

# Reproduction Unit

## Part A – Multiple Choice

- Which of these is a male primary sex characteristic?
  - Deepening of the voice.
  - Facial and pubic hair growth.
  - External reproductive organs.
  - Muscle and skeletal development.
- The testes are suspended in a scrotum outside the abdominal cavity of males because
  - that is close to where the penis is located.
  - there is no room inside the abdominal cavity.
  - this arrangement assists sperm and semen to flow into the urethra.
  - normal spermatogenesis requires a temperature less than body temperature.
- After sperm cells are produced, they are stored mainly in the
  - urethra.
  - prostate.
  - epididymis.
  - seminal vesicles.
- In a male, the tube used to carry both sperm and urine is the
  - ureter.
  - urethra.
  - vas deferens.
  - common bile duct.
- Sperm pass through all of the following **EXCEPT** one. Which one?
  - Epididymis.
  - Seminal vesicle.
  - Ductus deferens.
  - Seminiferous tubules.
- Correctly complete the following statement. “Sperm cells...”
  - carry their own nutrients.
  - are less numerous than ova.
  - are each individually motile.
  - always swim towards the penis.
- Which of the following does **NOT** contribute to the fluids that make up seminal fluid?
  - Testes.
  - Prostate.
  - Cowper’s glands.
  - Seminal vesicles.
- Which structure is used in both the male excretory and reproductive systems?
  - Ureter.
  - Urethra.
  - Vas deferens.
  - Seminal vesicle.
- Which of the following produces testosterone?
  - Sperm cells.
  - Hypothalamus.
  - Interstitial cells.
  - Anterior pituitary.

10. Which of the following glands is an endocrine gland?
  - A. Testes.
  - B. Prostate gland.
  - C. Cowper's gland.
  - D. Seminal vesicle.
  
11. Which of the following sets of structures becomes engorged with blood during human sexual responses?
  - A. Vagina, labia, breasts, penis.
  - B. Clitoris, labia, vagina, penis.
  - C. Clitoris, labia, breasts, penis.
  - D. Clitoris, vagina, breasts, penis.
  
12. Spermatogenesis and oogenesis differ in that
  - A. the rate of spermatogenesis is much more variable than that of oogenesis.
  - B. spermatogenesis begins before birth and oogenesis begins at puberty.
  - C. estrogen promotes oogenesis and progesterone promotes spermatogenesis.
  - D. oogenesis produces one functional gamete where spermatogenesis produces more.
  
13. Reducing of the release of GnRF from the hypothalamus will
  - A. stimulate LH and FSH secretion.
  - B. decrease the release of gonatotropic hormones.
  - C. stimulate an increase in progesterone and estrogen levels.
  - D. initiate ovulation in females and reduce spermatogenesis in males.
  
14. Which hormone, secreted by the growing follicle, initiates endometrial development?
  - A. LH.
  - B. FSH.
  - C. Estrogen.
  - D. Progesterone.
  
15. Which of the following is the correct sequence of structures through which an unfertilized ovum passes?
  - A. Oviduct – uterus – cervix – vagina.
  - B. Uterus – vagina – cervix – oviduct.
  - C. Oviduct – vagina – uterus – cervix.
  - D. Oviduct – cervix – uterus – vagina.
  
16. Fertilization of ova usually takes place in the
  - A. ovary.
  - B. uterus.
  - C. vagina.
  - D. oviduct.
  
17. What are the three phases of the ovarian cycle?
  - A. Embryo, fetus, and newborn.
  - B. Follicular, ovulatory, and luteal.
  - C. First, second, and third trimester.
  - D. Menstrual, proliferative, and secretory.
  
18. Which of the following has the **GREATEST** effect on the expression of female secondary sex characteristics?
  - A. Estrogen.
  - B. Progesterone.
  - C. Luteinizing hormone.
  - D. Follicle stimulating hormone.
  
