# Yashwantrao Chavan College of Science, Karad.

## B.Sc. Part I Semister-IV

## Paper- VII (Reproductive Biology)

## Question Bank –

## Multiple choice questions

**1.** What is the primary function of the male reproductive system?

a. Produce eggs b. Produce sperm c. Produce hormones d. Filter urine

2. Where does fertilization typically occur in humans?

a. Uterus b. Ovary c. Fallopian tube d. Cervix

3. What is the function of the corpus luteum in the female reproductive system?

a. Produce estrogen b. Produce progesterone c. Produce testosterone d. Release eggs

4. Which hormone is responsible for the development of male secondary sexual characteristics?

a. Estrogen b. Testosterone c. Progesterone d. FSH (Follicle Stimulating Hormone)

5. What is the name of the process where a sperm penetrates an egg?

a. Fertilization b. Ovulation c. Implantation d. Menstruation

6. Which structure connects the testes to the urethra in males?

a. Epididymis b. Vas deferens c. Seminal vesicle d. Prostate gland

7. In which part of the female reproductive system does fertilization usually occur?

a. Uterus b. Ovary c. Cervix d. Fallopian tube

8. What is the purpose of the cervix in the female reproductive system?

a. Produce eggs b. Protect the uterus c. Produce hormones d. Store sperm

9. What is the average menstrual cycle length in females?

a. 14 days b. 28 days c. 42 days d. 56 days

10. Which hormone is responsible for stimulating the development of the ovarian follicle in females? a. Estrogen b. Progesterone

c. FSH (Follicle Stimulating Hormone) d. LH (Luteinizing Hormone)

11. Where does fertilization occur in flowering plants?

a. Stigma b. Ovary c. Anther d. Petal

12. What is the name of the male gamete in plants?

a. Sperm b. Pollen c. Egg d. Ovule

13. Which structure releases the egg from the ovary in humans?

a. Fallopian tube b. Uterus c. Cervix d. Ovary

14. In which phase of the menstrual cycle does ovulation occur?

a. Menstrual phase b. Follicular phase c. Luteal phase d. Proliferative phase

15. What is the purpose of the placenta during pregnancy?

a. Produce hormones b. Exchange nutrients and waste between mother and fetus

c. Protect the fetus d. Store sperm

16. What is the name of the structure that connects the fetus to the placenta?

a. Umbilical cord b. Amniotic sac c. Chorion d. Blastocyst

17. What is the function of the acrosome in a sperm cell?

a. Protect the nucleus b. Propel the sperm forward

c. Digest the protective layers of the egg d. Store energy

18. Which hormone is responsible for the maintenance of the uterine lining during pregnancy?

a. Estrogen b. Progesterone

c. FSH (Follicle Stimulating Hormone) d. LH (Luteinizing Hormone)

19. What is the term for the release of an egg from the ovary?

a. Menstruation b. Ovulation c. Fertilization d. Implantation

20. In which part of the male reproductive system does sperm mature and gain motility?

a. Testes b. Vas deferens c. Epididymis d. Seminal vesicle

21. What is the purpose of the seminal vesicles in the male reproductive system?

a. Produce sperm b. Produce testosterone

c. Produce semen d. Transport sperm to the urethra

22. What is the term for the shedding of the uterine lining in the absence of pregnancy?

a. Menstruation b. Ovulation c. Fertilization d. Implantation

23. What is the function of the epididymis in the male reproductive system?

a. Produce sperm b. Store and mature sperm

c. Produce hormones d. Transport sperm to the urethra

24. Which hormone is responsible for the development of the mammary glands during pregnancy?
    a. Estrogen b. Progesterone c. Prolactin d. Oxytocin

25. What is the purpose of the prostate gland in the male reproductive system?
    a. Produce sperm b. Produce testosterone c. Produce semen d. Store sperm
26. Which hormone is responsible for stimulating milk ejection during breastfeeding?
    a. Estrogen b. Progesterone c. Prolactin d. Oxytocin
27. What is the function of the seminal vesicles in the male reproductive system?
    a. Produce sperm b. Produce testosterone c. Produce semen d. Store sperm
28. What is the term for the union of a sperm and egg to form a zygote?
    a. Ovulation b. Fertilization c. Implantation d. Menstruation
29. In which part of the female reproductive system does fertilization usually occur?
    a. Uterus b. Ovary c. Cervix d. Fallopian tube
30. Which hormone is responsible for the development of male secondary sexual characteristics?
    a. Estrogen b. Testosterone c. Progesterone d. FSH (Follicle Stimulating Hormone)
31. What is the purpose of the cervix in the female reproductive system?
    a. Produce eggs b. Protect the uterus c. Produce hormones d. Store sperm
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    a. Produce estrogen b. Produce progesterone c. Produce testosterone d. Release eggs
34. What is the name of the process where a sperm penetrates an egg?
    a. Fertilization b. Ovulation c. Implantation d. Menstruation
35. Which structure connects the testes to the urethra in males?
    a. Epididymis b. Vas deferens c. Seminal vesicle d. Prostate gland

