

Reproduction Unit

Part A – Multiple Choice

1. C
2. D
3. C
4. B
5. B
6. C
7. A
8. B
9. C
10. A
11. B
12. D
13. B
14. C
15. A
16. D
17. B
18. A
19. C
20. B
21. C
22. B
23. C
24. D
25. D
26. B
27. A
28. D
29. B
30. C
31. B
32. C
33. D
34. A
35. D

Part B – Written Answers

Note: The answers provided here are correct, but they may NOT be the only possible answers.

1.

| Basis of Contrast | Sperm | Ova |
|--------------------|----------------------|------------------------------------|
| Site of production | Seminiferous tubules | Ovaries |
| Ability to move | Has a tail; can swim | None; moved by external structures |
| # produced | Millions | One per month |
| Size | Small | Larger |

2.

| Structure | Name | Function |
|-----------|-------------|---|
| T | Fimbriae | Assist with ova entry into oviduct |
| U | Oviducts | Conduct ova to the uterus |
| V | Ovary | Produce ova and hormones (estrogen and progesterone) |
| W | Uterus | Site of implantations and embryonic development |
| X | Endometrium | Thickens with blood supply in preparation for implantation |
| Y | Cervix | Separates uterus from vagina; causes oxytocin release during childbirth |
| Z | Vagina | Birth canal; female organ of copulation |

3. a. U = immature follicle
 V = developing follicle
 W = Graafian follicle
 X = ovum
 Y = corpus luteum
 Z = ovary
- b. ovulation (release of the ovum from the ovary)
- c. produces progesterone to maintain the endometrium in the event that fertilization occurs
- d. Thick and lush, but has not yet become fully secretory.

4. Sample A was taken on Day 8
 Sample B was taken on Day 13
 Sample C was taken on Day 1
 Sample D was taken on Day 23

5.

| Structure | Name | Function |
|-----------|---------------------|--|
| A | Epididymis | Sperm storage allowing them time to mature |
| B | Seminiferous tubule | Spermatogenesis |
| C | Interstitial cells | Produce testosterone |

6. a. The hypothalamus in females is to monitors the blood and produces releasing factors and oxytocin
 The anterior pituitary is affected by the releasing factors and releases LH and FSH
 The posterior pituitary releases oxytocin
- b. Neuroendocrine function in females differs from that of males in that the levels of releasing factors from the hypothalamus are changing cyclically (as are the levels of the LH and FSH), where in males, they are rather constant as testosterone levels are maintained and spermatogenesis is ongoing. Also. Males do not produce and release oxytocin as females do (produced in the hypothalamus when stimulated by the cervix and released from the posterior pituitary).