

# TOTAL

## ASSESSMENT GUIDE

### Chapter 2 Prenatal Development

Topic		Factual	Conceptual	Applied
<b>TOPIC: Conception and Genetics.</b> <b>Objective 2.1-What are the characteristics of the zygote? Objective 2.1a-What are the risks associated with assisted reproductive technology?</b>	Multiple Choice	2.1-3, 2.1-4, 2.1-5, 2.1-6, 2.1-7, 2.1-11, 2.1-14, 2.1-16	2.1-10, 2.1-12	2.1-1, 2.1-2, 2.1-8, 2.1-9, 2.1-13, 2.1-15,
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	My Development Lab			
	Essay			
<b>TOPIC: Conception and Genetics.</b> <b>Objective 2.2</b> <b>In what ways do genes influence development?</b>	Multiple Choice	2.1-17, 2.1-28, 2.1-31	2.1-22, 2.1-23, 2.1-24, 2.1-25, 2.1-27, 2.1-29, 2.1-33	2.1-18, 2.1-19, 2.1-20, 2.1-21, 2.1-26, 2.1-30, 2.1-32
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	My Development Lab	2.4-1		
	Essay		2.3-1	
<b>TOPIC: Development from Conception to Birth</b> <b>Objective 2.3</b> <b>What happens in each of the stages of prenatal development?</b>	Multiple Choice	2.1-35, 2.1-36, 2.1-38, 2.1-39, 2.1-40, 2.1-41, 2.1-42, 2.1-46, 2.1-47, 2.1-48, 2.1-49, 2.1-50, 2.1-52	2.1-37, 2.1-43, 2.1-44, 2.1-51	2.1-34, 2.1-45
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<b>TOPIC: Development from Conception to Birth</b> <b>Objective 2.4</b> <b>How do male and female fetuses differ?</b>	Multiple Choice	2.1-53, 2.1-55		2.1-54
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	Essay			
<b>TOPIC: Development from Conception to Birth</b> <b>Objective 2.5</b> <b>What behaviors have scientists observed in fetuses?</b>	Multiple Choice	2.1-58, 2.1-59, 2.1-60	2.1-57	2.1-56
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	My Development Lab			
	Essay			
<b>TOPIC: Problems in Prenatal Development</b> <b>Objective 2.6-What are the effects of the major dominant, recessive, and sex-linked diseases? Objective 2.6a-What techniques are used to assess and treat problems in prenatal development?</b>	Multiple Choice	2.1-65, 2.1-67, 2.1-69, 2.1-70, 2.1-73	2.1-64, 2.1-66, 2.1-74	2.1-61, 2.1-62, 2.1-63, 2.1-68, 2.1-71, 2.1-72
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# TOTAL

## ASSESSMENT GUIDE

### Chapter 2 Prenatal Development

Topic		Factual	Conceptual	Applied
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<b>TOPIC: Problems in Prenatal Development Objective 2.8-How do maternal diseases and environmental hazards affect prenatal development? Objective 2.8a-How has technology changed the way that health professionals manage high-risk pregnancies?</b>	Multiple Choice	2.1-79, 2.1-81, 2.1-82, 2.1-85	2.1-83, 2.1-84	2.1-80, 2.1-86
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<b>TOPIC: Problems in Prenatal Development Objective 2.10</b> What are the risks associated with legal drugs, maternal diet, age, emotional distress, and poverty?	Multiple Choice	2.1-95, 2.1-96, 2.1-99	2.1-100	2.1-93, 2.1-94, 2.1-97, 2.1-98
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## Chapter 2: Prenatal Development

### Multiple Choice

2.1-1. At conception, a zygote is formed by the joining of two

- a. ova.
- b. sperm.
- c. gametes.
- d. genes.
- e. chromosomes.

**Difficulty:** 1

**Question ID:** 2.1-1

**Page-Reference:** 30

**Topic:** Conception and Genetics

**Skill:** Applied

**Objective:** 2.1

**Answer:** c. gametes.

2.1-2. Bernice just found out that she is pregnant. The cell that Bernice contributed at conception was a(n)

- a. embryo.
- b. zygote.
- c. sperm.
- d. gamete.
- e. ovum.

**Difficulty:** 1

**Question ID:** 2.1-2

**Page-Reference:** 30

**Topic:** Conception and Genetics

**Skill:** Applied

**Objective:** 2.1

**Answer:** e. ovum.

2.1-3. In order for conception to occur, the sperm must reach the ovum by traveling from the \_\_\_\_\_ to the \_\_\_\_\_ where fertilization takes place.

- a. vagina; fallopian tube
- b. uterus; vagina
- c. fallopian tube; cervix
- d. uterus; cervix
- e. cervix; vagina

**Difficulty:** 3

**Question ID:** 2.1-3

**Page-Reference:** 30

**Topic:** Conception and Genetics

**Skill:** Factual

**Objective:** 2.1

**Answer:** a. vagina; fallopian tube

2.1-4. What type of cell division produces gametes?

- a. meiosis
- b. codominance
- c. mitosis
- d. splicing
- e. cloning

**Difficulty:** 1

**Question ID:** 2.1-4

**Page-Reference:** 30

**Topic:** Conception and Genetics

**Skill:** Factual

**Objective:** 2.1

**Answer:** a. meiosis

2.1-5. In humans, the result of mitosis is a \_\_\_\_\_ chromosome cell, and the result of meiosis is a \_\_\_\_\_ chromosome cell.

- a. 46; 46
- b. 46; 23
- c. 23; 46
- d. 23; 23
- e. 92; 46

**Difficulty:** 2

**Question ID:** 2.1-5

**Page-Reference:** 30

**Topic:** Conception and Genetics

**Skill:** Factual

**Objective:** 2.1

**Answer:** b. 46; 23

2.1-6. **Who deduced that DNA was shaped like a double helix?**

- a. Down and Klinefelter
- b. Turner and Watson
- c. Watson and Crick
- d. Horowitz and Crick
- e. Freud and Watson

**Difficulty:** 1  
**Question ID:** 2.1-6  
**Page-Reference:** 30-31  
**Topic:** Conception and Genetics  
**Skill:** Factual  
**Objective:** 2.1

**Answer:** c. Watson and Crick

2.1-7. **Infertility is defined as the failure to conceive after \_\_\_\_\_ consecutive months of unprotected intercourse.**

- a. two
- b. four
- c. six
- d. 10
- e. 12

**Difficulty:** 1  
**Question ID:** 2.1-7  
**Page-Reference:** 31  
**Topic:** Conception and Genetics  
**Skill:** Factual  
**Objective:** 2.1a

**Answer:** e. 12

2.1-8. **Misty was a "test-tube baby," which means she was conceived using**

- a. IVF.
- b. FET.
- c. DNA.
- d. XY.
- e. XX.

**Difficulty:** 2  
**Question ID:** 2.1-8  
**Page-Reference:** 31  
**Topic:** Conception and Genetics  
**Skill:** Applied  
**Objective:** 2.1a

**Answer:** a. IVF.

2.1-9. Adella is 41 years of age and has been unsuccessful in her attempts to become pregnant. She has asked her doctor to try in vitro fertilization. Her doctor will tell her that only \_\_\_\_\_ percent of IVF procedures involving women over age 40 are successful.

- a. 46.
- b. 40.
- c. 35.
- d. 24.
- e. 17.

**Difficulty:** 1  
**Question ID:** 2.1-9  
**Page-Reference:** 31  
**Topic:** Conception and Genetics  
**Skill:** Applied  
**Objective:** 2.1a

**Answer:** e. 17.

2.1-10. It is most accurate to describe the genetic material in the nucleus of the cell as

- a. DNA, which contains chromosomes and genes.
- b. chromosomes composed of DNA, which has segments called genes.
- c. genes, which contain DNA and are found on chromosomes.
- d. separate bodies called genes, chromosomes, and DNA.
- e. 46 genes made up of DNA.

**Difficulty:** 3  
**Question ID:** 2.1-10  
**Page-Reference:** 31  
**Topic:** Conception and Genetics  
**Skill:** Conceptual  
**Objective:** 2.1

**Answer:** b. chromosomes composed of DNA, which has segments called genes.

2.1-11. In the 22 pairs of chromosomes called \_\_\_\_\_, the members of the pair look alike and contain exactly matching genetic loci.

- a. autosomes
- b. genotypes
- c. sex chromosomes
- d. gametes
- e. zygotes

**Difficulty:** 2  
**Question ID:** 2.1-11  
**Page-Reference:** 31  
**Topic:** Conception and Genetics  
**Skill:** Factual  
**Objective:** 2.1

**Answer:** a. autosomes

2.1-12. Which of the following statements about sex chromosomes is true?

