

Chapter – 2 | Human Reproduction

QUIZ PART-03

1. Spermatogenesis is the process of formation of:
- A. Female gametes B. Mature sperm
C. Ovum D. Zygote (B)

Explanation : Spermatogenesis is the process by which male gametes (spermatozoa) are formed from immature male germ cells called spermatogonia.

2. Spermatogenesis begins in humans at the time of:
- A. Birth B. Childhood
C. Puberty D. Old age (C)

Explanation : The formation of sperm from spermatogonia begins at puberty due to hormonal changes.

3. Spermatogonia contain how many chromosomes?
- A. 23 chromosomes
B. 46 chromosomes
C. 92 chromosomes
D. 44 chromosomes (B)

Explanation : Spermatogonia are diploid cells (2n) and contain 46 chromosomes.

4. Primary spermatocytes are formed from spermatogonia by:
- A. Fertilization B. Mitosis
C. Differentiation only D. Implantation (B)

Explanation : Spermatogonia undergo mitosis and some of them develop into primary spermatocytes, which later enter meiosis.

5. The first meiotic division of primary spermatocyte produces:
- A. Four spermatozoa
B. Two secondary spermatocytes
C. Two spermatids
D. One ovum (B)

Explanation : Primary spermatocyte completes the first meiotic division and forms two equal secondary spermatocytes, each having 23 chromosomes.

6. Secondary spermatocytes undergo the second meiotic division to form:
- A. Two primary spermatocytes
B. Four haploid spermatids
C. Four diploid spermatogonia
D. One spermatozoa (B)

Explanation : Secondary spermatocytes undergo the second meiotic division and produce four haploid spermatids.

7. Transformation of spermatids into spermatozoa is called:
- A. Spermiation B. Spermiogenesis
C. Ovulation D. Fertilization (B)

Explanation : Spermiogenesis is the process by which spermatids transform into mature spermatozoa.

8. Which hormone stimulates Leydig cells to produce and secrete androgens?
- A. FSH B. LH
C. GnRH D. Progesterone (B)

Explanation : Luteinizing hormone (LH) acts on Leydig cells and stimulates the synthesis and secretion of androgen hormones.

9. The acrosome of sperm contains:
- A. Hormones B. Enzymes
C. Mitochondria D. Chromosomes (B)

Explanation : The acrosome is a cap-like structure present on the head of sperm and contains enzymes that help in fertilization of the ovum. changes during the menstrual cycle.

10. The main function of mitochondria present in the middle piece of sperm is to:
- A. Store genetic material
B. Produce energy for movement
C. Form acrosome
D. Protect sperm from damage (B)

Explanation : The middle piece of sperm contains numerous mitochondria that produce energy required for movement of the tail.