANS: Answer not provided

DIF: moderate      REF: Birth and the Perinatal Environment  
MSC: Applied

20. Briefly discuss some of the cultural variations in childbirth noted in the text.

ANS: Answer not provided

DIF: easy      REF: Birth and the Perinatal Environment  
MSC: Factual

21. Define anoxia, and identify three conditions that might produce it.

ANS: Answer not provided.

DIF: moderate      REF: Potential Problems at Birth      MSC: Conceptual

22. Explain how Rh-incompatibility can result in anoxia.

ANS: Answer not provided.

DIF: difficult      REF: Potential Problems at Birth      MSC: Conceptual  
NOT: New

23. Explain the distinction between preterm and small-for-date infants.

ANS: Answer not provided.

DIF: easy      REF: Potential Problems at Birth      MSC: Conceptual

24. Identify short-term and long-term consequences of low birth weight.

ANS: Answer not provided.

DIF: moderate      REF: Potential Problems at Birth      MSC: Factual

25. Give an example of the active child theme from prenatal development

ANS: Answer not provided.

DIF: difficult      REF: Applying Developmental Themes to Prenatal Development and Birth  
MSC: Applied      NOT: New

## ESSAY

1. List and briefly describe the three periods of prenatal development, noting the event that marks the beginning of each period.

ANS: The germinal period begins with conception, which typically occurs in the fallopian tube. The conceived zygote begins to divide, forming a blastocyst, which continues to divide and grow as it moves down the fallopian tube to the uterus. The embryonic period begins with implantation of the blastocyst in the uterus. Cell differentiation continues at a rapid pace, and toward the end of the embryonic period, the embryo appears distinctly human in form. The indifferent gonad also develops toward the end of this period. The fetal period begins at the two-month point and continues until birth. Differentiation of body structures continues throughout, and the developing child typically reaches the age of viability at 22 to 28 weeks after conception.

DIF: easy      REF: From Conception to Birth      MSC: Conceptual

2. Harriet and Al decided to have children soon after they were married. But, as it happened, it was nearly four years later that Harriet missed a menstrual period and thus allowed her hopes to rise. When she went to her obstetrician a couple of weeks later, tests confirmed that she was pregnant. But not long after that, Harriet's baby "spontaneously" aborted. (a) Discuss possible natural causes for the spontaneous abortion. (b) List possible teratogenic causes. (c) By analogy to "postpartum depression," what emotional effects would you expect Harriet to experience?

ANS: (a) Natural causes include abnormal implantation of the embryo, burrowing of the embryo into a site incapable of sustaining it, malformation or immature development of the embryo, and genetic abnormality of the embryo. (b) Many teratogens have the potential to cause damage that trigger spontaneous abortion. The more likely ones are chicken pox, cytomegalovirus, hypertension, influenza, mumps, smallpox, hallucinogens, tobacco, and radiation. (c) Given the degree of enthusiasm over the pregnancy, Harriet might well mirror the effects of postpartum depression, especially if she comes to believe that she somehow caused the abortion. Her symptoms could include depression, irritability, and generalized hopelessness and despair.

DIF: difficult

REF: From Conception to Birth

MSC: Application

3. Should mothers take drugs and medications during pregnancy? Why or why not? What accounts for the fact that not every embryo or fetus exposed to a potential teratogenic agent is adversely affected or experiences the same effects?

ANS: A quick scan of the list of drugs and medications that can damage the developing child yields a simple "no," since even commonly used drugs such as aspirin, vitamins, and tobacco can be very harmful. Alcohol consumption is especially dangerous to the child. Even prescription medication should be taken only when it is essential to treat a medical condition in the mother or developing child. Teratogens are generally most harmful during the embryonic period, which means, among other things, that many mothers consume potential teratogens prior to knowing that they are pregnant. Women who are trying to get pregnant should avoid potential teratogenic agents if possible. The timing of exposure, "dosage," duration of exposure, and genetic vulnerability are all factors that can influence whether there will be adverse effects, how severe those effects are, and what they will be.

DIF: easy

REF: Potential Problems in Prenatal Development

TOP: CONCEPTUAL ESSAY QUESTIONS

MSC: Conceptual

4. The emotional well-being of pregnant women has been found to have a significant impact on prenatal development. Describe the most common consequences of maternal stress for the developing offspring, and discuss the mechanisms by which this negative influence is exerted.

