

Human Reproduction

1. Explain what is meant by germ layers and name the germ layers that appear in early human development.
2. What is a placenta? From what tissues does a placenta form?
3. What is the difference between a nucleus of an egg cell and that of a somatic (body) cell of an animal?
4. What is a germ layer?
5. What is fertilisation?
6. Where precisely does fertilisation normally occur in the human female?
7. List the **three** germ layers. Relate each of the germ layers that you have listed to an organ or system in the adult body.
8. True or false. A sperm contains the haploid number of chromosomes
9. What are secondary sexual characteristics?
10. Where are sperm produced?
11. From what structures does the placenta develop?
12. State **one** cause of infertility in the female and **one** cause of infertility in the male.
13. What is the function of the prostate gland?
14. State **one** way in which a sperm differs from an ovum (egg).
15. Give an example of a human secondary sexual characteristic.
16. State **three** functions of the placenta.
17. What is meant by *in vitro* fertilisation? What is done with the products of *in vitro* fertilisation?
18. What is meant by infertility? State **one** cause of infertility in the human male.
19. Name **three** methods of contraception and, in each case, explain how the method prevents conception.
20. Name a hormone associated with the maintenance of the placenta.
21. Describe the amnion and state its role.
22. Where is testosterone secreted in the body of the human male?
23. Give an example of a surgical method of male contraception. Suggest an advantage and a disadvantage of the method that you have named.
24. Give a brief account of the role of testosterone.
25. Where are sperm produced?

26. List **three** methods of contraception other than surgical. In your answer you may refer to either or both sexes.
27. State **two** ways in which sperm differ from ova (eggs).
28. Name a gland that secretes seminal fluid.
29. State a function of seminal fluid.
30. What is meant by contraception?
31. What is the menstrual cycle?
32. Give **one** example of vegetative propagation and state whether it involves a stem, a root, a leaf or a bud.
33. Write notes on menstruation and a disorder of menstruation.
34. Write notes on biological benefits of breastfeeding.
35. Write notes on formation and functions of the placenta.
36. In which part of the human female reproductive system is the ovum (egg) formed?
37. What is meant by fertilization?
38. Write notes on survival times for sperm and ova.
39. Give one cause of female infertility.
40. In which part of the human female reproductive system does fertilization occur?
41. Where is FSH produced?
42. Give one function of FSH.
43. Where is sperm stored in the human male?
44. State **two** functions of testosterone.
45. Give a cause of male infertility and suggest a corrective measure.
46. Which part of the female reproductive system is influenced by both FSH and LH?
47. How does vegetative propagation differ from reproduction by seed?
48. Where does fertilisation normally occur in the reproductive system of the human female?
49. In the female reproductive system where do the following occur:
 1. Meiosis,
 2. Fertilisation,
 3. Implantation.
50. Give an account of the role of either oestrogen **or** progesterone in the menstrual cycle.
51. Name a human female menstrual disorder.

In the case of this disorder give: 1. A possible cause, 2. A method of treatment.
52. Give an account of the importance of the placenta during human development in the womb.
53. From what tissues is the placenta formed?
54. Outline how birth occurs.
55. What is meant by *in-vitro fertilisation*?

56. After implantation, the embryo first develops into a *morula* and then into a *blastocyst*.
Explain the terms in italics.
57. Describe the process of birth.
58. Give any **one** biological benefit of breastfeeding.
59. List **two** methods of contraception.
60. Give **two** functions of the placenta.
61. From what tissues is the placenta formed?
62. Draw a labelled diagram of a human sperm cell.
63. Name **two** male secondary sexual characteristics.
64. Name the principal male sex hormone.
65. What is the function of the sperm duct (vas deferens)?
66. Name the part at which **each** of the following occurs:
- Production of sperm cells.
 - Maturing of sperm cells.
 - Mixing of fluid with sperm cells.
 - Transport of semen.
67. State **two** secondary sexual characteristics of the human male.
68. What maintains the secondary sexual characteristics in the adult human male?
69. Suggest a biological explanation for the following: As long as a baby feeds regularly from its mother's breast (or if a breast pump is regularly used) the milk will continue to flow.
70. Indicate precisely where each of the following events takes place:
- Ovulation
 - Fertilisation
71. What does the term *infertility* mean?
72. *In vitro* fertilisation is a method used to treat infertility. What is meant by the term *in vitro* in relation to fertilisation?
73. Give **one** cause of infertility in women.
74. As a result of fertility treatment, an embryo develops successfully from an *in vitro* fertilisation. What is the next step for the embryo?