

# Chapter 3

## HUMAN REPRODUCTION

### ONE MARK QUESTIONS:

1. What is scrotum? (K)
2. Scrotum in human males is situated outside the abdomen. What is the significance of this? (U)
3. What are seminiferous tubules? (K)
4. Name the functional units of testis where spermatogenesis occurs. (K)
5. Write the function of Leydig cells. (K)
6. Name the cells of testis that synthesise and secrete androgens. (K)
7. Mention the type of cells which provide nutrition to spermatogonia. (K)
8. Mention one function of sertoli cells. (K)
9. Sertoli cells are very much essential during spermatogenesis. Why? (A)
10. Name an accessory duct of the male reproductive system in humans. (K)
11. Name an accessory gland of the male reproductive system in humans. (K)
12. What is urethral meatus? (K)
13. What is glans penis? (K)
14. What is foreskin? (K)
15. What is seminal plasma? (K)
16. Name an accessory duct of the female reproductive system in humans. (K)
17. Name the funnel shaped part of the fallopian tube which lies close to the ovary. (K)
18. Name the finger-like projections present at the edges of the infundibulum of oviduct. (K)
19. Name the middle part of the oviduct or fallopian tube. (K)
20. Name the last part of the oviduct or fallopian tube. (K)
21. What is birth canal? (K)
22. Name the inner glandular layer of the uterus. (K)
23. Name the layer of uterus which undergoes cyclical changes during menstrual cycle. (K)
24. Name the layer of the uterus which exhibits strong contractions during parturition. (K)
25. What is hymen? (K)
26. Define gametogenesis. (K)
27. Define spermatogenesis. (K)
28. What is the ploidy of primary spermatocytes? (K)
29. What is the ploidy of secondary spermatocytes? (K)
30. What is the ploidy of spermatids? (K)
31. What would be the number of chromosome in the spermatids? (K)
32. Define spermiogenesis. (K)
33. Define spermiation. (K)
34. Expand GnRH. (K)
35. Mention the role of LH during spermatogenesis. (K)
36. In the absence of LH, spermatogenesis does not occur. Why? (A)
37. Mention the role of FSH in spermiogenesis. (K)
38. In the absence of FSH, spermiation does not occur. Why? (A)
39. Name the cap-like structure that covers the nucleus of the sperm anteriorly. (K)
40. Mention the role of acrosome. (K)

41. What is semen? (K)
42. Define oogenesis. (K)
43. Name the stage of meiosis in which the primary oocytes exist. (K)
44. What are primary ovarian follicles? (K)
45. What are secondary ovarian follicles? (K)
46. What are tertiary ovarian follicles? (K)
47. Name the cavity of graafian follicles. (K)
48. Name the cavity present in the tertiary ovarian follicles of human females. (K)
49. Define ovulation. (K)
50. Define menstrual cycle. (K)
51. What is menarche? (K)
52. What is menopause? (K)
53. During which phase of the menstrual cycle the endometrial lining of uterus and its blood vessels breakdown resulting in bleeding? K
54. Mention a gonadotropin which promotes follicular development during menstrual cycle. (K)
55. Name the hormone which induces the rupturing of Graafian follicle. (K)
56. Name a hormone which induces ovulation. (K)
57. Ovulation takes place on the 14<sup>th</sup> day of menstrual cycle. Why? (K)
58. During which phase of the menstrual cycle the mature Graafian follicle ruptures to release the ovum? (K)
59. During which phase of the menstrual cycle corpus luteum is formed? (K)
60. Name the hormone secreted by corpus luteum. (K)
61. Mention the function of progesterone. (K)
62. What is coitus? (K)
63. What is insemination? (K)
64. Define fertilisation. (K)
65. In which part of the fallopian tube of the female reproductive system fertilization occurs? (K)
66. Why all copulations do not lead to fertilization and pregnancy in healthy couple? (A)
67. When does the secondary oocyte complete second meiotic division? (U)
68. Define cleavage. (K)
69. What is trophoblast ? (K)
70. Why the cells of the inner cell mass of blastocyst are called stem cells? (A)
71. What are stem cells? (K)
72. Define implantation. (K)
73. Name the finger like projections that appear on the trophoblast after the implantation. (K)
74. Define is placenta? (K)
75. Expand hCG. (K)
76. Expand hPL. (K)
77. Mention any one hormone secreted by the placenta. (K)
78. Mention one function of placenta. (K)
79. Name any one hormone in human females which is produced only during pregnancy. (K)
80. Mention the hormone produced only during pregnancy by the ovary in human females. (K)
81. Which part of the female reproductive system produces relaxin? (K)
82. In which month of pregnancy, embryo's heart is formed? (K)
83. In which month of human pregnancy, foetus develops limbs and digits? (K)