- a. The Y chromosome is larger than the X chromosome.
- b. The X chromosome has more genetic loci than the Y has.
- c. The XX combination represents a male.
- d. Only females have a Y chromosome.
- e. TDF is always found on the X chromosome.

**Difficulty:** 3

**Question ID:** 2.1-12

**Page-Reference:** 31-32

**Topic:** Conception and Genetics

**Skill:** Conceptual

**Objective:** 2.1

**Answer:** b. The X chromosome has more genetic loci than the Y has.

2.1-13. Kristi and Bill are expecting a child. The sex of the child is determined by

- a. Kristi.
- b. Bill.
- c. both Kristi and Bill.
- d. the time of day the conception took place.
- e. environmental factors.

**Difficulty:** 2

**Question ID:** 2.1-13

**Page-Reference:** 32

**Topic:** Conception and Genetics

**Skill:** Applied

**Objective:** 2.1

**Answer:** b. Bill.

2.1-14. Which of the following determines maleness in fertilized ovas that are genetically male?

- a. homozygous, recessive genes
- b. the SRY region of the Y chromosome
- c. the acidity of the mucus in the vagina
- d. the X chromosome
- e. level of estrogen

**Difficulty:** 2

**Question ID:** 2.1-14

**Page-Reference:** 32

**Topic:** Conception and Genetics

**Skill:** Factual

**Objective:** 2.1

**Answer:** b. the SRY region of the Y chromosome

2.1-15. **Dr. Posada is a genetic researcher. He is working with chromosome 20. He might be investigating any of the following EXCEPT**

- a. gigantism.
- b. retinoblastoma.
- c. myloid tumor suppressor.
- d. colon cancer.
- e. Prader-Willi Syndrome.

**Difficulty:** 3

**Question ID:** 2.1-15

**Page-Reference:** 32

**Topic:** Conception and Genetics

**Skill:** Applied

**Objective:** 2.1

**Answer:** e. Prader-Willi Syndrome.

2.1-16. **The pattern of characteristics and developmental sequences mapped in the genes of any specific individual is the**

- a. gamete.
- b. genotype.
- c. phenotype.
- d. chromosome.
- e. zygote.

**Difficulty:** 1

**Question ID:** 2.1-16

**Page-Reference:** 32

**Topic:** Conception and Genetics

**Skill:** Factual

**Objective:** 2.2

**Answer:** b. genotype.

2.1-17. **When genetic information at a given locus is the same on both chromosomes, the individual is \_\_\_\_\_ for that trait.**

- a. heterozygous
- b. phenotypic
- c. homozygous
- d. dominant
- e. genotypic

**Difficulty:** 1

**Question ID:** 2.1-17

**Page-Reference:** 32

**Topic:** Conception and Genetics

**Skill:** Factual

**Objective:** 2.2

**Answer:** c. homozygous



- 2.1-18. **Meg has type A blood made up of a gene for A paired with a gene for O. Meg is \_\_\_\_\_ for blood type.**
- a. heterozygous
  - b. genotypic
  - c. homozygous
  - d. phenotypic
  - e. recessive

**Difficulty:** 2

**Question ID:** 2.1-18

**Page-Reference:** 32

**Topic:** Conception and Genetics

**Skill:** Applied

**Objective:** 2.2

**Answer:** a. heterozygous

- 2.1-19. **Which of the following statements describes Lamar's genotype?**
- a. He has brown hair.
  - b. He is short for his age.
  - c. He looks like his father.
  - d. He has type AB blood.
  - e. He is an overachiever.

**Difficulty:** 2

**Question ID:** 2.1-19

**Page-Reference:** 32-33

**Topic:** Conception and Genetics

**Skill:** Applied

**Objective:** 2.2

**Answer:** d. He has type AB blood.

- 2.1-20. **Which of the following statements describes the person's phenotype?**
- a. Maria's 23rd chromosome pair is XX.
  - b. Mark's blood type is AO.
  - c. Jill is a carrier of cystic fibrosis.
  - d. Larry has brown hair.
  - e. Mel has Trisomy 21.

**Difficulty:** 3

**Question ID:** 2.1-20

**Page-Reference:** 32-33

**Topic:** Conception and Genetics

**Skill:** Applied

**Objective:** 2.2

**Answer:** d. Larry has brown hair.

2.1-21. **Which of the following is true about David's fine hair?**

- a. It comes from a dominant gene.
- b. He carries a curly hair gene.
- c. It is a polygenic trait.
- d. It is a co-dominant trait.
- e. He had to inherit a gene from both parents.

**Difficulty:** 3

**Question ID:** 2.1-21

**Page-Reference:** 33

**Topic:** Conception and Genetics

**Skill:** Applied

**Objective:** 2.2

**Answer:** e. He had to inherit a gene from both parents.

2.1-22. **All of the following are dominant traits EXCEPT**

- a. Type A blood.
- b. nearsightedness.
- c. flat feet.
- d. coarse hair.
- e. freckles.

**Difficulty:** 3

**Question ID:** 2.1-22

**Page-Reference:** 33

**Topic:** Conception and Genetics

**Skill:** Conceptual

**Objective:** 2.2

**Answer:** c. flat feet.

2.1-23. **Which of the following is an accurate statement about dominant and recessive genes?**

- a. Only about 300 physical characteristics are dominant.
- b. All genes are expressed the same in every individual.
- c. The dominant/recessive pattern is very straightforward.
- d. Genes cannot be codominant.
- e. Even simple patterns of inheritance can be complicated.

**Difficulty:** 3

**Question ID:** 2.1-23

**Page-Reference:** 33-34

**Topic:** Conception and Genetics

**Skill:** Conceptual

**Objective:** 2.2

**Answer:** e. Even simple patterns of inheritance can be complicated.

2.1-24. **The AB blood type is an example of**

- a. a recessive trait.
- b. codominance.
- c. a homozygous locus.
- d. a sex chromosome influence.
- e. a polygenic trait.

**Difficulty:** 2

**Question ID:** 2.1-24

**Page-Reference:** 34

**Topic:** Conception and Genetics

**Skill:** Conceptual

**Objective:** 2.2

**Answer:** b. codominance.

2.1-25. **Quentin has blue eyes, blond hair, freckles, dimples, and flat feet. Which of these traits is polygenic?**

- a. blue eyes
- b. blond hair
- c. freckles
- d. dimples
- e. flat feet

**Difficulty:** 3

**Question ID:** 2.1-25

**Page-Reference:** 34

**Topic:** Conception and Genetics

**Skill:** Applied

**Objective:** 2.2

**Answer:** a. blue eyes

2.1-26. **Mikki's phenotype for her height is**

- a. the same as her genotype.
- b. the difference between the effects of two genes.
- c. the sum of the effects of several height genes.
- d. inherited only from her father.
- e. determined by genes on her X chromosome.

**Difficulty:** 2

**Question ID:** 2.1-26

**Page-Reference:** 34

**Topic:** Conception and Genetics

**Skill:** Applied

**Objective:** 2.2

**Answer:** c. the sum of the effects of several height genes.

2.1-27. **Height is a trait that is all of the following EXCEPT**

- a. polygenic.
- b. multifactorial.
- c. dominant.
- d. affected by environment.
- e. a measure of general health.

**Difficulty:** 2

**Question ID:** 2.1-27

**Page-Reference:** 34

**Topic:** Conception and Genetics

**Skill:** Conceptual

**Objective:** 2.2

**Answer:** c. dominant.

2.1-28. **When inherited genes are located outside the nucleus of the zygote, the inheritance is**

- a. polygenic.
- b. multifactorial.
- c. dominant.
- d. mitochondrial.
- e. codominant.

**Difficulty:** 1

**Question ID:** 2.1-28

**Page-Reference:** 34

**Topic:** Conception and Genetics

**Skill:** Factual

**Objective:** 2.2

**Answer:** d. mitochondrial.

2.1-29. **Some studies suggest that genomic imprints**

- a. will always come from the mother's ovum.
- b. results in Prader-Willi syndrome if from the father.
- c. always leads to obesity and mental retardation.
- d. may be particularly important in diseases that appear later in life, such as heart disease.
- e. is an example of mitochondrial inheritance.

**Difficulty:** 3

**Question ID:** 2.1-29

**Page-Reference:** 34

**Topic:** Conception and Genetics

**Skill:** Conceptual

**Objective:** 2.2

**Answer:** d. may be particularly important in diseases that appear later in life, such as heart disease.

- 2.1-30. **Rita is pregnant. When she conceived, two separate ova were fertilized at the same time, and each implanted in the uterus. Rita can expect to give birth to**
- a. a child with Down syndrome.
  - b. a premature child.
  - c. fraternal twins.
  - d. identical twins.
  - e. monozygotic twins.

