

Human Reproduction — CBSE Pattern Test 1

Class 12 Biology · 90 minutes · 40 marks · Sections A–D with answer key · Narayan Gurukul Academy

Test 1 — CBSE Pattern (90 minutes, 40 marks)

Class 12 Biology · Human Reproduction · Narayan Gurukul Academy (ClassApna)

General Instructions: (1) This paper has four sections — Section A (1×10), Section B (2×4), Section C (3×4) and Section D (5×2) — total 40 marks. Time allowed: 90 minutes.
(2) All questions are compulsory. No overall choice is given; internal choice, where allowed, is clearly marked.
(3) For MCQ questions choose the single correct option; for VSA answers write a single line.
(4) Take $g = 10 \text{ m/s}^2$. All symbols carry their usual meaning. Use of a calculator is not permitted.

Section A — MCQ & VSA ($10 \times 1 = 10$ marks)

- The male gametes are produced in the
 - testes
 - ovaries
 - prostate
 - epididymis
- Fertilisation in humans occurs in the
 - uterus
 - fallopian tube
 - ovary
 - vagina
- The hormone that induces parturition is
 - oxytocin
 - prolactin
 - oestrogen
 - FSH
- One spermatogonium produces
 - four sperm
 - one sperm
 - two sperm
 - eight sperm
- The menstrual cycle is approximately
 - 28 days
 - 7 days
 - 40 days
 - 60 days
- The corpus luteum secretes
 - progesterone
 - FSH
 - LH
 - oxytocin
- Colostrum is rich in
 - antibodies

- (B) fats
 - (C) carbohydrates
 - (D) minerals
8. The scrotum maintains a temperature that is
- (A) lower than body temperature
 - (B) higher
 - (C) equal
 - (D) irrelevant
9. What is ovulation?
10. What is a zygote?

Section B — Short Answer I ($4 \times 2 = 8$ marks)

11. Name the parts of the male reproductive system.
12. What is spermiogenesis?
13. Name the hormone of lactation.
14. Where does implantation occur?

Section C — Short Answer II ($4 \times 3 = 12$ marks)

15. Write the functions of the Sertoli and Leydig cells.
16. What is the function of colostrum?
17. Explain the process of fertilisation.
18. Name the phases of the menstrual cycle.

Section D — Long Answers ($2 \times 5 = 10$ marks)

19. (a) Describe the structure of a sperm. (b) Explain the process of spermatogenesis.
20. (a) Describe the phases of the menstrual cycle. (b) Explain the role of the placenta.

Answer Key (Marking Scheme)

- Q1 — (A) testes. Q2 — (B) fallopian tube. Q3 — (A) oxytocin. Q4 — (A) four sperm. Q5 — (A) 28 days. Q6 — (A) progesterone. Q7 — (A) antibodies. Q8 — (A) lower than body temperature.
- Q9 — Ovulation is the release of the ovum from the mature follicle.
- Q10 — A zygote is the fertilised egg (diploid).
- Q11 — Testes, epididymis, vas deferens, seminal vesicles, prostate, Cowper's glands, penis and urethra.
- Q12 — Spermiogenesis is the transformation of a spermatid into a sperm.
- Q13 — Prolactin.
- Q14 — In the endometrium of the uterus.
- Q15 — Sertoli cells nourish developing sperm; Leydig cells secrete testosterone.
- Q16 — Colostrum provides IgA antibodies, giving the newborn passive immunity.
- Q17 — Sperm + ovum → zygote at the ampullary-isthmic junction.
- Q18 — Menstrual, follicular, ovulatory and luteal.

Q19 — (a) Head (nucleus + acrosome), neck (centrioles), middle piece (mitochondria), tail. (b) Spermatogonia → primary → secondary spermatocytes → spermatids → sperm.

Q20 — (a) Menstrual, follicular, ovulatory, luteal. (b) The placenta provides nutrition and oxygen to the foetus and removes waste.