**Female Reproductive Cycle**

1. Can you name the two different cycles (and phases) found in the human female reproductive system?
    - Ovarian Cycle (follicular phase, luteal phase)
    - Uterine cycle (proliferative phase, secretory phase, menstrual flow phase)

2. What does GnRH do?
    - GnRH is a releasing hormone of the hypothalamus that stimulates the anterior pituitary to secrete FSH & LH

3. What does FSH stimulate?
    - FSh stimulates growth of follicles

4. What causes the spike in LH Level?
    - The LH surge is caused by an increase in GnRH production that resulted from increasing levels of estradiol produced by the developing follicle

5. What does this LH surge induce?
    - The LH surge induces the maturation of the follicle and ovulation, and it transforms the ruptured follicle to the corpus luteum

6. What does LH maintain during the luteal phase?
    - LH maintains the corpus luteum, which secretes estradiol and progesterone

7. What inhibits secretion of LH & FSH?
    - High levels of estradiol & progesterone act on the hypothalamus and pituitary to inhibit LH & FSH secretion

8. What allows LH & FSH secretion to begin again?
    - The lack of LH causes the corpus luteum to disintegrate. As a result, the production of estradiol and progesterone ceases, which allows LH and FSH secretion to begin again.

**Pregnancy**

9. Can you name the proper trimester…
    a. Implantation occurs in the uterus? **First Trimester**

    b. The embryo secretes hCG? **First Trimester**

    c. The placenta forms? **First Trimester**

    d. Organogenesis occurs and the embryo becomes a fetus? **First Trimester**

    e. The corpus luteum's progesterone secretion maintains the pregnancy? **First Trimester**

    f. hCG declines, corpus luteum dies, and the placenta secretes its own progesterone? **Second Trimester**

    g. Labor is induced by hormones and local regulators? **Third Trimester**

    h. Oxytocin, placental prostaglandins, and prolactin are produced? **Third Trimester**

**Maternal Immune Tolerance**

10. How is the maternal immune tolerance of the embryo and fetus maintained during pregnancy?
    - Main objective: Control mother's T-cytotoxic cells (these cells would attack the embryo/fetus)
    - Two ways:
        - Tryptophan-degrading enzymes – released by the placenta (Tc cells need tryptophan to survive)
        - Fas Ligand (FasL) – death molecule – released by the trophoblast and promotes Tc cell apoptosis

**Birth Control**

11. Can you list the three general types of birth control methods (and give examples of each)?
    - Prevent release of gametes (sterilization, birth control pills)
    - Prevent fertilization (abstinence, rhythm method, condom, diaphragm, spermicides, coitus interruptus)
    - Prevent implantation of embryo (IUD's, morning after pills)

12. Which birth control methods are most effective and which ones are least effective?
    - Most effective – abstinence, sterilization, chemical contraception
    - Least effective – rhythm method, coitus interruptus

**Human Female Reproductive Cycle Diagram**