19. Which of the following **BEST** describes how an ovum enters an oviduct once ovulation occurs?
  - A. It swims.
  - B. Peristalsis.
  - C. It is drawn in the action of fimbriae and cilia.
  - D. It is propelled by the force of the bursting follicle.

20. During the secretory phase of the menstrual cycle, what is the main source of progesterone?
- A. Adrenal gland.
  - B. Corpus luteum.
  - C. Anterior pituitary.
  - D. Developing follicle.
21. The secretory phase of the menstrual cycle
- A. is a result of declining LH and FSH levels.
  - B. is associated with dropping progesterone levels.
  - C. corresponds to the luteal phase of the ovarian cycle.
  - D. is when the endometrium begins to degenerate and menstrual flow occurs.
22. What are the sources of the four hormones that regulate the ovarian and uterine cycles?
- A. Uterus and the ovaries.
  - B. Anterior pituitary gland and the ovaries.
  - C. Anterior and posterior pituitary gland and the ovaries.
  - D. Adrenal gland, anterior pituitary gland and the ovaries.
23. What occurs if progesterone is not secreted in the female?
- A. The corpus luteum develops in the ovary.
  - B. Secondary sex characteristics do not develop.
  - C. The endometrium will not mature completely.
  - D. Uterine contractions begin stimulating childbirth.
24. Which of the following hormones **MOST** directly stimulates ovulation?
- A. Estrogen.
  - B. Oxytocin.
  - C. Progesterone.
  - D. Luteinizing hormone.
25. What is the source of the discharge that is released during menstruation?
- A. Cervix.
  - B. Vagina.
  - C. Oviduct.
  - D. Endometrium.
26. Ovulation is a process where
- A. sperm are ejected from the penis.
  - B. an egg is released from the ovary.
  - C. a zygote implants on the uterine wall.
  - D. an egg is produced and brought to maturity.
27. Implantation normally occurs
- A. several days after fertilization.
  - B. immediately after fertilization.
  - C. about ten weeks after fertilization.
  - D. about ten minutes after fertilization.
28. After ovulation, the ruptured follicle
- A. disappears and all its cells degenerate.
  - B. is incorporated into the ovary's epithelium.
  - C. is passed out of the body as waste material.
  - D. specializes into a temporary endocrine gland.
29. Progesterone is produced in the
- A. ovary and acts on the testes.
  - B. ovary and acts on the uterus.
  - C. ovary and acts on the pituitary.
  - D. pituitary and acts on the ovary.

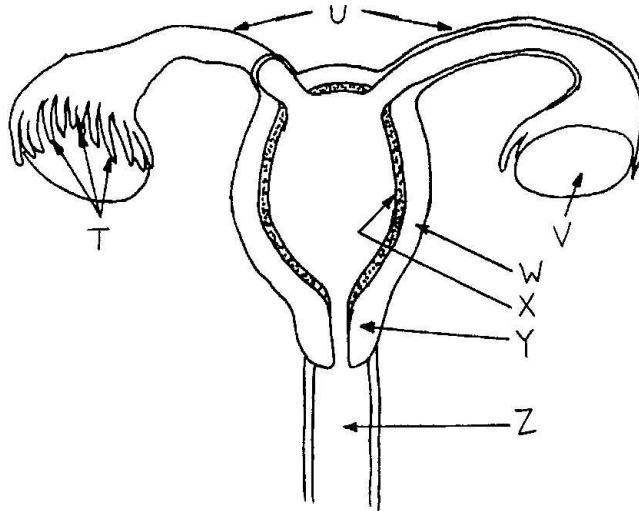
30. Which of the following is **INCORRECTLY** matched with its function?
- A. Epididymis – stores sperm.
  - B. Ovary – secretes estrogen and progesterone.
  - C. Seminiferous tubules – produce seminal fluid.
  - D. Scrotum – encases the testes outside of the abdominal cavity.
31. The hormone **MOST** associated with childbirth is
- A. estrogen.
  - B. oxytocin.
  - C. adrenalin.
  - D. progesterone.
32. Human chorionic gonadotropin (HCG) is different from other gonadotropins because it does **NOT**
- A. enter the bloodstream.
  - B. stimulate any tissue in the body.
  - C. come from the anterior pituitary.
  - D. act on the ovaries or the corpus luteum.
33. Which of the following is the embryonic hormone that maintains the corpus luteum during pregnancy?
- A. Luteinizing hormone.
  - B. Follicle stimulating hormone.
  - C. Gonadotropic releasing factor.
  - D. Human chorionic gonadotropin.
34. Through which structures must a child pass during childbirth?
- A. Cervix and vagina.
  - B. Vagina and urethra.
  - C. Fallopian tube and navel.
  - D. Fallopian tube and umbilical cord.
35. The presence of HCG in a woman's urine indicates that
- A. she has just ovulated.
  - B. menstruation is about to begin.
  - C. her levels of estrogen are decreasing.
  - D. implantation of an embryo has occurred.