ANS: Emotional stress results in a state of arousal that involves the secretion of various hormones. These hormones are able to cross the placenta and enter the fetus's bloodstream, causing arousal and potentially resulting in changes in heart rate and motor activity. When maternal stress is prolonged and severe, various harmful consequences may emerge, including stunted growth, premature delivery, and irregular behavior patterns. Maternal stress can also continue to influence the course of development after birth, by impairing the mother's ability to provide adequate care and nurturing to the infant.

DIF: difficult

REF: Potential Problems in Prenatal Development

MSC: Conceptual

5. Briefly discuss natural or prepared childbirth and home delivery, noting the advantages and disadvantages of each.

ANS: Natural or prepared childbirth can involve standard delivery room procedures or the use of a birthing room. Typical considerations are that the mother receives advance training in relaxation and birth-related exercises, the father is present in the delivery room as a “coach,” and medication is avoided or minimized. Thus, the mother is awake, and both parents may experience more engrossment with the newborn child. Also, the child is born alert, without the sedative effects of medication. Disadvantages are that the mother may experience considerable pain in spite of the advance training, and from a hospital point of view, the procedure is not as efficient. Home delivery typically includes natural childbirth advantages, plus delivery of the child in a more relaxing and familiar setting. Disadvantages are that it may be difficult to find an obstetrician who endorses home delivery, and any medical complications that arise are not as likely to receive prompt treatment and medical attention.

DIF: moderate      REF: Birth and the Perinatal Environment  
MSC: Conceptual

6. Janet and Steve had their first child two months ago. Steve is getting impatient with Janet because she cries frequently and has little energy or enthusiasm for anything. Although neither Janet nor Steve knows it, Janet is probably experiencing extended postpartum depression. (a) What factors have been found to contribute to extended postpartum depression? (b) What general approaches might be helpful for Janet in getting over her depression?

ANS: (a) Predisposing factors include sedative medications administered during birth making both mom and baby unresponsive initially, a negative attitude toward the pregnancy, and absence of the father during the birth. After childbirth, contributing factors might include such things as attention shifting from the “pregnant” woman to her infant, leaving her needs unfulfilled; hormonal changes following birth; lack of emotional support from the husband; and a negative attitude toward the marriage. (b) General kinds of approaches include providing emotional support, encouraging her to talk about her feelings, and assuring her that she is not unusual in having this kind of reaction. Support from other mothers can be helpful.

DIF: moderate      REF: Birth and the Perinatal Environment  
MSC: Application

7. Don and Louise attended “natural” childbirth classes, and Don was present throughout Louise’s labor and delivery of their son. During labor, Don served as a coach, helping Louise relax as much as possible and control her breathing, and reminding her not to push until it was time to deliver the baby. During delivery, Don stood at the head of the table and gave Louise emotional support. After their son was born, Don was allowed to carry him down the hall to Louise’s room. Later, Don described the overall experience as thoroughly profound and joyous, and he became fond of relating how he felt when he first gazed into his son’s wide-open and inquiring eyes. (a) Discuss Don’s feelings in terms of engrossment. (b) What long-range effects might this have on Don’s interactions with his son? (c) How might medication and traditional childbirth procedures have interfered?

ANS: (a) Don apparently became thoroughly engrossed with his son as a result of participation, with predictable effects such as strong emotional bonding and attachment (also as a result of subsequent interactions with the child). He apparently remembers the experience very positively and vividly. (b) Through the sense of belongingness established during the events surrounding his son’s birth, Don was off to a good start in being actively involved with his newborn, especially with regard to feeling that he was directly responsible in helping his son begin life. (c) Traditional childbirth procedures would have precluded the extent of early contact both for Don and for Louise. For example, she would probably have been too medicated to be fully aware of what was going on, therefore precluding their sharing of the experience. Moreover, medications for the mother also affect the neonate, which means that the child would have displayed drowsiness and perhaps irritability and unresponsiveness that would have made the experience less positive.

