

Leifer: Introduction to Maternity & Pediatric Nursing, 6th Edition

Chapter 03: Fetal Development

Test Bank

MULTIPLE CHOICE

1. The total number of chromosomes contained in a mature sperm or ovum is:
 - a. 22.
 - b. 23.
 - c. 44.
 - d. 46.

ANS: B

Gametes (sex chromosomes) contain 23 chromosomes.

DIF: Cognitive Level: Knowledge REF: p. 32 OBJ: 2
TOP: Gametogenesis KEY: Nursing Process Step: N/A
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

2. A pregnant woman states, "My husband hopes I will give him a boy because we have three girls." The nurse explains that:
 - a. the sex chromosome of the fertilized ovum determines the gender of the child.
 - b. when the sperm and ovum are united, there is a 75% chance the child will be a girl.
 - c. when the pH of the female reproductive tract is acidic, the child will be a girl.
 - d. if a sperm carrying a Y chromosome fertilizes an ovum, then a boy is produced.

ANS: D

When a Y-bearing sperm fertilizes an ovum, a male child is produced.

DIF: Cognitive Level: Comprehension REF: p. 33 OBJ: 3
TOP: Sex Determination KEY: Nursing Process Step:
Implementation
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

3. Using a diagram, the nurse points out the most common site for fertilization, which is the:
 - a. lower segment of the uterus.
 - b. outer third of the fallopian tube near the ovary.
 - c. upper portion of the uterus.
 - d. area of the fallopian tube farthest from the ovary.

ANS: B

Fertilization takes place in the outer third of the fallopian tube, which is closest to the ovary.

DIF: Cognitive Level: Knowledge REF: pp. 33-34 OBJ: 3
TOP: Fertilization KEY: Nursing Process Step: Implementation
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

4. The embryo is termed a fetus at which stage of prenatal development?
- a. 2 weeks
 - b. 4 weeks
 - c. 9 weeks
 - d. 16 weeks

ANS: C

The fetus (third stage of prenatal development) begins at the ninth week and continues until the 40th week of gestation or until birth.

DIF: Cognitive Level: Knowledge REF: p. 37 OBJ: 4
TOP: Prenatal Developmental Milestones KEY: Nursing Process Step:
Implementation
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

5. The nurse explains to a pregnant patient that blood is circulating through the placenta to the fetus by way of:
- a. one umbilical vein.
 - b. two umbilical veins.
 - c. one umbilical artery.
 - d. two umbilical arteries.

ANS: A

The umbilical vein transports richly oxygenated blood from the placenta to the fetus.

DIF: Cognitive Level: Knowledge REF: p. 39 OBJ: 7
TOP: Fetal Circulation KEY: Nursing Process Step:
Implementation
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

6. The nurse explains that the usual location for implantation of the zygote is the:
- a. upper section of the posterior uterine wall.
 - b. lower portion of the uterus near the cervical os.
 - c. inner third of the fallopian tube near the uterus.
 - d. lateral aspect of the uterine wall.

ANS: A

The zygote usually implants in the upper section of the posterior uterine wall.

DIF: Cognitive Level: Knowledge REF: p. 34 OBJ: 3
TOP: Implantation KEY: Nursing Process Step: N/A
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

7. The embryonic membrane that contains fingerlike projections on its surface, which attach to the uterine wall, is the:
- amnion.
 - yolk sac.
 - chorion.
 - decidua basalis.

ANS: C

The chorion is a thick membrane with fingerlike projections (villi) on its outermost surface.

DIF: Cognitive Level: Knowledge REF: pp. 34-35 OBJ: 4
TOP: Accessory Structures of Pregnancy KEY: Nursing Process Step: N/A
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

8. The nurse explains that the hormone responsible for converting the endometrium into decidual cells for implantation is:
- estrogen.
 - human chorionic gonadotropin.
 - human placental lactogen.
 - progesterone.

ANS: D

At high levels, progesterone maintains the endometrial lining for implantation of the zygote.

DIF: Cognitive Level: Knowledge REF: p. 39 OBJ: 6
TOP: Placenta KEY: Nursing Process Step: N/A
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

9. When the patient asks when her infant's heart will begin to pump blood, the nurse replies that blood circulation begins:
- by the end of week 3.
 - beginning in week 8.
 - at the end of week 16.
 - beginning in week 24.

ANS: A

The fetal heart begins to pump by week 3 of gestation.

DIF: Cognitive Level: Knowledge REF: p. 36 OBJ: 5
TOP: Prenatal Development KEY: Nursing Process
Step: N/A
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

10. In fetal circulation, the purpose of the ductus venosus is to bypass the:

- a. liver.
- b. heart.
- c. lungs.
- d. kidneys.

