

Human reproduction

Fill in the blanks

1. Humans are sexually reproducing and _____.

Answer: viviparous

2. Formation of gametes is called _____.

Answer: gametogenesis

3. Male gametes are called _____.

Answer: sperms

4. Female gametes are called _____.

Answer: ova

5. Transfer of sperms into female genital tract is called _____.

Answer: insemination

6. Fusion of male and female gametes is called _____.

Answer: fertilisation

7. The fertilized egg formed after fusion is called _____.

Answer: zygote

8. Attachment of blastocyst to uterine wall is called _____.

Answer: implantation

9. Development of embryo inside uterus is called _____.

Answer: gestation

10. Delivery of baby is called _____.

Answer: parturition

11. Reproductive events begin after _____.

Answer: puberty

12. Sperm formation continues even in _____ age.

Answer: old

13. Ovum formation stops around the age of _____ years in women.

Answer: 50

14. Male reproductive system is located in the _____ region.

Answer: pelvic

15. Testes are situated outside the abdominal cavity in a pouch called _____.

Answer: scrotum

16. Scrotum maintains temperature about _____ lower than body temperature.

Answer: 2–2.5°C

17. Lower temperature is necessary for _____.

Answer: spermatogenesis

18. Each testis contains about _____ testicular lobules.

Answer: 250

19. Seminiferous tubules are the site of _____ production.

Answer: sperm

20. Male germ cells are called _____.

Answer: spermatogonia

21. Spermatogonia undergo _____ to form sperms.

Answer: meiosis

22. _____ cells provide nourishment to germ cells.

Answer: Sertoli

23. Interstitial cells are also called _____ cells.

Answer: Leydig

24. Leydig cells secrete male hormones called _____.

Answer: androgens

25. An example of androgen is _____.

Answer: testosterone

26. Sequence of ducts begins with _____ tubules.

Answer: seminiferous

27. Sperms mature and are stored in the _____.

Answer: epididymis

28. Vas deferens loops over the urinary _____.

Answer: bladder

29. Urethra opens outside through the urethral _____.

Answer: meatus

30. Penis contains _____ tissue for insemination.

Answer: erectile

31. Enlarged tip of penis is called _____ penis.

Answer: glans

32. Loose skin covering glans penis is called _____.

Answer: foreskin

33. Seminal vesicles secrete seminal fluid rich in _____.

Answer: fructose

34. Fructose provides _____
for sperm movement.
Answer: energy
35. Seminal vesicles contribute
major volume of _____.
Answer: semen
36. Prostate gland secretes thin,
milky _____ fluid.
Answer: alkaline
37. Prostate gland improves sperm
_____.
Answer: motility
38. Bulbourethral glands are also
called _____ glands.
Answer: Cowper's
39. Bulbourethral glands secrete
clear _____-like fluid.
Answer: mucus
40. Bulbourethral glands help in
smooth passage of _____ during
ejaculation.
Answer: semen

1. What are the main reproductive events in humans?

Gametogenesis, insemination, fertilisation, zygote formation, blastocyst formation, implantation, gestation and parturition.

2. Why are humans called viviparous?

Because they give birth to young ones.

3. What is the difference between sperm formation and ovum formation in humans?

Sperm formation continues even in old age,

while ovum formation stops around 50 years in women.

4. Name the main parts of the male reproductive system.

Testes, accessory ducts, accessory glands and external genitalia.

5. Why are testes located in the scrotum?

To maintain a lower temperature necessary for spermatogenesis.

6. What is the function of scrotum?

It maintains the testes at a temperature 2–2.5°C lower than body temperature.

7. What is spermatogenesis?

Formation of sperms is called spermatogenesis.

8. What are seminiferous tubules?

Mention their function.

They are coiled tubules inside testes where sperm production occurs.

9. What are spermatogonia?

They are male germ cells that undergo meiosis to form sperms.

10. What is the function of Sertoli cells?

They provide nourishment to developing germ cells.

11. What are Leydig cells? State their function.

Leydig cells are interstitial cells that secrete male hormones called androgens.

12. Name the male hormone secreted by Leydig cells.

Testosterone.

