



General Instructions

- (i) The examination will be conducted in Computer-Based Test (CBT) mode.
- (ii) Each question carries +5 marks for correct answer and -1 mark for wrong answer.
- (iii) The total number of questions are 50.
- (iv) Duration of the exam is 1 hour (60 minutes).

1. Which of the following hormones is not produced by the placenta?

- (A) hCG
- (B) hPL
- (C) Thyroxine
- (D) Estrogen

2. In the following statements, identify the stages of oogenesis in the order in which they occur:

- (A) During fertilisation, formation of egg and second polar body.
- (B) Meiosis II commences but stops at metaphase II.
- (C) Meiosis I commences but stops at prophase I.
- (D) Formation of primary oocyte from oogonia.
- (E) Meiosis I completes and results in formation of secondary oocyte and first polar body.

- (A) (D), (C), (B), (E), (A)
- (B) (C), (E), (D), (A), (B)
- (C) (D), (C), (E), (B), (A)

(D) (D), (C), (A), (E), (B)

3. Select the correct statement/s from the following:

- A. Spermatogonia always undergo meiotic cell division.**
- B. Primary spermatocytes divide by mitotic cell division.**
- C. Secondary spermatocytes have 23 chromosomes and undergo second meiotic division.**
- D. Spermatozoa are transformed into spermatids.**

(A) A and C only

(B) C only

(C) D only

(D) B and C only

4. Arrange the following events in correct sequence:

- A. Formation of zygote**
- B. Formation of blastocyst**
- C. Implantation**
- D. Formation of morula**

(A) A, D, B, C

(B) A, B, D, C

(C) A, B, C, D

(D) C, D, B, A

5. Which among the following hormones is not produced by placenta?

- (A) Human Chorionic Gonadotropin (hCG)
 - (B) Human Placental Lactogen (hPL)
 - (C) Estrogens
 - (D) Relaxin
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6. A primary spermatocyte after first meiotic division leads to the formation of secondary

spermatocytes. These are:

- (A) Two equal haploid cells
 - (B) Two unequal haploid cells
 - (C) Two diploid cells
 - (D) Four diploid cells
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7. A pregnant female was admitted to the labour room. Mild uterine contractions started, but further strong uterine contractions were not taking place. Which of these could a doctor inject to induce delivery?

- (A) Oxytocin
 - (B) Vasopressin
 - (C) Relaxin
 - (D) Prolactin
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8. Spermatogenesis starts at the age of puberty due to a significant increase in secretion of Gonadotropin Releasing Hormone (GnRH). Increased levels of GnRH stimulate the secretion of two gonadotropins which are:

- (A) Luteinising Hormone and Androgens
 - (B) Follicle Stimulating Hormone and Androgens
 - (C) Luteinising Hormone and Follicle Stimulating Hormone
 - (D) Luteinising Hormone and Testosterone
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9. Select the correct sequence of events in human spermatogenesis:

- (A) Spermatid
- (B) Spermatogonia
- (C) Spermatozoa
- (D) Secondary Spermatocytes
- (E) Primary Spermatocytes

- (A) (B), (E), (D), (A), (C)
(B) (E), (D), (B), (C), (A)
(C) (B), (E), (D), (C), (A)
(D) (B), (D), (E), (A), (C)
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10. Which of the following statements are correct about the structure of a sperm?

- A. It is composed of head, thorax, neck and tail.**
B. The neck region contains a lot of mitochondria.
C. The mitochondria produce energy for the movement of the tail.
D. The tail facilitates sperm motility essential for fertilization.

- (A) A and B only
(B) B and C only
(C) C and D only
(D) B and D only
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