## Long answer question

1. Describe the structure and function of the male reproductive system.
2. Explain the process of spermatogenesis in detail.
3. Discuss the hormonal regulation of male reproductive functions.
4. Compare and contrast the structure and function of sperm and egg cells.
5. How is fertilization achieved in humans? Explain the events involved.
6. Describe the menstrual cycle, including the hormonal changes that occur during each phase.
7. What is the role of the endometrium in the female reproductive system?
8. Explain the process of oogenesis, including the formation of polar bodies.
9. Discuss the hormonal regulation of female reproductive functions.
10. Compare and contrast mitosis and meiosis, highlighting their significance in reproduction.
11. Explain the process of implantation in the uterus after fertilization.
12. Discuss the major stages of embryonic development, including gastrulation and organogenesis.
13. What is the role of the placenta in embryonic and fetal development?
14. Describe the process of parturition, including the hormonal changes and stages of labor.
15. Explain the concept of gametogenesis and its significance in sexual reproduction.
16. Discuss the various methods of contraception and their mechanisms of action.
17. Discuss the ethical considerations surrounding assisted reproductive technologies (ART), such as in vitro fertilization (IVF).
18. Describe the structures and functions of the female reproductive system.
19. Explain the genetic basis of infertility and the role of genetic counseling in reproductive health.
20. Discuss the role of the cervix in the female reproductive system.
21. Describe the factors influencing the timing of puberty in males and females.
22. Discuss the differences between primary and secondary infertility and their potential causes.
23. What is polycystic ovary syndrome (PCOS), and how does it affect female fertility?
24. Explain the role of hormones in the regulation of sexual behavior.
25. Discuss the impact of lifestyle factors, such as diet and exercise, on reproductive health.
26. Describe the various methods of assisted reproductive technologies (ART) and their success rates.
27. Explain the concept of sexual selection and its role in reproductive strategies.

28. Discuss the challenges and ethical considerations associated with surrogate motherhood.
29. What is the role of the epididymis in sperm maturation and storage?
30. Explain the process of spermiogenesis and the formation of mature sperm.
31. Discuss the causes and treatments of erectile dysfunction in males.
32. Describe the role of the fallopian tubes in the female reproductive system.
33. Explain the process of capacitation in sperm and its significance in fertilization.
34. Discuss the impact of age on male and female fertility.
35. What is endometriosis, and how does it affect female reproductive health?

## Short answer question

1. What is the primary function of the reproductive system?
2. What are the male and female reproductive organs?
3. What is the role of testosterone in male reproduction?
4. What is the menstrual cycle in females?
5. Define ovulation.
6. How long does the average menstrual cycle last?
7. What is fertilization?
8. Where does fertilization typically occur in humans?
9. What is the purpose of the cervix?
10. Describe the process of spermatogenesis.
11. What is the function of the epididymis?
12. What are gametes?
13. Explain the role of the fallopian tubes in reproduction.
14. What is the corpus luteum?
15. Define menopause.
16. What is the purpose of the endometrium?
17. Explain the role of the placenta during pregnancy.
18. What is the function of amniotic fluid?

19. Define zygote.
20. What is the purpose of the vas deferens?
21. Describe the structure of the uterus.
22. What is the importance of the testes in the male reproductive system?
23. Define infertility.
24. What is a blastocyst?
25. Describe the process of implantation.
26. What is the role of progesterone in the menstrual cycle?
27. Explain the concept of sexual dimorphism.
28. What is the purpose of the seminal vesicles?
29. Define ectopic pregnancy.
30. What is the function of the male urethra in reproduction?
31. Describe the role of luteinizing hormone (LH) in reproduction.
32. What is the function of the Cowper's gland?
33. What is the role of the Sertoli cells in the testes?
34. Explain the term "menstrual synchrony."
35. What is the function of the labia majora and labia minora?
36. Explain the concept of oogenesis.
37. What is the role of human chorionic gonadotropin (hCG) during pregnancy?
38. Define cleavage in embryonic development.
39. What is the function of the prostate gland?
40. Explain the process of capacitation in sperm.
41. What is the purpose of the cervical mucus?
42. Define spermiogenesis.
43. What is the function of the vas deferens during ejaculation?
44. Explain the concept of in vitro fertilization (IVF).
45. What is the significance of the hypothalamus in the regulation of reproductive hormones?

Seat No. 26654

**B.Sc (Part –II) (Semester IV) Examination April- May 2023 (CBCS)**
**Zoology (Paper-VII)**
**Reproductive Biology**
**Sub Code- 78911**

Day and Date: Thursday 15/6/2023
Time-02.30to4.30pm

Total marks: 50

**Q.1 Answer the following questions choosing the correct alternatives given below them.** 10

**1. Site of fertilization in mammal is .....**

a)Ovary b)Uterus c)Vagina d) Fallopian tube

**2. Endometrium is lining of .....**

a) Uterus b) Urinary bladder c) Testis d) Ureter

**3. On fertilization, the urine of female contains .....**

a) LH b) Progesterone c) FSH d) hCG

**4. The coiled and longest part of male reproductive system is .....**

a) Vas deferens b) Urethra c)Epididymis d)Ejaculatory duct

**5. The structural and functional unit of the testis is.....**

a) Nephron b) Uriniferous tubule c) Seminiferous tubule d) Leydig cell

**6. Sperms are mainly stored in .....**

a) Epididymis b) Prostate gland c) Balbo-urethral gland d) Urethra

**7. In vasectomy, the duct which is cut and tied is ....**

a)Urethra b) Vas deferens

c) Ejaculatory duct d) Duct of seminal vesicle

**8. Which hormone is responsible for ovulation?**

a)FSH b)Estrogen c)LH d)Progesterone

**9. Newly released mammalian egg has outermost covering of .....**

a) Plasma membrane b) Neural membrane

c) Vitelline membrane d) Zona pellucida

**10. Human menstrual cycle is under control of ..... hormone.**

a) Estrogen b) FSH c)LH d)All of above

**Q.2 Write Long answer (Any Two) 20**

**A) With neat labeled diagram describe Female reproductive system.**

**B) Describe the process of Spermatogenesis.**

**C) What are contraceptive? Describe IUT and oral contraceptives.**

**Q.3Write short answer (Any Four) 20**

**a) Parturition**

**b) Corpus luteum**

**c) Prostate gland**

**d) Ovum transport in fallopian tube**

**e) Vasectomy**

**f) Pregnancy diagnosis**