**Difficulty:** 1

**Question ID:** 2.1-30

**Page-Reference:** 35

**Topic:** Conception and Genetics

**Skill:** Applied

**Objective:** 2.2

**Answer:** c. fraternal twins.

- 2.1-31. **Which of the following is true about fraternal twins?**

- a. They will be homozygous.
- b. They are dizygotic.
- c. They are monozygotic.
- d. They are always the same sex.
- e. They will be premature.

**Difficulty:** 1

**Question ID:** 2.1-31

**Page-Reference:** 35

**Topic:** Conception and Genetics

**Skill:** Factual

**Objective:** 2.2

**Answer:** b. They are dizygotic.

- 2.1-32. **Matt and Marcy are twins. From this statement you can be certain that they are \_\_\_\_\_ twins.**

- a. identical
- b. monozygotic
- c. fraternal
- d. conjoined
- e. polygenic

**Difficulty:** 3

**Question ID:** 2.1-32

**Page-Reference:** 35

**Topic:** Conception and Genetics

**Skill:** Applied

**Objective:** 2.2

**Answer:** c. fraternal

2.1-33. **Which of the following is true of prenatal development?**

- a. All three trimesters occur in the first stage.
- b. Trimesters vary in length.
- c. There are three stages of prenatal development.
- d. Each stage of prenatal development is in a different trimester.
- e. Stages are the same as trimesters.

**Difficulty:** 2

**Question ID:** 2.1-33

**Page-Reference:** 35

**Topic:** Development from Conception to Birth

**Skill:** Conceptual

**Objective:** 2.2

**Answer:** c. There are three stages of prenatal development.

2.1-34. **Robert's wife is in the germinal stage of pregnancy and he wants to know what is happening. You can tell him that the**

- a. amnion and placenta are developing.
- b. "finishing" of organ systems is taking place.
- c. gametes are being formed through meiosis.
- d. the blastocyst is forming.
- e. the heart is formed and beating.

**Difficulty:** 2

**Question ID:** 2.1-34

**Page-Reference:** 35

**Topic:** Development from Conception to Birth

**Skill:** Applied

**Objective:** 2.3

**Answer:** d. the blastocyst is forming.

2.1-35. **The mass of cells that attaches itself to the wall of the uterus about two weeks after conception is called a(n) \_\_\_\_\_ and has about \_\_\_\_\_ cells.**

- a. umbilical cord; 36
- b. placenta; 36
- c. blastocyst; 150
- d. autosome; 150
- e. chorion; 3

**Difficulty:** 3

**Question ID:** 2.1-35

**Page-Reference:** 35

**Topic:** Development from Conception to Birth

**Skill:** Factual

**Objective:** 2.3

**Answer:** c. blastocyst; 150

2.1-36. **Cell division begins \_\_\_\_\_ after conception.**

- a. two weeks
- b. one week
- c. within two to three days
- d. 48 to 60 hours
- e. 24 to 36 hours

**Difficulty:** 1

**Question ID:** 2.1-36

**Page-Reference:** 35

**Topic:** Development from Conception to Birth

**Skill:** Factual

**Objective:** 2.3

**Answer:** e. 24 to 36 hours

2.1-37. **In general, prenatal development is**

- a. extremely predictable.
- b. controlled by maturational sequences.
- c. invulnerable to environmental influences.
- d. random in sequence and timing.
- e. determined solely by genetic programming.

**Difficulty:** 2

**Question ID:** 2.1-37

**Page-Reference:** 35-37

**Topic:** Development from Conception to Birth

**Skill:** Conceptual

**Objective:** 2.3

**Answer:** b. controlled by maturational sequences.

2.1-38. **The correct order of the different names given to the human organism as it develops during the nine months of gestation is**

- a. blastocyst, fetus, embryo.
- b. blastocyst, embryo, fetus.
- c. embryo, blastocyst, fetus.
- d. embryo, fetus, blastocyst.
- e. fetus, embryo, blastocyst.

**Difficulty:** 1

**Question ID:** 2.1-38

**Page-Reference:** 35-37

**Topic:** Development from Conception to Birth

**Skill:** Factual

**Objective:** 2.3

**Answer:** b. blastocyst, embryo, fetus.

2.1-39. **What is the correct order of the stages of gestation?**

- a. germinal, fetal, and embryonic
- b. embryonic, germinal, and fetal
- c. germinal, embryonic, and fetal
- d. embryonic, fetal, and germinal
- e. fetal, germinal, and embryonic

**Difficulty:** 1

**Question ID:** 2.1-39

**Page-Reference:** 36

**Topic:** Development from Conception to Birth

**Skill:** Factual

**Objective:** 2.3

**Answer:** c. germinal, embryonic, and fetal

2.1-40. **The embryonic stage begins when \_\_\_\_\_ is complete and continues until \_\_\_\_\_ is complete.**

- a. mitosis; meiosis
- b. implantation; organogenesis
- c. meiosis; mitosis
- d. germination; implantation
- e. implantation; conception

**Difficulty:** 1

**Question ID:** 2.1-40

**Page-Reference:** 36-37

**Topic:** Development from Conception to Birth

**Skill:** Factual

**Objective:** 2.3

**Answer:** b. implantation; organogenesis

2.1-41. **The amnion is**

- a. a plate-like mass of cells that lies against the wall of the uterus.
- b. the second half of the fetal stage.
- c. the sac or bag filled with liquid in which the baby floats.
- d. a filter through which nutrients pass to the embryo and fetus.
- e. the first internal organ to develop.

**Difficulty:** 1

**Question ID:** 2.1-41

**Page-Reference:** 37

**Topic:** Development from Conception to Birth

**Skill:** Factual

**Objective:** 2.3

**Answer:** c. the sac or bag filled with liquid in which the baby floats.



2.1-42. **What two organs does the chorion develop into?**

- a. placenta and umbilical cord
- b. blastocyst and zygote
- c. heart and lungs
- d. kidneys and liver
- e. amnion and blastocyst

**Difficulty:** 1

**Question ID:** 2.1-42

**Page-Reference:** 37

**Topic:** Development from Conception to Birth

**Skill:** Factual

**Objective:** 2.3

**Answer:** a. placenta and umbilical cord

2.1-43. **Which of the following is an accurate description of the placenta?**

- a. It is a platelike mass of cells protecting the heart.
- b. It is fully developed by two weeks after conception.
- c. It serves as heart and lungs for the embryo.
- d. It is connected to the embryo's circulatory system through the umbilical cord.
- e. It develops during the germinal stage.

**Difficulty:** 3

**Question ID:** 2.1-43

**Page-Reference:** 37

**Topic:** Development from Conception to Birth

**Skill:** Conceptual

**Objective:** 2.3

**Answer:** d. It is connected to the embryo's circulatory system through the umbilical cord.

2.1-44. **All of the following can pass through the placenta EXCEPT**

- a. most of the mother's hormones.
- b. most drugs and anesthetics.
- c. oxygen.
- d. digestive wastes.
- e. proteins and sugars.

**Difficulty:** 1

**Question ID:** 2.1-44

**Page-Reference:** 37

**Topic:** Development from Conception to Birth

**Skill:** Conceptual

**Objective:** 2.3

**Answer:** a. most of the mother's hormones.

2.1-45. **Delores is in the fetal stage of her pregnancy. What can she expect to happen in this stage?**

- a. Differentiation of the major organ systems begins.
- b. The development into a blastocyst is completed.
- c. Organ systems are refined.
- d. The placenta develops.
- e. The heart begins to beat.

**Difficulty:** 2

**Question ID:** 2.1-45

**Page-Reference:** 37

**Topic:** Development from Conception to Birth

**Skill:** Applied

**Objective:** 2.3

**Answer:** c. Organ systems are refined.

2.1-46. **The sex of the fetus can be identified by**

- a. five days after conception.
- b. two weeks after conception.
- c. 21 days after conception.
- d. week 10 of gestation.
- e. week 12 of gestation.

**Difficulty:** 1

**Question ID:** 2.1-46

**Page-Reference:** 37

**Topic:** Development from Conception to Birth

**Skill:** Factual

**Objective:** 2.3

**Answer:** e. week 12 of gestation.

2.1-47. **The \_\_\_\_\_ exists in only rudimentary form at the end of embryonic period.**

- a. amnion
- b. nervous system
- c. placenta
- d. circulatory system
- e. umbilical cord

**Difficulty:** 1

**Question ID:** 2.1-47

**Page-Reference:** 38

**Topic:** Development from Conception to Birth

**Skill:** Factual

**Objective:** 2.3

**Answer:** b. nervous system

2.1-48. **The great majority of neurons are apparently formed**

- a. by two years after birth.
- b. at birth.
- c. in the third trimester of pregnancy.
- d. between 10 and 18 weeks into gestation.
- e. at conception.