DIF: moderate      REF: Birth and the Perinatal Environment  
MSC: Application

8. After giving birth, Britney took part in a study in which she saw her baby briefly after delivery, visited with him six to 12 hours later, and had half-hour feeding sessions every four hours thereafter for the remainder of a three-day hospital stay. Another mother in the study was in an “extended contact” group of women who were permitted five “extra” hours a day to cuddle her baby, including an hour of skin-to-skin contact that took place within three hours of birth. What might the implications of this difference in “contact” be for the emotional bonding of mother and baby? Discuss related findings from the text.

ANS: Developmentalists have suggested that the first six to 12 hours after birth are a sensitive period for emotional bonding, when the mother is especially ready to respond to and develop a strong sense of affection for her baby. In one study, half of a group of new mothers follow the then-traditional hospital routine: they saw their babies briefly after delivery, visited with them six to 12 hours later, and had half-hour feeding sessions every four hours thereafter for the remainder of a three-day hospital stay. The other mothers were in an “extended contact” group and were permitted five “extra” hours a day to cuddle their babies, including an hour of skin-to-skin contact that took place within three hours of birth.



In a follow-up one month later, mothers who had been allowed early extended contact with their babies appeared to be more involved with them and held them closer during feeding sessions than did mothers who had followed the traditional hospital routine. One year later, the extended-contact mothers were still more highly involved caregivers, and their one-year-olds outperformed those in the traditional-routine group on tests of physical and mental development. This doesn't mean that mothers who have no early contact with their newborns miss out on forming the strongest possible emotional ties to them. Later research has shown that early contact effects are nowhere near as significant or long-lasting as originally thought. Even though early contact can be very pleasant and can help a mother begin to form an emotional bond with her child, it is not essential to do so.

Based on this evidence, Britney may be a less involved caregiver as her baby develops than the extended contact mother, but it need not necessarily be that way.

DIF: moderate      REF: Birth and the Perinatal Environment  
MSC: Application

9. Contemporary research indicates that the short-term effects of perinatal complications such as low birth weight can typically be overcome by environment; discuss what aspects of environment have been found to be effective in this respect.

ANS: (1) Low-birth-weight babies are often difficult to love (due to their being relatively unattractive and hard to comfort), thus parents may become emotionally detached. Information and special training for parents is helpful. (2) Traditional hospital procedures allow only minimal contact with babies of low birth weight, but research now indicates that such babies become less irritable and more responsive (and also show quicker neurological development) if they are periodically handled and soothed by their mothers. (3) In general, stable and highly supportive homes foster healthy emotional attachments of low-birth-weight babies to their mothers and tend to preclude serious intellectual impairment or learning difficulties. (4) In general, more supportive and stimulating home environments help low-birth-weight babies overcome early intellectual deficits; less stimulating and supportive home environments tend to perpetuate intellectual deficits.

DIF: moderate      REF: Potential Problems at Birth      MSC: Conceptual

10. This chapter offers examples of three different “qualitative stage progressions.” What is qualitative stage progression? Briefly outline and discuss the different qualitative stage progressions from the chapter.

ANS: Qualitative changes are changes in form or kind—changes that make the individual fundamentally different in some way than he or she was earlier. The transformation of a tadpole into a frog is a qualitative change. Similarly, an infant who lacks language may be qualitatively different from a preschooler who speaks well, and an adolescent who is sexually mature may be fundamentally different from a classmate who has yet to reach puberty. Discontinuity theorists tend to portray development as a sequence of qualitative changes. Discontinuity theorists are the ones who claim that we progress through developmental stages, each of which is a distinct phase of life characterized by a particular set of abilities, emotions, motives, or behaviors that form a coherent pattern.

We encountered three different qualitative stage progressions in this chapter. First, the developing organism proceeds through three qualitatively distinct stages in prenatal development: the zygote, the embryo, and the fetus. Second, the pregnant woman goes through three qualitatively distinct stages during pregnancy: the first, second, and third trimesters. (And remember that the stages of the developing organism do not correspond chronologically to the pregnant woman’s stages.) Finally, we saw that the birth process can be divided into three qualitatively distinct stages: labor, birth, and afterbirth. As usual, however, we can also see quantitative change in prenatal development. For example, the period of the fetus consists mainly of quantitative changes as the organism grows in size and refines the structures and functions that first develop in the period of the embryo.

DIF: difficult      REF: Applying Developmental Themes to Prenatal Development and Birth  
MSC: Conceptual