**Part B – Written Answers**

1. Complete the following table to contrast sperm and ova in **FOUR** ways.

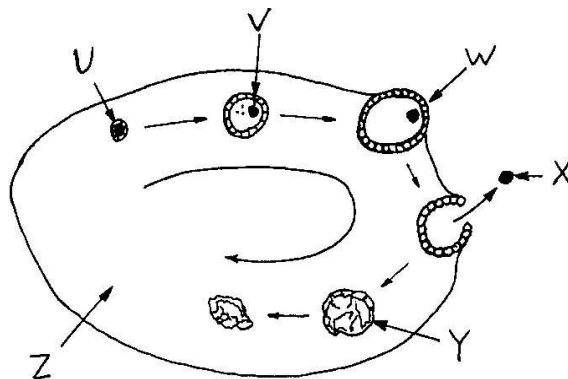
Basis of Contrast	Sperm	Ova

2. Name and describe **ONE** function of each of the structures indicated in the diagram below.



Structure	Name	Function
T		
U		
V		
W		
X		
Y		
Z		

3. Examine the diagram below and answer the associated questions.



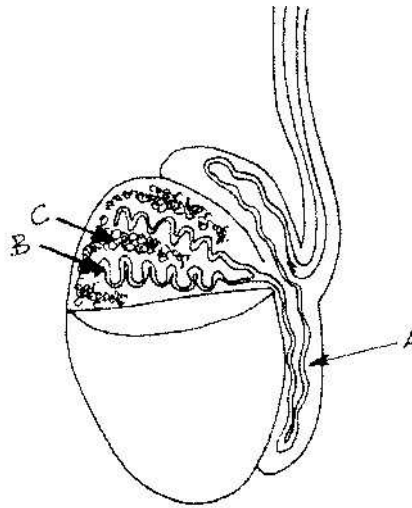
- Name the labeled structures.
- What event is occurring at **X**?
- What is the role of structure **Y**?
- Describe the appearance/condition of the endometrium at the same time as **X** occurs.

4. Four blood samples from the same woman were analyzed for their relative hormone levels at on Day 1, 8, 13 and 23 of her menstrual cycle. The data (in random order) is presented in the chart below.

Hormone	Sample A	Sample B	Sample C	Sample D
FSH	medium	high	low	low
LH	medium	high	low	low
progesterone	medium	medium	low	high
estrogen	medium	high	low	high
<b>DAY</b>				

Complete the row in the table to indicate the most likely day that each sample was taken.

5. Examine the diagram below and complete the associated table.



Structure	Name	Function
A		
B		
C		

6. a. Name **ONE** role of each of the following in relation to a female's reproductive system.  
 hypothalamus  
 anterior pituitary  
 posterior pituitary
- b. State **TWO** ways the neuroendocrine function is different between males and female.