**Difficulty:** 2

**Question ID:** 2.1-48

**Page-Reference:** 38

**Topic:** Development from Conception to Birth

**Skill:** Factual

**Objective:** 2.3

**Answer:** d. between 10 and 18 weeks into gestation.

2.1-49. **In the fetal brain, synapse formation requires the growth of which two neuronal structures?**

- a. dendrites; terminal fibers
- b. terminal fibers; axon
- c. axons; dendrites
- d. glial cells; dendrite
- e. axons; terminal fiber

**Difficulty:** 2

**Question ID:** 2.1-49

**Page-Reference:** 38

**Topic:** Development from Conception to Birth

**Skill:** Factual

**Objective:** 2.3

**Answer:** c. axons; dendrites

2.1-50. **The tiny space between neurons which allows neuronal communication is the**

- a. terminal fiber.
- b. dendrite.
- c. synapse.
- d. axon.
- e. neurotransmitter.

**Difficulty:** 1

**Question ID:** 2.1-50

**Page-Reference:** 38

**Topic:** Development from Conception to Birth

**Skill:** Factual

**Objective:** 2.3

**Answer:** c. synapse.

2.1-51. **What changes in fetal behavior signal that fetal brain development is proceeding normally?**

- a. The axons lengthen and the dendritic arbor grows.
- b. The majority of the prefrontal cortex is mature.
- c. Glial cells begin to produce neurotransmitters.
- d. The embryo gains about half its birth weight.
- e. The fetus exhibits alternating periods of activity and rest, and begins to yawn.

**Difficulty:** 3

**Question ID:** 2.1-51

**Page-Reference:** 38

**Topic:** Development from Conception to Birth

**Skill:** Conceptual

**Objective:** 2.3

**Answer:** e. The fetus exhibits alternating periods of activity and rest, and begins to yawn.

2.1-52. **The cells that hold together and give form to the structures of the nervous system are called**

- a. axons.
- b. dendrites.
- c. glial cells.
- d. nerve cells.
- e. soma.

**Difficulty:** 1

**Question ID:** 2.1-52

**Page-Reference:** 39

**Topic:** Development from Conception to Birth

**Skill:** Factual

**Objective:** 2.3

**Answer:** c. glial cells.

2.1-53. **During prenatal development, the presence of testosterone is**

- a. equally important for the development of both male and female genitalia.
- b. important in female development in the last three months.
- c. is minimal in both males and females.
- d. the masculinizing factor in prenatal development.
- e. a cause of congenital adrenal hyperplasia.

**Difficulty:** 3

**Question ID:** 2.1-53

**Page-Reference:** 40

**Topic:** Development from Conception to Birth

**Skill:** Factual

**Objective:** 2.4

**Answer:** d. the masculinizing factor in prenatal development.

2.1-54. **Adela has congenital adrenal hyperplasia. She will**

- a. tend to be masculinized.
- b. be extremely feminine in her behavior.
- c. not be affected by this disorder.
- d. be masculine as a child, but feminine as an adult.
- e. be shy and timid as a child.

**Difficulty:** 2

**Question ID:** 2.1-54

**Page-Reference:** 40

**Topic:** Development from Conception to Birth

**Skill:** Applied

**Objective:** 2.4

**Answer:** a. tend to be masculinized.

2.1-55. **Sex differences in children's responsive to external stimuli first appear**

- a. in the womb.
- b. in the first few weeks of life.
- c. at about 3 years of age.
- d. in elementary school.
- e. at puberty.

**Difficulty:** 2

**Question ID:** 2.1-55

**Page-Reference:** 40

**Topic:** Development from Conception to Birth

**Skill:** Factual

**Objective:** 2.4

**Answer:** a. in the womb.

2.1-56. **Which of the following is an accurate statement of sex differences in development?**

- a. Boys are four to six weeks ahead in skeletal development.
- b. Girls are heavier and longer at birth.
- c. The average length at birth for boys is 19 inches.
- d. Boys have more muscle tissue and fewer fat cells.
- e. Girls are more vulnerable to prenatal problems.

**Difficulty:** 3

**Question ID:** 2.1-56

**Page-Reference:** 40

**Topic:** Development from Conception to Birth

**Skill:** Applied

**Objective:** 2.4

**Answer:** d. Boys have more muscle tissue and fewer fat cells.

2.1-57. **Which is the most accurate statement of sex differences in early development?**

- a. Girls are more vulnerable to prenatal problems.
- b. More females are spontaneously aborted.
- c. Girls have more muscle and fewer fat cells.
- d. Boys are four to six weeks ahead in bone development at birth.
- e. Boys are slightly heavier and longer at birth.

**Difficulty:** 2

**Question ID:** 2.1-57

**Page-Reference:** 40

**Topic:** Development from Conception to Birth

**Skill:** Conceptual

**Objective:** 2.4

**Answer:** e. Boys are slightly heavier and longer at birth.

2.1-58. **Research on prenatal development suggests that the fetus can distinguish between familiar and novel stimuli by the**

- a. end of germinal period.
- b. end of the embryonic period.
- c. 20th week of prenatal development.
- d. 32nd or 33rd week prenatally.
- e. the first month after birth.

**Difficulty:** 2

**Question ID:** 2.1-58

**Page-Reference:** 41

**Topic:** Development from Conception to Birth

**Skill:** Factual

**Objective:** 2.5

**Answer:** d. 32nd or 33rd week prenatally.

2.1-59. **Research in fetal development has shown that**

- a. fetuses are unresponsive to auditory stimuli.
- b. fetuses are unable to recognize patterns of sound.
- c. only embryonic chicks recognize different sounds.
- d. active fetuses become labeled as retarded after birth.
- e. the prenatal learning process parallels what happens postnatally.

**Difficulty:** 3

**Question ID:** 2.1-59

**Page-Reference:** 42

**Topic:** Development from Conception to Birth

**Skill:** Factual

**Objective:** 2.5

**Answer:** e. the prenatal learning process parallels what happens postnatally.

2.1-60. **Longitudinal studies have shown that very active fetuses are more likely to become school children who are labeled by teachers as**

- a. hyperactive.
- b. mentally retarded.
- c. learning disabled.
- d. normal.
- e. gifted.

**Difficulty:** 2

**Question ID:** 2.1-60

**Page-Reference:** 42

**Topic:** Problems in Prenatal Development

**Skill:** Factual

**Objective:** 2.5

**Answer:** a. hyperactive.

2.1-61. **Luigi has a sex-linked disorder. This is caused by a gene on the**

- a. 15th chromosome pair.
- b. autosomes.
- c. X chromosome.
- d. mitochondria.
- e. 22nd chromosome pair.

**Difficulty:** 1

**Question ID:** 2.1-61

**Page-Reference:** 42

**Topic:** Problems in Prenatal Development

**Skill:** Applied

**Objective:** 2.6

**Answer:** c. X chromosome.

2.1-62. **Helen's daughter has PKU. Which of the following is most likely to be true?**

- a. Helen is African American.
- b. Her daughter cannot drink milk.
- c. The disorder was discovered when her daughter was in her teens.
- d. She was exposed to a teratogen while pregnant.
- e. Helen was over 40 when she gave birth.

**Difficulty:** 3

**Question ID:** 2.1-62

**Page-Reference:** 42

**Topic:** Problems in Prenatal Development

**Skill:** Applied

**Objective:** 2.6

**Answer:** b. Her daughter cannot drink milk.

2.1-63. **Duane and Jeanine are African American. A genetic counselor would most likely test them for**

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

**Difficulty:** 1

**Question ID:** 2.1-63

**Page-Reference:** 42-43

**Topic:** Problems in Prenatal Development

**Skill:** Applied

**Objective:** 2.6

**Answer:** a. sickle cell disease.

2.1-64. **Phenylketonuria, sickle-cell anemia, and cystic fibrosis are all**

- a. autosomal dominant disorders.
- b. sex-linked recessive disorders.
- c. autosomal recessive disorders.
- d. caused by teratogens.
- e. found on the X chromosome.

**Difficulty:** 3

**Question ID:** 2.1-64

**Page-Reference:** 43

**Topic:** Problems in Prenatal Development

**Skill:** Conceptual

**Objective:** 2.6

**Answer:** c. autosomal recessive disorders.

2.1-65. **In the United States about \_\_\_\_\_ African Americans have sickle cell disease and about \_\_\_\_\_ have sickle cell trait.**

- a. 1 in 10,000; 1 in 100
- b. 1 in 5,000; 1 in 20
- c. 1 in 20; 1 in 5,000
- d. 1 in 12; 1 in 500
- e. 1 in 500; 1 in 12

**Difficulty:** 1

**Question ID:** 2.1-65

**Page-Reference:** 43

**Topic:** Problems in Prenatal Development

**Skill:** Factual

**Objective:** 2.6

**Answer:** e. 1 in 500; 1 in 12



2.1-66. Which of the following disorders is usually fatal in the first three years of life?

