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HST071: Human Reproductive Biology
Homework 4

1. Phytoestrogens are (steroidal / non-steroidal) compounds found in _____ that have the ability to bind and activate _____ receptors (weakly / strongly).
2. To reduce the risk of Rh sensitization, Rh-immune globulin should be given to Rh- (negative / positive) (sensitized / unsensitized) women at _____ weeks gestational age and again after delivery if the newborn is Rh (negative / positive).
3. Measurement of amniotic fluid _____ remains the standard for assessment of pregnancies at risk for significant fetal anemia. Two other tests that are done but are not adequately sensitive are _____ and _____.
4. In a process similar to Rh sensitization, _____ sensitization can occur, but unlike Rh disease, _____ fetuses can be affected.
5. A major complication of cocaine use during pregnancy is _____.
6. The most distinctive feature of retinoic acid's teratogenic effect on fetuses is _____.
7. The following are all teratogenic effects of maternal alcohol use EXCEPT
 - (A) growth retardation
 - (B) abruptio placenta
 - (C) microcephaly
 - (D) mental retardation
 - (E) subtle craniofacial abnormalities
8. The transformation zone in the cervix is seen least well during which stage of life
 - (A) fetal
 - (B) prepubertal
 - (C) post-menopausal
 - (D) pregnancy
 - (E) age 20-45
9. Dysplasia may be distinguished from metaplasia by
 - (A) size of the cell
 - (B) staining of the cytoplasm
 - (C) mitochondrial spicules
 - (D) nuclear atypia
 - (E) hypochromasia of the nucleus
10. A cystic hygroma is filled with
 - (A) blood
 - (B) amniotic fluid
 - (C) lymph
 - (D) collagen
 - (E) elastic tissue

Name: _____

11. Growth of the uterus during pregnancy is considered to be
 - (A) hypertrophy
 - (B) hyperplasia
 - (C) metaplasia

12. The main purpose of the intracellular matrix in the myometrium is to
 - (A) provide enzymatic degradation of used myometrial fibers
 - (B) transmit contractile forces
 - (C) increase the solubility of collagen
 - (D) permit the myometrium to behave in an elastic fashion
 - (E) store calcium in an ionized state

13. The plasma membranes between myometrial cells are connected by 6-subunit structures called
 - (A) connexons
 - (B) actin fibrils
 - (C) myosin fibrils
 - (D) gap junctions
 - (E) open channels

14. Amniocentesis for purposes of prenatal diagnosis is best performed at
 - (A) 15 weeks
 - (B) 12 weeks
 - (C) 18 weeks
 - (D) any time between 12 and 22 weeks
 - (E) less than 12 weeks

15. The second most common liveborn autosomal trisomy is
 - (A) 15
 - (B) 16
 - (C) 18
 - (D) 19
 - (E) 22

16. A neural tube defect that affects the rostral portion of the spinal cord produces an infant
 - (A) missing the cauda equina
 - (B) having oligohydramnios
 - (C) with hydrocephalus
 - (D) with anencephalus
 - (E) with meningocele

17. Alpha fetal protein is produced by the _____ and _____ at 4-8 weeks of pregnancy.
18. The three components of the triple screen are _____, _____, and _____.

Name: _____

19. In a fetus with known spina bifida it is expected that the amniotic fluid will contain excess amounts of
- (A) acetyl cholinesterase
 - (B) hemoglobin A
 - (C) hemoglobin C
 - (D) lymph
 - (E) catecholamines
20. Chorionic villus sampling has been associated with
- (A) neural tube defects
 - (B) limb reduction defects
 - (C) placental anomalies
 - (D) cardiac defects
 - (E) none of the above
21. CVS may produce incorrect results. One of the major causes for this is
- (A) cross contamination of cultures
 - (B) placental mosaicism
 - (C) sex chromosome aneuploidy
 - (D) balanced translocation carriers
22. A woman is 10 weeks pregnant and chooses to have a CVS procedure. It is fair to tell her that
- (A) The test will assure her that the baby is healthy
 - (B) The test will tell her if the baby has spina bifida
 - (C) The test will give her a fetal karyotype with a high degree of reliability
 - (D) We cannot do this procedure until 14 weeks gestation
 - (E) Her risk of miscarriage from the procedure is 20%
23. Fetal blood flow is _____ during fetal hypoxia. The fetal _____ continues to receive its required share, as does the fetal _____ and _____.
24. The oxygen dissociation curve in fetal blood is (more / less) steep than in maternal blood. Fetal hematocrit is (higher / lower) compared to maternal hematocrit.
25. Fetal cerebral blood flow exhibits _____ over a limited range of blood pressure. This is lost in _____, and cerebral flow becomes a function of blood pressure.
26. A major cardiovascular problem seen in premature infants is _____, which can be corrected by administering _____, which is a _____.
27. Premature infants do not produce enough _____ in their lungs, leading to _____ syndrome.