Hormonal Regulation of Pregnancy and Childbirth

Introduction
1. Identify pregnancy and childbirth functions regulated by hormones.

Hormonal Regulation of Pregnancy During First Week
2. a. Describe the glandular function of the corpus luteum during the first week of pregnancy.

b. Describe the glandular function of the blastocyst.

c. What is the function of human chorionic gonadotropin (hCG)?

d. Explain why menstruation does not occur.

Hormonal Regulation of Pregnancy During Months 3-4
3. Describe the glandular role of the corpus luteum and the chorion over the first two months of pregnancy.
4. Identify the shift in estrogen production by the ninth week.

5. Describe hCG production changes after the fourth month.

**Hormonal Regulation of Pregnancy During Months 4-9**

6. Identify the *placental produced hormones* that regulate activities during months 4-9.

7. Describe regulatory effects of placental produced *estrogens and progesterone* during months 4-9.

8. Describe the roles of placental produced *relaxin*.

9. Describe the roles of human chorionic somatomammotropin (hCS).

10. What effect does placental produced *corticotropic releasing hormone* have on the fetus?

11. What effect does ACTH, secreted by the fetal anterior pituitary gland, have on the fetal adrenal glands?
12. What effect does cortisol, secreted by the fetal adrenal glands, have on fetal lungs?

13. Describe CRH and Estrogen changes and functions through months 4-9.

Regulation of Lactation

14. Explain how blood levels of prolactin build throughout the pregnancy but lactation does not begin until AFTER delivery.

15. a. Describe the role of breast stretch receptors.

b. Describe hypothalamus activity resulting from suckling stimulation.

c. Describe effects caused by prolactin.

Regulation of Labor and Birth

17. a. Corticotropin-releasing hormones stimulate increased estrogen secretion just prior to birth. What affect do these high levels of estrogen have on the uterine muscles? ______________________________________________________________________

b. What effect does the increase in uterine oxytocin receptors have? ____________________________

18. Describe the effects of relaxin. ______________________________________________________________________

19. Describe the positive feedback loop that results in childbirth. (Stretch Receptors, Nerve Impulses, Hypothalamus, Anterior Pituitary, Oxytocin, More Stretch) ______________________________________________________________________

20. Describe events for each of the three stages of parturition.

Cervix Dilation - ______________________________________________________________________

Expulsion - ______________________________________________________________________

Placental Stage - ______________________________________________________________________