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

**Difficulty:** 1

**Question ID:** 2.1-66

**Page-Reference:** 43

**Topic:** Problems in Prenatal Development

**Skill:** Factual

**Objective:** 2.6

**Answer:** d. Tay Sachs

2.1-67. All of the following are true of Huntington's disease EXCEPT

- a. It is usually not diagnosed until adulthood.
- b. It affects psychological and motor functions.
- c. There is a blood test to identify it.
- d. It is a dominant disorder.
- e. Although motor functions fail, the brain is not affected.

**Difficulty:** 3

**Question ID:** 2.1-67

**Page-Reference:** 43

**Topic:** Problems in Prenatal Development

**Skill:** Factual

**Objective:** 2.6

**Answer:** e. Although motor functions fail, the brain is not affected.

2.1-68. Craig has a sex-linked disorder. Which of the following does he have?

- a. Huntington's
- b. Tay Sachs
- c. Schizophrenia
- d. Albinism
- e. Hemophilia

**Difficulty:** 2

**Question ID:** 2.1-68

**Page-Reference:** 43

**Topic:** Problems in Prenatal Development

**Skill:** Applied

**Objective:** 2.6

**Answer:** e. Hemophilia

2.1-69. Which of the following disorders is a sex-linked disorder?

- a. Down syndrome
- b. Fragile-X syndrome
- c. Klinefelter's syndrome
- d. Turner's syndrome
- e. Tay Sachs

**Difficulty:** 1

**Question ID:** 2.1-69

**Page-Reference:** 43

**Topic:** Problems in Prenatal Development

**Skill:** Factual

**Objective:** 2.6

**Answer:** b. Fragile-X syndrome

2.1-70. A disorder that causes mental retardation that becomes progressively worse as children get older and is also strongly associated with autism is known as \_\_\_\_\_.

- a. Down syndrome.
- b. Klinefelter's syndrome.
- c. Fragile-X syndrome.
- d. Turner's syndrome.
- e. Huntington's disease.

**Difficulty:** 2

**Question ID:** 2.1-70

**Page-Reference:** 44

**Topic:** Problems in Prenatal Development

**Skill:** Factual

**Objective:** 2.6

**Answer:** c. Fragile-X syndrome.

2.1-71. Mrs. Robertson is having a prenatal test in which cells are extracted from the placenta. This test is

- a. amniocentesis.
- b. CVS.
- c. fetoscopy.
- d. ultrasound.
- e. sonography.

**Difficulty:** 2

**Question ID:** 2.1-71

**Page-Reference:** 44

**Topic:** Problems in Prenatal Development

**Skill:** Applied

**Objective:** 2.6a

**Answer:** b. CVS.

- 2.1-72. **Dr. Ulrich is using a prenatal test on one of his pregnant patients in which he filters fetal cells out of fluid to test for genetic disorders. He is using**
- a. amniocentesis.
  - b. CVS.
  - c. fetoscopy.
  - d. ultrasound.
  - e. DNA testing.

**Difficulty:** 2

**Question ID:** 2.1-72

**Page-Reference:** 44

**Topic:** Problems in Prenatal Development

**Skill:** Applied

**Objective:** 2.6a

**Answer:** a. amniocentesis.

- 2.1-73. **What substance in the mother's blood indicates abnormalities in the fetal brain and spinal cord?**
- a. alpha-fetoprotein
  - b. CVS
  - c. estrogen
  - d. progesterone
  - e. testosterone

**Difficulty:** 1

**Question ID:** 2.1-73

**Page-Reference:** 44

**Topic:** Problems in Prenatal Development

**Skill:** Factual

**Objective:** 2.6a

**Answer:** a. alpha-fetoprotein

- 2.1-74. **All of the following statements about fetoscopy are accurate EXCEPT**
- a. it involves insertion of a camera into the womb.
  - b. it is used routinely on all high risk pregnancies.
  - c. it has made it possible to surgically correct prenatal defects.
  - d. it can be used to take samples of blood from the umbilical cord.
  - e. it has made fetal bone marrow transplants possible.

**Difficulty:** 3

**Question ID:** 2.1-74

**Page-Reference:** 44

**Topic:** Problems in Prenatal Development

**Skill:** Conceptual

**Objective:** 2.6a

**Answer:** b. it is used routinely on all high risk pregnancies.

2.1-75. Which of the following disorders is also called Trisomy 21?

- a. Tay Sachs
- b. triple-X syndrome
- c. cystic fibrosis
- d. hemophilia
- e. Down Syndrome

**Difficulty:** 1

**Question ID:** 2.1-75

**Page-Reference:** 45

**Topic:** Problems in Prenatal Development

**Skill:** Factual

**Objective:** 2.7

**Answer:** e. Down Syndrome

2.1-76. Which of the following mothers is at the greatest risk for having a Down syndrome child?

- a. Claudia, who is 18
- b. Zoe, who is 25
- c. Barb, whose husband works with pesticides
- d. Glendora, who is very active in sports
- e. Marian, who is 30

**Difficulty:** 3

**Question ID:** 2.1-76

**Page-Reference:** 45

**Topic:** Problems in Prenatal Development

**Skill:** Applied

**Objective:** 2.7

**Answer:** c. Barb, whose husband works with pesticides

2.1-77. Which sex-chromosome anomaly is paired with its correct label or characteristics?

- a. XXY - Turner's syndrome
- b. XYY - unusually tall, with mild retardation
- c. XXX - Klinefelter's syndrome
- d. XO - male with slow physical development
- e. YY - fragile X

**Difficulty:** 3

**Question ID:** 2.1-77

**Page-Reference:** 45

**Topic:** Problems in Prenatal Development

**Skill:** Factual

**Objective:** 2.7

**Answer:** b. XYY - unusually tall, with mild retardation

2.1-78. **Janine has Turner's syndrome. She will experience all of the following EXCEPT**

- a. little, if any, breast development.
- b. lack of menstruation.
- c. poor spatial ability.
- d. below normal verbal skills.
- e. stunted growth.

**Difficulty:** 2

**Question ID:** 2.1-78

**Page-Reference:** 45

**Topic:** Problems in Prenatal Development

**Skill:** Applied

**Objective:** 2.7

**Answer:** d. below normal verbal skills.

2.1-79. **What is the greatest period of vulnerability for all organ systems?**

- a. first 2 years of life
- b. first 6 months of life
- c. last trimester of pregnancy
- d. third through seventh weeks of pregnancy
- e. first two weeks of pregnancy

**Difficulty:** 1

**Question ID:** 2.1-79

**Page-Reference:** 45

**Topic:** Problems in Prenatal Development

**Skill:** Factual

**Objective:** 2.8

**Answer:** d. third through seventh weeks of pregnancy

2.1-80. **Melissa wants to have a baby but she is worried about catching rubella since she was never vaccinated as a child. What should Melissa do?**

- a. She should not have any children.
- b. She should be vaccinated at least two years before becoming pregnant.
- c. She should be vaccinated while she is pregnant.
- d. She should be vaccinated at least three months before pregnancy.
- e. The baby should be vaccinated immediately after birth.

**Difficulty:** 3

**Question ID:** 2.1-80

**Page-Reference:** 45-46

**Topic:** Problems in Prenatal Development

**Skill:** Applied

**Objective:** 2.8

**Answer:** d. She should be vaccinated at least three months before pregnancy.

2.1-81. In South Africa about \_\_\_\_\_ of pregnant women are HIV-positive.

- a. 5%
- b. 10%
- c. 20%
- d. 30%
- e. 40%

**Difficulty:** 1

**Question ID:** 2.1-81

**Page-Reference:** 47

**Topic:** Problems in Prenatal Development

**Skill:** Factual

**Objective:** 2.8

**Answer:** d. 30%

2.1-82. Research on the HIV virus in pregnant women has shown that

- a. HIV is always transmitted to an embryo or fetus by an infected mother.
- b. HIV is decreasing in women of childbearing age.
- c. HIV is less likely to be transmitted when the mother has been treated with antiretroviral drugs during pregnancy.
- d. women exposed to AZT have a greater probability of transmitting the disease to their child.
- e. only children of drug abusing mothers are at risk for HIV.

**Difficulty:** 2

**Question ID:** 2.1-82

**Page-Reference:** 47

**Topic:** Problems in Prenatal Development

**Skill:** Factual

**Objective:** 2.8

**Answer:** c. HIV is less likely to be transmitted when the mother has been treated with antiretroviral drugs during pregnancy.