ANS: A

Fetal blood bypasses the liver through the ductus venosus by carrying blood directly to the inferior vena cava.

DIF: Cognitive Level: Knowledge REF: p. 39 OBJ: 7
TOP: Prenatal Development KEY: Nursing Process
Step: N/A
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

11. Untreated respiratory distress in the newborn could cause which complication?

- a. Esophageal atresia
- b. Gastric dilation
- c. Cold stress
- d. Reopening of the foramen ovale

ANS: D

Respiratory distress can cause increased pressure in the right ventricle, causing reopening of the foramen ovale.

DIF: Cognitive Level: Application REF: p. 40 OBJ: 7
TOP: Fetal Circulation KEY: Nursing Process Step:
Implementation
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

12. During an ultrasound, two amnions and two placentas are observed. The nurse is aware that this pregnancy will result in _____ twins.

- a. dizygotic
- b. monozygotic
- c. conjoined
- d. high birth-weight

ANS: A

Dizygotic twins always have two amnions and two chorions (placentas).

DIF: Cognitive Level: Analysis REF: p. 41 OBJ: 8
TOP: Multifetal Pregnancy KEY: Nursing Process Step: Assessment
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

13. A woman who is 25 weeks pregnant asks the nurse what her fetus looks like. The nurse explains that one physical characteristic present in a 25-week-old fetus is:

- a. lanugo covering the body.
- b. constant motion.
- c. skin that is pink and smooth.
- d. eyes that are closed.

ANS: A

By 25 weeks, the body of the fetus is covered with lanugo, the eyes are open, the skin is wrinkled, and the fetus has definite periods of movement and sleeping.

DIF: Cognitive Level: Application REF: p. 37, Table 3-1
OBJ: 5 TOP: Prenatal Development
KEY: Nursing Process Step: Implementation
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

14. At what point in prenatal development do the lungs begin to produce surfactant?
- a. 17 weeks
 - b. 20 weeks
 - c. 25 weeks
 - d. 30 weeks

ANS: C

During week 25, the alveoli begin to produce surfactant, which enables the alveoli to stay open for adequate lung oxygenation to occur.

DIF: Cognitive Level: Knowledge REF: p. 37, Table 3-1
OBJ: 5 TOP: Prenatal Development
KEY: Nursing Process Step: N/A
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

15. A woman missed her menstrual period 1 week ago and has come to the doctor's office for a pregnancy test. The nurse knows that the placental hormone measured in pregnancy tests is:
- a. progesterone.
 - b. estrogen.
 - c. human chorionic gonadotropin.
 - d. human placental lactogen.

ANS: C

Human chorionic gonadotropin is the basis for most pregnancy tests. It is detectable in maternal blood as soon as implantation occurs, usually 7 to 9 days after fertilization.

DIF: Cognitive Level: Knowledge REF: p. 39 OBJ: 6
TOP: Accessory Structures of Pregnancy KEY: Nursing Process Step: Assessment
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

16. When preparing to teach a class about prenatal development, the nurse would include information about folic acid supplementation because it is known to prevent:
- congenital heart defects.
 - neural tube defects.
 - mental retardation.
 - premature birth.

ANS: B

It is now known that folic acid supplements can prevent neural tube defects such as spina bifida.

DIF: Cognitive Level: Comprehension REF: p. 37 OBJ: 5
TOP: Prenatal Development KEY: Nursing Process
Step: Planning
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

17. The nurse informs a class of expectant parents that the fetus is first considered viable at the age of _____ weeks.
- 14
 - 20
 - 25
 - 30

ANS: B

By 20 weeks of gestation, the lungs have matured enough for the fetus to survive outside the uterus (age of viability).

DIF: Cognitive Level: Knowledge REF: p. 37 OBJ: 5
TOP: Prenatal Developmental Milestones KEY: Nursing Process Step: N/A
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

18. The nurse explains that if one parent has a dominant gene and the other parent does not, the percentage of children carrying the dominant gene will be:
- 10%.
 - 25%.
 - 50%.
 - 100%.

ANS: C

If one parent has a dominant trait and the other does not, then 50% of the children will inherit the trait.

DIF: Cognitive Level: Comprehension REF: p. 33 OBJ: 4
TOP: Dominant Traits KEY: Nursing Process Step:
Implementation

MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

19. The nurse explains that monozygotic twins are frequently below average birth weight because of inadequate:
- a. space in the uterus.
 - b. blood supply.
 - c. maternal health.
 - d. placental nutrition.

ANS: D

The single placenta may not be able to provide adequate nutrition to two fetuses.

