Practicum in Education and Training

(2) The student understands the learner and learning process. The student is expected to:
(A) apply principles and theories of human development appropriate to specific teaching or training situations
(B) apply principles and theories about the learning process to specific teaching or training situations
(C) analyze personal behaviors and skills that facilitate the learning process
(D) suggest effective instructional practices to accommodate learning differences, learner exceptionality and special-needs conditions

Biology. (6) Science concepts. The student knows the mechanisms of genetics, including the role of nucleic acids and the principles of Mendelian Genetics. The student is expected to:
(A) identify components of DNA, and describe how information for specifying the traits of an organism is carried in the DNA
(B) recognize that components that make up the genetic code are common to all organisms
(D) recognize that gene expression is a regulated process
(E) identify and illustrate changes in DNA and evaluate the significance of these changes
(F) predict possible outcomes of various genetic combinations such as monohybrid crosses, dihybrid crosses and non-Mendelian inheritance
(G) recognize the significance of meiosis to sexual reproduction
(H) describe how techniques such as DNA fingerprinting, genetic
modifications, and chromosomal analysis are used to study the genomes of organisms

**Biology.** (10) Science concepts. The student knows that biological systems are composed of multiple levels. The student is expected to:

(A) describe the interactions that occur among systems that perform the functions of regulation, nutrient absorption, reproduction, and defense from injury or illness in animals

(C) analyze the levels of organization in biological systems and relate the levels to each other and to the whole system

1. Which structure protects the developing baby from being injured should the mother fall?
   a. Fallopian tube
   b. Amniotic fluid
   c. Ovaries
   d. Umbilical chord

2. Fertilization in the human body normally takes place in the following location:
   a. Ovary
   b. Uterus
   c. Fallopian tubes
   d. Cervix

3. Antibiotics are used to treat some sexually transmitted diseases. Which of the following can be treated with antibiotics?
   a. Gonorrhea
   b. AIDS
   c. Genital herpes
   d. Human papilloma virus

4. Which statement is true for human development?
   a. Alcohol and drugs taken during pregnancy will not harm the embryo or the fetus.
   b. The first trimester of pregnancy is not important to the development of the embryo.
   c. Drugs and alcohol taken during pregnancy cannot cause birth defects
   d. Viral diseases may affect the development of the embryo.
5. The use of substances by the mother can have devastating consequences to the fetus. Women who smoke during their pregnancies have the following common characteristics. Which is the most common consequence?
   a. Below average intelligence and facial deformities
   b. Low birth weights
   c. Heart defects
   d. Arm or a leg not developed

6. Researchers estimate that approximately 58 percent of all natural conceptions never become properly implanted in the uterus which results in the new life ending before the mother is aware she is pregnant. When implantation is successful, hormonal changes halt a woman’s:
   a. menstrual cycle
   b. physical growth
   c. hormone production
   d. hair growth

7. By the twelfth week of pregnancy, the embryo has already begun development of the basic organs and parts. Which of the following organs are used to determine the gender of the fetus by the 12th week?
   a. the brain
   b. the eyes
   c. sex organs
   d. the stomach

8. Down syndrome is the most common genetic anomaly during prenatal development. Typical features of Down syndrome include flattened facial appearance, heart defects, and mental retardation. The risk of having a child with Down syndrome increases with maternal age. Down syndrome is caused by:
   a. extra copy of the 21 chromosome
   b. two sperms fertilizing an egg at once
   c. extra copy of any chromosome
   d. shortage of chromosomal material

9. There are a number of maternal diseases that can negatively impact the fetus, including herpes, rubella, and AIDS. Herpes virus is one of the most common maternal diseases and can be transmitted in the fetus, leading to all of the following except:
   a. deafness
   b. brain swelling
   c. mental retardation
   d. Down syndrome
10. Within a few hours after conception, the single-celled zygote begins making a journey down the fallopian tube to the uterus where it will begin the process of:
   a. maturation
   b. implantation with simultaneous cell division and growth
   c. destruction
   d. growth

Answer Key

1)  B
2)  C
3)  A
4)  D
5)  B
6)  A
7)  C
8)  A
9)  D
10) B