

Reproductive System and Gametogenesis

Biology · Answer Key · 20 Questions

1. Where are sperm produced in the male reproductive system?

- A) Ovaries
- B) Testes**
- C) Pituitary gland
- D) Hypothalamus

2. What is the primary function of Sertoli cells in the seminiferous tubules?

- A) Produce testosterone
- B) Nourish spermatids**
- C) Initiate meiosis
- D) Form the acrosome

3. Which hormone stimulates Leydig cells to produce testosterone?

- A) FSH
- B) GnRH
- C) LH**
- D) Inhibin

4. What is the approximate length of a seminiferous tubule?

- A) 3-7 cm
- B) 30-70 cm**
- C) 1-2 cm
- D) 10-20 cm

5. What process transforms spermatids into mature sperm?

- A) Spermatocytogenesis
- B) Meiosis
- C) Spermiogenesis**
- D) Mitosis

6. How many sperm are typically produced from one spermatogonium?

- A) One
- B) Two
- C) Four**
- D) Eight

7. Which part of the sperm contains genetic material?

- A) Tail
- B) Midpiece
- C) Head**
- D) Acrosome

8. What is the function of the acrosome in a sperm?

- A) Provide energy
- B) Help penetrate the egg**
- C) Guide movement
- D) Store genetic material

9. What is the normal temperature of the scrotum compared to body temperature?

- A) Higher
- B) Lower**
- C) The same
- D) Unrelated

10. What are the main components of semen?

- A) Red blood cells and plasma
- B) Sperm and seminal fluid**
- C) White blood cells and platelets
- D) Hormones and antibodies

11. Where are egg cells produced in the female reproductive system?

- A) Uterus
- B) Fallopian tubes
- C) Ovaries**
- D) Cervix

12. What is the process of egg cell development called?

- A) Spermatogenesis
- B) Oogenesis**
- C) Gametogenesis
- D) Meiosis

13. At what stage of meiosis is the oocyte arrested until ovulation?

- A) Prophase I (diplotene)**
- B) Metaphase II
- C) Anaphase I
- D) Telophase II

14. How many oocytes are typically present in the ovaries at birth?

- A) Thousands
- B) Hundreds
- C) Millions**
- D) Tens of thousands

15. What is the structure that surrounds the oocyte in a mature follicle?

- A) Zona pellucida**
- B) Corona radiata
- C) Theca
- D) Granulosa cells

16. Which hormone directly triggers ovulation?

- A) Estrogen
- B) Progesterone
- C) FSH
- D) LH**

17. What is the corpus luteum primarily responsible for producing?

- A) Estrogen
- B) FSH
- C) Progesterone**
- D) GnRH

18. The female reproductive cycle is also known as the:

- A) Spermatic cycle
- B) Ovarian cycle
- C) Menstrual cycle**
- D) Follicular cycle

19. Which phase of the ovarian cycle is generally more stable?

- A) Follicular phase
- B) Ovulation
- C) Luteal phase**
- D) Menstruation

20. What is the primary role of FSH in the ovarian cycle?

- A) Stimulate ovulation
- B) Promote progesterone production
- C) Stimulate follicle development**
- D) Maintain the corpus luteum