2.1-83. Which of the following is an accurate statement concerning CMV?

- a. Symptoms are always severe in adults.
- b. It is not a serious disease.
- c. It is a virus in the herpes group.
- d. It cannot be transmitted prenatally.
- e. It causes syphilis.

**Difficulty:** 2

**Question ID:** 2.1-83

**Page-Reference:** 47

**Topic:** Problems in Prenatal Development

**Skill:** Conceptual

**Objective:** 2.8

**Answer:** c. It is a virus in the herpes group.

2.1-84. **Which of the following statements about STDs in pregnant women is accurate?**

- a. Herpes cannot be transmitted to the fetus during delivery.
- b. Gonorrhea can cause the infant to be blind.
- c. Syphilis is most harmful during the embryonic stage.
- d. CMV does not reach the fetus.
- e. All babies of HIV mothers will be HIV positive.

**Difficulty:** 3

**Question ID:** 2.1-84

**Page-Reference:** 47

**Topic:** Problems in Prenatal Development

**Skill:** Conceptual

**Objective:** 2.8

**Answer:** b. Gonorrhea can cause the infant to be blind.

2.1-85. **Of the following STD's, which are transmitted during delivery?**

- a. CMV and HIV
- b. herpes, syphilis, and HIV
- c. syphilis and gonorrhea
- d. CMV, herpes, and gonorrhea
- e. HIV and syphilis

**Difficulty:** 2

**Question ID:** 2.1-85

**Page-Reference:** 47

**Topic:** Problems in Prenatal Development

**Skill:** Factual

**Objective:** 2.8

**Answer:** d. CMV, herpes, and gonorrhea

2.1-86. **Ophelia's obstetrician has asked her to limit her consumption of fresh swordfish during her pregnancy. What substances is her doctor concerned with?**

- a. mercury and PCBs
- b. arsenic and lead
- c. cadmium and gases
- d. solvents and PCBs
- e. feces and cadmium

**Difficulty:** 3

**Question ID:** 2.1-86

**Page-Reference:** 48

**Topic:** Problems in Prenatal Development

**Skill:** Applied

**Objective:** 2.8

**Answer:** a. mercury and PCBs

- 2.1-87. **Sorting out the effects of drugs on prenatal development has proven to be a very difficult task for all of the following reasons EXCEPT**
- a. women who drink alcohol are also more likely to smoke.
  - b. women usually take only one drug at a time.
  - c. the effects of drugs may be subtle.
  - d. women who use drugs may have other problems that cause their symptoms.
  - e. the drug effects are visible only many years after birth.

**Difficulty:** 3

**Question ID:** 2.1-87

**Page-Reference:** 48

**Topic:** Problems in Prenatal Development

**Skill:** Conceptual

**Objective:** 2.9

**Answer:** b. women usually take only one drug at a time.

- 2.1-88. **Billy Jean is a heavy smoker. Her doctor has warned her that research results indicate that if a mother smokes during pregnancy, the child will have**
- a. foreshortened or missing limbs.
  - b. vaginal cancer.
  - c. low birth weight.
  - d. learning problems in elementary school.
  - e. FAS.

**Difficulty:** 1

**Question ID:** 2.1-88

**Page-Reference:** 48-49

**Topic:** Problems in Prenatal Development

**Skill:** Applied

**Objective:** 2.9

**Answer:** c. low birth weight.

- 2.1-89. **All of the following are common characteristics of children with fetal alcohol syndrome (FAS) EXCEPT**
- a. larger than normal size.
  - b. smaller brains.
  - c. distinct facial features.
  - d. heart defects.
  - e. physical deformities.

**Difficulty:** 2

**Question ID:** 2.1-89

**Page-Reference:** 49

**Topic:** Problems in Prenatal Development

**Skill:** Conceptual

**Objective:** 2.9

**Answer:** a. larger than normal size.



2.1-90. **What would be the most accurate thing for a physician to tell a woman about drinking alcohol during her pregnancy?**

- a. "It is okay to have one or two drinks a week."
- b. "It is okay to drink moderate amounts."
- c. "Don't drink at all during the first three months of your pregnancy."
- d. "Don't drink at all during the entire pregnancy."
- e. "Limit drinking to one drink a day."

**Difficulty:** 3

**Question ID:** 2.1-90

**Page-Reference:** 49

**Topic:** Problems in Prenatal Development

**Skill:** Applied

**Objective:** 2.9

**Answer:** d. "Don't drink at all during the entire pregnancy."

2.1-91. **Which of the following statements about cocaine use during pregnancy is TRUE?**

- a. About 3/4 of cocaine-exposed babies are born prematurely.
- b. Cocaine-exposed babies have normal birth weights.
- c. All cocaine exposed infants go through withdrawal at birth.
- d. It is not clear if there are any long-term consequences from prenatal cocaine exposure.
- e. Research has shown conclusively that there are long term effects.

**Difficulty:** 3

**Question ID:** 2.1-91

**Page-Reference:** 50

**Topic:** Problems in Prenatal Development

**Skill:** Factual

**Objective:** 2.9

**Answer:** d. It is not clear if there are any long-term consequences from prenatal cocaine exposure.

2.1-92. **Both heroin and methodone use during pregnancy can cause all of the following EXCEPT**

- a. addiction at birth.
- b. miscarriage.
- c. premature labor.
- d. early death.
- e. permanent developmental delays.

**Difficulty:** 2

**Question ID:** 2.1-92

**Page-Reference:** 50

**Topic:** Problems in Prenatal Development

**Skill:** Conceptual

**Objective:** 2.9

**Answer:** e. permanent developmental delays.

2.1-93. **Consuela has just become pregnant. Which of the following vitamins in large doses can cause malformation of the ears, face, and heart?**

- a. vitamin A
- b. vitamin B
- c. vitamin C
- d. vitamin D
- e. vitamin E

**Difficulty:** 1

**Question ID:** 2.1-93

**Page-Reference:** 51 (Table 2.5)

**Topic:** Problems in Prenatal Development

**Skill:** Applied

**Objective:** 2.10

**Answer:** a. vitamin A

2.1-94. **Daniel's wife is pregnant. He has just read an article about the use of acetaminophen during pregnancy. He should tell his wife**

- a. acetaminophen should not be used during the last three months of pregnancy.
- b. acetaminophen is off limits during pregnancy because it is always teratogenic to human fetuses.
- c. acetaminophen is safe during pregnancy, unless taken to excess.
- d. acetaminophen causes several chromosomal disorders.
- e. acetaminophen should be avoided completely because their newborn will be addicted to it.

**Difficulty:** 2

**Question ID:** 2.1-94

**Page-Reference:** 51

**Topic:** Problems in Prenatal Development

**Skill:** Applied

**Objective:** 2.10

**Answer:** c. acetaminophen is safe during pregnancy, unless taken to excess.

2.1-95. **A well-known teratogen, toxoplasmosis, found in raw meat and contaminated cat feces, can cause**

- a. behavior problems in adolescence.
- b. brain swelling and spinal abnormalities.
- c. serious malnutrition.
- d. lower IQ scores.
- e. facial deformities.

**Difficulty:** 2

**Question ID:** 2.1-95

**Page-Reference:** 51 (Table 2.5)

**Topic:** Problems in Prenatal Development

**Skill:** Factual

**Objective:** 2.10

**Answer:** b. brain swelling and spinal abnormalities.

2.1-96. **Effects of malnutrition during pregnancy are**

- a. most damaging during the embryonic period, when organ systems differentiate.
- b. noticeable only under famine conditions.
- c. not noticeable, because the fetus is able to act as a parasite on the mother's body.
- d. most detrimental if malnutrition occurs during the last three months of pregnancy.
- e. damaging only when combined with maternal drug use.

**Difficulty:** 2

**Question ID:** 2.1-96

**Page-Reference:** 51

**Topic:** Problems in Prenatal Development

**Skill:** Factual

**Objective:** 2.10

**Answer:** d. most detrimental if malnutrition occurs during the last three months of pregnancy.

2.1-97. **Bess has been told to eat plenty of green leafy vegetables and grain products during pregnancy.**

**They will provide \_\_\_\_\_ that will help prevent neural tube defects.**

- a. calcium
- b. folic acid
- c. vitamin A
- d. iron
- e. protein

**Difficulty:** 1

**Question ID:** 2.1-97

**Page-Reference:** 51-52

**Topic:** Problems in Prenatal Development

**Skill:** Applied

**Objective:** 2.10

**Answer:** b. folic acid

2.1-98. **Your friend is pregnant and her doctor has told her to increase her consumption of folic acid, because folic acid**

- a. prevents iron deficiency anemia.
- b. prevents neural tube defects.
- c. helps to keep weight gain down.
- d. contributes to respiratory system development.
- e. increases birth weight.