DIF: Cognitive Level: Comprehension REF: p. 41 OBJ: 8

TOP: Low Birth-Weight Twins KEY: Nursing Process Step: Implementation

MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

20. The school nurse counseling a group of adolescent girls states that sperm ejaculated near the cervix:
- a. are destroyed by the acidic pH of the vagina.
 - b. survive up to 5 days and can cause pregnancy.
 - c. lose their motility in about 12 hours after intercourse.
 - d. are usually pushed out of the vagina by the muscular action of the vaginal wall.

ANS: B

Sperm ejaculated near the cervix can survive up to 5 days and cause pregnancy even before ovulation.

DIF: Cognitive Level: Comprehension REF: p. 33 OBJ: Objective: 3

TOP: Fertilization KEY: Nursing Process Step: Implementation

MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

21. The nurse explains that survival of the X and Y bearing sperm after intercourse can be affected by the woman's:
- a. age.
 - b. estrogen level.
 - c. body temperature.
 - d. level of feminine hygiene.

ANS: B

Estrogen levels and the pH of the female reproductive tract can affect the survival of the X- and Y-bearing sperm as well as their motility.

DIF: Cognitive Level: Knowledge REF: p. 33 OBJ: Objective: 3

TOP: Fertilization KEY: Nursing Process Step: Implementation

MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

22. The normal umbilical cord is comprised of:
- 1 artery carrying blood to the fetus and 1 vein carrying blood away from the fetus.
 - 1 artery carrying blood to the fetus and 2 veins carrying blood away from the fetus.
 - 2 arteries carrying blood away from the fetus and 1 vein carrying blood to the fetus.
 - 2 arteries carrying blood to the fetus and 2 veins carrying blood away from the fetus.

ANS: C

The umbilical cord is comprised of 2 arteries carrying blood away from the fetus and 1 vein carrying blood to the fetus.

DIF: Cognitive Level: Knowledge REF: p. 39 OBJ: Objective: 6
TOP: Fetal Circulation KEY: Nursing Process Step: N/A
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

MULTIPLE RESPONSE

23. A nurse is teaching a class on fetal development to a class of high school students and explains the primary germ layers. What are the germ layers? Select all that apply.
- Ectoderm
 - Endoderm
 - Mesoderm
 - Plastoderm
 - Blastoderm

ANS: A, B, C

The zygote transforms its embryonic disc into three layers: the ectoderm, the mesoderm, and the endoderm.

DIF: Cognitive Level: Knowledge REF: p. 35, Box 3-1
OBJ: 4 TOP: Primary Germ Layers
KEY: Nursing Process Step: Implementation
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

24. The amniotic fluid has several functions. What are they? Select all that apply.
- Maintaining an even temperature
 - Impeding excessive fetal movement
 - Lubricating fetal skin
 - Acting as reservoir for nutrients
 - Acting as cushion for fetus

ANS: A, E

The amniotic fluid provides maintenance of even temperature; prevents amnion from adhering to fetal skin; allows buoyancy, symmetrical growth, and fetal movement; and acts as a cushion for the fetus. Although the fetus does swallow amniotic fluid, it has no nutritional value.

DIF: Cognitive Level: Knowledge REF: p. 35, Box 3-1
OBJ: 6 TOP: Amniotic Fluid
KEY: Nursing Process Step: Implementation
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

COMPLETION

25. The nurse explains that prior to fertilization each cell is reduced from 46 chromosomes to 23 chromosomes. This is referred to as the _____ number.

ANS:

haploid

When each cell reduces its chromosomes from 46 to 23, it is called the haploid number.

DIF: Cognitive Level: Comprehension REF: p. 31 OBJ: 3
TOP: Haploid Number KEY: Nursing Process Step:
Implementation
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

26. The component of development that programs the genetic code into the nucleus of the cell is _____.

ANS:

DNA

The DNA programs the genetic code to the nucleus of the cell to be replicated.

DIF: Cognitive Level: Knowledge REF: p. 31 OBJ: 4
TOP: DNA KEY: Nursing Process Step: N/A
MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

27. The vessels comprising the umbilical cord are cushioned and protected by a substance called _____.

ANS:

Wharton's jelly

Wharton's jelly is a substance in the umbilical cord that cushions and protects the vessels.

DIF: Cognitive Level: Knowledge REF: p. 39 OBJ: Objective: 1
TOP: Fetal Circulation KEY: Nursing Process Step: N/A

MSC: NCLEX: Health Promotion and Maintenance: Growth and Development

OTHER

28. Organize the developmental stages in the correct order.

- a. Fetus
- b. Zygote
- c. Embryo
- d. Blastocyst
- e. Morula

ANS:

B, E, D, C, A

The development follows these stages: zygote, morula, blastocyst, embryo, and fetus.

DIF: Cognitive Level: Application

REF: p. 36

OBJ: 4

TOP: Fetal Development

KEY: Nursing Process Step: N/A

MSC: NCLEX: Health Promotion and Maintenance: Growth and Development