84. At which month of pregnancy first foetal movement and appearance of hair on head can be noticed? (K)
85. What is gestation period? (K)
86. Define parturition. (K)
87. What is foetal ejection reflex? (K)
88. Name a hormone which induces parturition. (K)
89. Why oxytocin is necessary for parturition? (A)
90. Name the hormone released by the pituitary gland in response to foetal ejection reflex in human female. (K)
91. Define lactation. K
92. What is colostrum? (K)
93. "Colostrum is considered as essential for newborn baby". Give reason. (A)

#### **TWO MARKS QUESTIONS:**

1. Mention two functions of sertoli cells. (K)
2. What are the functions of sertoli cells and interstitial cells of the testis? (K)
3. Name the hormones secreted by Leydig's cells and corpus leuteum. (K)
4. Name any two accessory ducts of the male reproductive system in humans. (K)
5. Name any two accessory glands of the male reproductive system in humans. (K)
6. Name any two accessory ducts of the female reproductive system in humans. (K)
7. Mention any four parts of the external genitalia in human females. (K)
8. Mention any two hormones secreted by ovary. (K)
9. Differentiate spermiogenesis from spermiation. (U)
10. Define spermiation. What is the role of FSH in spermiation? (K)
11. Mention the roles of LH and FSH during spermatogenesis. (K)
12. "Acrosome and middle piece of the sperm are very essential parts of the sperm without which fertilization does not occur". Justify the statement. (A)
13. How is primary ovarian follicle different from secondary ovarian follicle? (U)
14. How is secondary ovarian follicle different from tertiary ovarian follicle? (U)
15. Mention one function each of FSH and LH. (K)
16. Mention one function each of LH and oxytocin. (K)
17. Mention one function each of FSH and oxytocin. (K)
18. Mention one function each of FSH and progesterone. (K)
19. Mention one function each of progesterone and LH. (K)
20. What is menstrual cycle? Name the hormones which regulate menstrual cycle. (K)
21. Name the gonadotropins whose concentration gradually increases during the follicular phase of menstrual cycle. (K)
22. Mention two events that occur during the follicular phase of menstrual cycle. (K)
23. Define ovulation. Mention the hormone that induces ovulation. (K)
24. Mention two events that occur during the leuteal phase of menstrual cycle. (K)
25. Differentiate menarche and menopause. (U)
26. Define fertilization. In which part of the fallopian tube of the female reproductive system fertilization occurs? (K)
27. Define the terms cleavage and implantation. (K)
28. Define the terms fertilization and implantation. (K)

29. Define the terms fertilization and cleavage. (K)
30. Mention the functions of placenta. (K)
31. What is placenta? Mention any two hormones secreted by placenta. (K)
32. List any four hormones secreted by placenta. (K)
33. Name any four hormones which increase several folds in maternal blood during pregnancy. K
34. Name any two hormones in human females which are produced only during pregnancy. (K)
35. Define parturition. Name the hormone released by the pituitary which induces parturition. (K)
36. Mention one function each of progesterone and oxytocin. (U)
37. "Unless foetal ejection reflex is produced, normal parturition does not occur". Substantiate the statement. (K)
38. What is colostrum? Mention its benefits. K

### THREE MARK QUESTIONS:

1. Draw a neat labeled diagram of sectional view of seminiferous tubules. (S)
2. Write the schematic representation of spermatogenesis. (S)
3. Briefly explain the role of three hormones during spermatogenesis. (U)
4. Write the schematic representation of oogenesis. (S)
5. Mention the events that occur during the follicular phase of menstrual cycle. (K)
6. Mention the events that occur during the luteal phase of menstrual cycle. (K)
7. Briefly explain the process of fertilization in humans. (U)
8. Define placenta. Mention the functions of placenta. (K)
9. In humans, sex of the baby is determined by the father and not the mother. Justify. (A)
10. Define gestation. Name any two hormones in human females which are produced only during pregnancy. (K)
11. Explain the neuroendocrine mechanism which induces parturition. (U)

### FIVE MARK QUESTIONS:

1. Describe the male reproductive system in humans. (U)
2. Draw a labelled diagram of human male reproductive system. (S)
3. Describe the internal structure of testis. (U)
4. Describe the female reproductive system in humans. (U)
5. Draw a labelled diagram of the sectional view of female reproductive system. (S)
6. Describe the structure of mammary gland. (U)
7. Draw a neat labeled diagram of the sectional view of mammary gland. (S)
8. Explain spermatogenesis with the help of a schematic representation. (U)
9. Explain oogenesis with the help of a schematic representation. (U)
10. Draw a neat labelled diagram of human sperm. (S)
11. Describe the various events that occur during menstrual cycle. (U)
12. Briefly explain the embryonic development in humans. (U)

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