**Difficulty:** 1

**Question ID:** 2.1-98

**Page-Reference:** 51-52

**Topic:** Problems in Prenatal Development

**Skill:** Applied

**Objective:** 2.10

**Answer:** b. prevents neural tube defects.

2.1-99. **Infants born to women over the age of 35 are**

- a. at lower risk for weighing less than 5.5 pounds at birth.
- b. at higher risk for postpartum obesity.
- c. at higher risk for heart malformations and chromosomal disorders.
- d. at higher risk for developing ADHD in early childhood.
- e. no more at risk than infants born to women under 35.

**Difficulty:** 2

**Question ID:** 2.1-99

**Page-Reference:** 52

**Topic:** Problems in Prenatal Development

**Skill:** Factual

**Objective:** 2.10

**Answer:** c. at higher risk for heart malformation and chromosomal disorders.

2.1-100. **Comparison of poor and middle-class mothers indicates that poor mothers**

- a. are less likely to have stillborn infants.
- b. are more likely to have their first pregnancy later in life.
- c. are less likely to be immunized against such diseases as rubella.
- d. are more likely to seek early prenatal care.
- e. are less likely to have more than one or two pregnancies.

**Difficulty:** 2

**Question ID:** 2.1-100

**Page-Reference:** 53

**Topic:** Problems in Prenatal Development

**Skill:** Conceptual

**Objective:** 2.10

**Answer:** c. are less likely to be immunized against such diseases as rubella.

**Fill-in-the-Blank**

2.2-1. **The nucleus of each human cell contains a set of 46 \_\_\_\_\_ .**

**Difficulty:** 1

**Question ID:** 2.2-1

**Page-Reference:** 30

**Topic:** Conception and Genetics

**Skill:** Factual

**Objective:** 2.1

**Answer:** chromosomes

2.2-2. The tube between the ovary and the uterus down which the ovum travels to the uterus and in which conception usually occurs is called the \_\_\_\_\_ .

**Difficulty:** 1  
**Question ID:** 2.2-2  
**Page-Reference:** 30  
**Topic:** Conception and Genetics  
**Skill:** Factual  
**Objective:** 2.1

**Answer:** fallopian tube

2.2-3. Chromosomes are composed of long strings of molecules of a chemical called deoxyriboneucleic acid also known as \_\_\_\_\_ .

**Difficulty:** 1  
**Question ID:** 2.2-3  
**Page-Reference:** 30  
**Topic:** Conception and Genetics  
**Skill:** Factual  
**Objective:** 2.1

**Answer:** DNA

2.2-4. The gene that determines any particular characteristic or developmental pattern always occurs in the same place on a particular chromosome. Geneticists call that site the \_\_\_\_\_ of the gene.

**Difficulty:** 2  
**Question ID:** 2.2-4  
**Page-Reference:** 31  
**Topic:** Conception and Genetics  
**Skill:** Factual  
**Objective:** 2.1

**Answer:** locus

2.2-5. Coarse hair, nearsightedness, and dimples are all \_\_\_\_\_ traits.

**Difficulty:** 2  
**Question ID:** 2.2-5  
**Page-Reference:** 33  
**Topic:** Conception and Genetics  
**Skill:** Factual  
**Objective:** 2.2

**Answer:** dominant

2.2-6. **Georgette has inherited only one gene for straight hair. Therefore, she will have \_\_\_\_\_ hair but may transmit a gene for \_\_\_\_\_ hair to her children.**

**Difficulty:** 3  
**Question ID:** 2.2-6  
**Page-Reference:** 33-34  
**Topic:** Conception and Genetics  
**Skill:** Applied  
**Objective:** 2.2

**Answer:** curly/straight

2.2-7. **The pattern of genetic transmission in which both genes and environment influence the phenotype is called \_\_\_\_\_ .**

**Difficulty:** 2  
**Question ID:** 2.2-7  
**Page-Reference:** 34  
**Topic:** Conception and Genetics  
**Skill:** Factual  
**Objective:** 2.2

**Answer:** multifactorial pattern of inheritance

2.2-8. **Because identical twins develop from the same original fertilized \_\_\_\_\_ , they have identical \_\_\_\_\_ heritages.**

**Difficulty:** 3  
**Question ID:** 2.2-8  
**Page-Reference:** 35  
**Topic:** Development from Conception to Birth  
**Skill:** Conceptual  
**Objective:** 2.2

**Answer:** ovum/genetic

2.2-9. **A \_\_\_\_\_ is the name for the mass of cells from roughly four to 10 days after fertilization.**

**Difficulty:** 2  
**Question ID:** 2.2-9  
**Page-Reference:** 35  
**Topic:** Development from Conception to Birth  
**Skill:** Factual  
**Objective:** 2.3

**Answer:** blastocyst

2.2-10. The developing child has already reached the \_\_\_\_\_ stage of prenatal development before the mother ends her first trimester.

**Difficulty:** 2  
**Question ID:** 2.2-10  
**Page-Reference:** 36-37  
**Topic:** Development from Conception to Birth  
**Skill:** Factual  
**Objective:** 2.3

**Answer:** third

2.2-11. The embryonic process where the rudiments of skin, sense receptors, nerve cells, muscles, circulatory system, and internal organs are developing is called \_\_\_\_\_ .

**Difficulty:** 2  
**Question ID:** 2.2-11  
**Page-Reference:** 37  
**Topic:** Development from Conception to Birth  
**Skill:** Factual  
**Objective:** 2.3

**Answer:** organogenesis

2.2-12. The movement of neurons to specialized regions of the brain is known as \_\_\_\_\_ .

**Difficulty:** 1  
**Question ID:** 2.2-12  
**Page-Reference:** 38  
**Topic:** Development from Conception to Birth  
**Skill:** Factual  
**Objective:** 2.3

**Answer:** neuronal migration

2.2-13. A fetus's capability for survival outside the womb is called \_\_\_\_\_ .

**Difficulty:** 2  
**Question ID:** 2.2-13  
**Page-Reference:** 38  
**Topic:** Development from Conception to Birth  
**Skill:** Factual  
**Objective:** 2.3

**Answer:** viability

2.2-14. Most brain structures in a fetus are completely developed by the end of the \_\_\_\_\_ week.

**Difficulty:** 3  
**Question ID:** 2.2-14  
**Page-Reference:** 38  
**Topic:** Development from Conception to Birth  
**Skill:** Factual  
**Objective:** 2.3

**Answer:** twenty fourth

2.2-15. The rapid development of neurons between the 10th and 18th week of gestation is called \_\_\_\_\_ .

**Difficulty:** 2  
**Question ID:** 2.2-15  
**Page-Reference:** 38  
**Topic:** Development from Conception to Birth  
**Skill:** Factual  
**Objective:** 2.3

**Answer:** neuronal proliferation

2.2-16. The female fetus may be masculinized if a genetic disorder called \_\_\_\_\_ is present.

**Difficulty:** 3  
**Question ID:** 2.2-16  
**Page-Reference:** 40  
**Topic:** Development from Conception to Birth  
**Skill:** Factual  
**Objective:** 2.4

**Answer:** congenital adrenal hyperplasia

2.2-17. \_\_\_\_\_ and \_\_\_\_\_ are caused by genes located on the autosomes.

**Difficulty:** 2  
**Question ID:** 2.2-17  
**Page-Reference:** 42-43  
**Topic:** Problems in Prenatal Development  
**Skill:** Factual  
**Objective:** 2.6

**Answer:** Autosomal disorders/sex-linked disorders



2.2-18. About one in every 3,000 babies born to Jewish couples of Eastern European ancestry suffers from a recessive disorder called \_\_\_\_\_ disease.

**Difficulty:** 2  
**Question ID:** 2.2-18  
**Page-Reference:** 43  
**Topic:** Problems in Prenatal Development  
**Skill:** Factual  
**Objective:** 2.6

**Answer:** Tay Sachs

2.2-19. One common fairly innocuous sex-linked recessive disorder is known as \_\_\_\_\_ .

**Difficulty:** 1  
**Question ID:** 2.2-19  
**Page-Reference:** 43  
**Topic:** Problems in Prenatal Development  
**Skill:** Factual  
**Objective:** 2.6

**Answer:** red-green color blindness

2.2-20. \_\_\_\_\_ has become a routine part of prenatal care in the United States because of its usefulness in monitoring fetal growth in high-risk pregnancies.

**Difficulty:** 2  
**Question ID:** 2.2-20  
**Page-Reference:** 46  
**Topic:** Problems in Prenatal Development  
**Skill:** Factual  
**Objective:** 2.6a

**Answer:** Ultrasound

2.2-21. CMV is now thought to be the single most prevalent cause of both congenital \_\_\_\_\_ and \_\_\_\_\_ .

