

## Reproductive System Concept Questions

1. It is important that only one sperm fertilize an egg. What would be the result if multiple sperm fertilized a single egg?
2. Explain how each of the following could be described as an adaptation that helps to ensure fertilization:
  - a) seminal fluid
  - b) production of millions of sperm
  - c) cilia lining the walls of the oviducts.
3. Before birth, the male testes descend from the abdominal cavity into the scrotum. Explain why testes that fail to descend cannot produce sperm.
4. Why is the ejaculatory duct important to help increase the chance of fertilization?
5. All humans start out as females but those with a y chromosome become males during early embryonic development. As we would expect, females and males have analogous structures that have slightly different functions. Which female structure is analogous to the male
  - a) testes?
  - b) vas deferens?
  - c) penis? (Clitoris.)
6. Most ectopic pregnancies are tubal. Explain why they are dangerous.
7. The fetus is unable to breathe oxygen or eat *in utero*. What important substances must pass through the placenta?
8. Sometimes physical trauma to the mother can affect the fetus. How would partial detachment of the placenta from the endometrium affect the fetus?
9. Suppose a woman's oviducts were blocked.
  - a) Would she produce ova?
  - b) Could she become pregnant?
10.
  - a) When is the fertile period during the menstrual cycle?
  - b) Why is the female only fertile during this period?
11. Why is estrogen at its highest just before ovulation and why is this important?
12. Explain how negative feedback regulates the level of FSH during the menstrual cycle.
13. What hormone changes trigger the beginning of a new menstrual cycle?
14. What would happen if the corpus luteum disintegrated during pregnancy?
15. Explain why it is important that the menstrual cycle is stopped during pregnancy and how hormone interactions achieve this.
16.
  - a) How does the birth control pill prevent pregnancy?
  - b) Why would a woman not take birth control pills for the entire 28 days of the menstrual cycle?
  - c) On which days of the menstrual cycle would the pill not be taken?
17. Why do you think doctors recommend that women avoid most medications and alcohol during pregnancy?
18. Can a woman who has reached menopause ever become pregnant? Explain.
19. If a woman is past her due date or complications are suspected, her obstetrician might induce labor. How do you think this could be done?