13. Write the sequence of male accessory ducts.

Seminiferous tubules → Rete testis → Vasa

efferentia → Epididymis → Vas deferens → Ejaculatory duct → Urethra.

14. What is the function of epididymis?

It stores and matures sperms.

15. What is the function of vas deferens?

It transports sperms from epididymis to urethra.

16. What is the function of urethra in males?

It carries urine and semen outside the body.

17. What is the role of penis in reproduction?

It helps in insemination.

18. What is glans penis?

It is the enlarged tip of the penis.

19. What is foreskin?

It is the loose skin covering the glans penis.

20. Name the male accessory glands.

Seminal vesicles, prostate gland and bulbourethral glands.

21. Write the functions of seminal vesicles.

They secrete fructose-rich seminal fluid that nourishes sperms and provides energy.

22. Write the functions of prostate gland.

It secretes alkaline fluid that protects and activates sperms.

23. Write the functions of bulbourethral glands.

They lubricate the urethra and neutralize acidic traces of urine.

24. Why is fructose present in seminal fluid?

It provides energy for sperm movement.

25. Why is alkaline fluid added to semen?

To neutralize acidity and protect sperms.

MCQs

1. Humans are described as:

- (a) Asexual and oviparous
- (b) Sexual and viviparous
- (c) Hermaphrodite
- (d) External fertilizers

Answer: (b) Sexual and viviparous

Explanation: Humans reproduce sexually through fusion of male and female gametes and give birth to young ones, so they are viviparous.

2. Formation of gametes is called:

- (a) Fertilisation
- (b) Implantation
- (c) Gametogenesis
- (d) Gestation

Answer: (c) Gametogenesis

Explanation: Gametogenesis is the process of formation of gametes such as sperms and ova.

3. Fusion of male and female gametes leads to formation of:

- (a) Embryo
- (b) Blastocyst
- (c) Zygote
- (d) Placenta

Answer: (c) Zygote

Explanation: Fertilisation results in fusion of sperm and ovum to form a zygote.

4. Attachment of blastocyst to uterine wall is called:

- (a) Fertilisation
- (b) Implantation
- (c) Parturition
- (d) Insemination

Answer: (b) Implantation

Explanation: Implantation is the process in which the blastocyst attaches to the uterine wall for further development.

5. The pouch in which testes are present is called:

- (a) Epididymis
- (b) Vas deferens
- (c) Scrotum
- (d) Urethra

Answer: (c) Scrotum

Explanation: The scrotum is a sac-like structure that holds the testes outside the abdominal cavity.

6. Scrotum helps in maintaining temperature:

- (a) Equal to body temperature
- (b) Higher than body temperature
- (c) 2–2.5°C lower than body temperature
- (d) 5°C lower than body temperature

Answer: (c) 2–2.5°C lower than body temperature

Explanation: Spermatogenesis requires a slightly lower temperature than body

temperature, which is maintained by the scrotum.

7. Sperms are produced in:

- (a) Leydig cells
- (b) Seminiferous tubules
- (c) Epididymis
- (d) Vasa efferentia

Answer: (b) Seminiferous tubules

Explanation: Seminiferous tubules are the sites of sperm production in testes.

8. Cells that provide nutrition to germ cells are:

- (a) Leydig cells
- (b) Spermatogonia
- (c) Sertoli cells
- (d) Interstitial cells

Answer: (c) Sertoli cells

Explanation: Sertoli cells nourish and support developing sperm cells inside seminiferous tubules.

9. Testicular hormones (androgens) are secreted by:

- (a) Sertoli cells
- (b) Germ cells
- (c) Leydig cells
- (d) Epididymis

Answer: (c) Leydig cells

Explanation: Leydig cells, also called interstitial cells, produce male sex hormones such as testosterone.

10. **Seminal plasma is rich in:**

- (a) Glucose and proteins
- (b) Fructose, calcium and enzymes
- (c) Lipids and starch
- (d) Vitamins only

Answer: (b) Fructose, calcium and enzymes

Explanation: Seminal plasma contains fructose for energy, calcium and enzymes that help sperm survival and motility.

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