**Difficulty:** 3  
**Question ID:** 2.2-21  
**Page-Reference:** 47  
**Topic:** Problems in Prenatal Development  
**Skill:** Factual  
**Objective:** 2.8

**Answer:** mental retardation/deafness

2.2-22. \_\_\_\_\_ is a new specialty meant to manage the pregnancies of women who have maternal health problems such as diabetes.

**Difficulty:** 1  
**Question ID:** 2.2-22  
**Page-Reference:** 47  
**Topic:** Problems in Prenatal Development  
**Skill:** Factual  
**Objective:** 2.8

**Answer:** Fetal-maternal medicine

2.2-23. Pregnant women are advised to not consume large amounts of fish to avoid exposure to the potentially teratogenic substance called \_\_\_\_\_ that is due to industrial pollution of the waterways and oceans.

**Difficulty:** 1  
**Question ID:** 2.2-23  
**Page-Reference:** 48  
**Topic:** Problems in Prenatal Development  
**Skill:** Conceptual  
**Objective:** 2.8

**Answer:** mercury

2.2-24. A pattern of abnormalities, including mental retardation and minor physical anomalies, often found in children born to alcoholic mothers is called \_\_\_\_\_ .

**Difficulty:** 1  
**Question ID:** 2.2-24  
**Page-Reference:** 49  
**Topic:** Problems in Prenatal Development  
**Skill:** Factual  
**Objective:** 2.9

**Answer:** fetal alcohol syndrome (FAS)

2.2-25. For the protection of the fetus, new regulations by the Food and Drug Administration now require that 140 micrograms of \_\_\_\_\_ be added to each 100 grams of enriched flour.

**Difficulty:** 3  
**Question ID:** 2.2-25  
**Page-Reference:** 52  
**Topic:** Problems in Prenatal Development  
**Skill:** Factual  
**Objective:** 2.10

**Answer:** folic acid

## Essay

- 2.3-1. **Define genotype and phenotype and give examples of each. Explain the conditions under which they would be the same.**

**Difficulty:** 2  
**Question ID:** 2.3-1  
**Page-Reference:** 32-34  
**Topic:** Conception and Genetics  
**Skill:** Conceptual  
**Objective:** 2.2

**Answer:** Genotype is the pattern of characteristics mapped in the genes; phenotype is the expression of a particular set of genetic information. They would be the same when both chromosomes making up the genotype express the same information (a recessive trait being expressed).

- 2.3-2. **Briefly trace prenatal development from conception to birth. Give examples of what happens at critical points in the process.**

**Difficulty:** 3  
**Question ID:** 2.3-2  
**Page-Reference:** 35-39  
**Topic:** Development from Conception to Birth  
**Skill:** Factual  
**Objective:** 2.3

**Answer:** The answer should include the germinal stage (first two weeks), in which the zygote has not attached to the uterus as yet; the embryonic stage (weeks 3 through 8), in which organogenesis takes place and teratogens can have their greatest effect; and the fetal stage (last 7 months), when the most growth occurs.

- 2.3-3. **Explain the difference among autosomal dominant, autosomal recessive, and sex-linked disorders and give examples of each.**

**Difficulty:** 3  
**Question ID:** 2.3-3  
**Page-Reference:** 42-45  
**Topic:** Problems in Prenatal Development  
**Skill:** Factual  
**Objective:** 2.6

**Answer:** Autosomal disorders occur on chromosome pairs 1 through 22, dominant requiring only one gene for expression and recessive requiring both genes in the pair for expression. Sex-linked disorders occur on the X chromosome. Examples should be given for each (See Table 2.4).

2.3-4. Describe what a *mini fetal monitor* is and discuss possible advantages and disadvantages.

**Difficulty:** 2  
**Question ID:** 2.3-4  
**Page-Reference:** 48  
**Topic:** Problems in Prenatal Development  
**Skill:** Applied  
**Objective:** 2.8a

**Answer:** The answer should include a description of the mini fetal monitor as found in the box on *Technology and the Developing Child: High-Tech Monitoring for High-Risk Pregnancies*. Advantages include in-home instead of in-hospital monitoring and ease of use. Disadvantages could include technical problems, lack of proper use by the mother, and distance from the hospital if a problem should occur.

2.3-5. What is the result of inadequate amounts of folic acid during pregnancy?

**Difficulty:** 2  
**Question ID:** 2.3-5  
**Page-Reference:** 51-52  
**Topic:** Problems in Prenatal Development  
**Skill:** Factual  
**Objective:** 2.10

**Answer:** Folic acid is a B vitamin found primarily in liver, beans, leafy green vegetables, broccoli, orange juice, wheat germ, and fortified grain products. Inadequate amounts of folic acid have been clearly linked to the risk of neural tube defects such as spina bifida, a deformity in which the lower part of the spine does not close. Spina bifida children often have mental retardation and have lower body paralysis.

2.3-6. What are the reasons for the higher risk of problems in infants born to poor mothers in the United States (as compared to middle-class mothers)? Make a recommendation for correcting this situation.

**Difficulty:** 2  
**Question ID:** 2.3-6  
**Page-Reference:** 53  
**Topic:** Problems in Prenatal Development  
**Skill:** Applied  
**Objective:** 2.10

**Answer:** The answer should cover such things as poor nutrition, lack of prenatal and postnatal health care, etc. The recommendations should be realistic.

**MyDevelopmentLab**

2.4-1. Every cell in the human body contains a total of \_\_\_\_ chromosomes, made up of strands of \_\_\_\_\_ .

**Difficulty:** 2  
**Question ID:** 2.4-1  
**Page-Reference:** MDL  
**Topic:** Explore: Building Blocks of Genetics  
**Skill:** Factual  
**Objective:** 2.2

**Answer:** 46/DNA

2.4-2. At what point during pregnancy can Chorionic Villus Sampling be performed? If you were pregnant would you have this procedure done to determine the sex of your child? Why or why not?

**Difficulty:** 2  
**Question ID:** 2.4-2  
**Page-Reference:** MDL  
**Topic:** Watch: Chorionic Villus Sampling  
**Skill:** Conceptual  
**Objective:** 2.7

**Answer:** The procedure can be done as early as 10 weeks of gestation. Since the procedure is twice as risky as amniocentesis, and both are risky procedures, neither one should be used simply for determining the sex of the child.

2.4-3. An STD screen for \_\_\_\_\_ is likely to be positive in a mother who prematurely gives birth to a child with a small head circumference and visual abnormalities.

**Difficulty:** 2  
**Question ID:** 2.4-3  
**Page-Reference:** MDL  
**Topic:** Simulate: Teratogens and Their Effects  
**Skill:** Applied  
**Objective:** 2.8

**Answer:** syphilis

2.4-4. Michael's family lives on the shores of a lake in southern Utah which is next to an abandoned land-fill. The family frequently eats trout from the lake. Three-year-old Michael was born with microcephaly and cognitive delays in visual recognition. Which of the following teratogens would you suspect as a possible cause for Michael's birth defects?

- a. Mercury
- b. PCBs
- c. Lead
- d. Arsenic

**Difficulty:** 2

**Question ID:** 2.4-4

**Page-Reference:** MDL

**Topic:** Simulate: Teratogens and Their Effects

**Skill:** Applied

**Objective:** 2.8

**Answer:** b. PCBs

2.4-5. People who use hypnobirthing as a method of drug-free delivery believe that \_\_\_\_\_ is a natural anesthetic.

**Difficulty:** 1

**Question ID:** 2.4-5

**Page-Reference:** MDL

**Topic:** Watch: Drug-Free Deliveries

**Skill:** Conceptual

**Objective:** 2.9

**Answer:** relaxation

2.4-6. There is no scientific evidence that hypnobirthing is as effective as giving a mother a(n) \_\_\_\_\_ during delivery.

**Difficulty:** 2

**Question ID:** 2.4-6

**Page-Reference:** MDL

**Topic:** Watch: Drug-Free Deliveries

**Skill:** Factual

**Objective:** 2.9

**Answer:** epidural

2.4-7. **After watching the video clip on drug-free deliveries, explain the process of hypnobirthing. Using critical thinking, give an educated, informed opinion of this process.**

**Difficulty:** 2

**Question ID:** 2.4-7

**Page-Reference:** MDL

**Topic:** Watch: Natural Childbirth: Drug-Free Deliveries

**Skill:** Applied

**Objective:** 2.10

**Answer:** Key concepts: - no scientific data to back it up or discredit it - there is anecdotal evidence based on the premise that the woman's body knows how to deliver the child and the less outside interference the better, including drugs - process involves visualization, relaxation, relaxed breathing and gentle stroking of the back and hips