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# HSSC-I NATIONAL BOOK FOUNDATION FBISE

## BIOLOGY TEST - CHAPTER 11: REPRODUCTION

| Name: | | Roll No. | | Section: |
|---|---|---|---|---|

**Total Time: 2:30 Hour**
**Time Allowed: 150 Minutes**

**Total Marks: 150**

**PAPER OBJECTIVE**
**SECTION-A (MARKS 150)**

**NOTE: Section-A is compulsory. All parts of this section are to be answered on these pages and handed over to the center superintendent. Deleting / overwriting is not allowed. Do not use lead pencil.**

**Q.1 Fill the relevant bubble for each part. All parts carry one mark.**

| Questions | A | B | C | D | A B C D |
|---|---|---|---|---|---|
| **1. The ability of an organism to produce new offspring of its own type is called:** | homeostasis | metabolism | reproduction | growth | ○○●○ |
| **2. Reproduction is required for the survival of the:** | individual | species | organ | cell | ○●○○ |
| **3. Human reproduction needs:** | external fertilisation | internal fertilisation | fragmentation | budding | ○●○○ |
| **4. The human reproductive system becomes functional at:** | puberty | age five | age fifty | birth | ●○○○ |
| **5. The reproductive system is turned on at puberty by:** | growth hormone | insulin | thyroxine | sex hormones | ○○○● |
| **6. The male gonads are the:** | ovaries | epididymis | testes | prostate | ○○●○ |
| **7. The testes are located in a skin pouch called the:** | uterus | cervix | pelvis | scrotum | ○○○● |
| **8. Testes are located outside the abdomen because sperm production is most efficient at:** | body temperature exactly | a temperature lower than body temperature | a temperature higher than body temperature | any temperature | ○●○○ |
| **9. The long coiled ducts inside the testes are the:** | ductus deferens | vasa efferentia | seminiferous tubules | ejaculatory ducts | ○○●○ |
| **10. Sperm are produced in the:** | seminiferous tubules | vas deferens | epididymis | prostate | ●○○○ |
| **11. Sperm are stored and matured in the:** | epididymis | prostate | seminiferous tubules | urethra | ●○○○ |
| **12. The epididymis opens into the:** | prostate | bladder | urethra | vas deferens | ○○○● |
| **13. The vas deferens joins the duct of the seminal vesicle to form the:** | ureter | ejaculatory duct | epididymis | urethra | ○●○○ |
| **14. The ejaculatory duct enters the:** | scrotum | bladder | penis directly | prostate gland | ○○○● |



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| Questions | A | B | C | D | A B C D |
|---|---|---|---|---|---|
| **15. The urethra is also called the:** | urinogenital duct | ejaculatory duct | vas deferens | oviduct | ●○○○ |
| **16. The accessory glands of the male reproductive system are the seminal vesicles, prostate gland and:** | Bartholin's glands | thyroid gland | adrenal glands | bulbourethral glands | ○○○● |
| **17. The copulatory organ in males is the:** | epididymis | penis | urethra | scrotum | ○●○○ |
| **18. Semen is a mixture of sperm and:** | secretions of accessory glands | blood | lymph | urine | ●○○○ |
| **19. The amount of semen released during ejaculation is about:** | 200 ml | 2–5 ml | 20–50 ml | 0.2 ml | ○●○○ |
| **20. The normal sperm count per ml of semen is between:** | 20 to 150 million | 200 to 500 | 200 to 1500 million | 2 to 15 million | ●○○○ |
| **21. The process of sperm formation is called:** | spermiogenesis only | oogenesis | fertilisation | spermatogenesis | ○○○● |
| **22. Spermatogenesis takes place in the:** | vas deferens | prostate | germinal epithelium of the seminiferous tubules | epididymis | ○○●○ |
| **23. The cells which divide by mitosis in spermatogenesis are:** | secondary spermatocytes | spermatids | spermatogonia | spermatozoa | ○○●○ |
| **24. The primary spermatocyte undergoes meiosis I to form:** | two secondary spermatocytes | four spermatids | two spermatids | one ovum | ●○○○ |
| **25. Each secondary spermatocyte after meiosis II produces:** | four sperm | two spermatids | two primary spermatocytes | one ovum | ○●○○ |
| **26. Spermatids are:** | haploid and non-motile | haploid and motile | diploid and motile | diploid and non-motile | ●○○○ |
| **27. The process by which a spermatid changes into a sperm is called:** | oogenesis | meiosis | mitosis | spermiogenesis | ○○○● |
| **28. A healthy adult male makes about how many sperm every day?** | 40 thousand | 4 million | 4 billion | 400 million | ○○○● |
| **29. The hypothalamus releases:** | gonadotropin releasing hormone (GnRH) | testosterone | FSH | LH | ●○○○ |
| **30. GnRH acts on the:** | ovaries | anterior pituitary | posterior pituitary | testes | ○●○○ |
| **31. The anterior pituitary releases FSH and:** | LH | GnRH | inhibin | testosterone | ●○○○ |

| Questions | A | B | C | D | A B C D |
|---|---|---|---|---|---|
| **32. In males, FSH stimulates the:** | seminal vesicle | Leydig cells | Sertoli cells | prostate | ○○●○ |
| **33. In males, LH stimulates the:** | interstitial cells of Leydig | spermatogonia | Sertoli cells | epididymis | ●○○○ |
| **34. Leydig cells secrete:** | LH | inhibin | FSH | testosterone | ○○○● |
| **35. The male sex hormone is:** | inhibin | testosterone | progesterone | estrogen | ○●○○ |
| **36. Testosterone is responsible for:** | secondary sexual characteristics | ovulation | lactation | menstruation | ●○○○ |
| **37. Secondary sexual characteristics in males include deepening of the voice and:** | growth of breasts | widening of hips | menstruation | growth of facial hair | ○○○● |
| **38. Rising testosterone acts on the hypothalamus and pituitary to:** | stimulate estrogen | inhibit GnRH, FSH and LH | have no effect | stimulate GnRH, FSH and LH | ○●○○ |
| **39. The Sertoli cells produce the hormone:** | progesterone | estrogen | inhibin | testosterone | ○○●○ |
| **40. Inhibin is released into the blood when the sperm count is:** | zero | too high | normal only | too low | ○●○○ |
| **41. Inhibin inhibits the release of GnRH and:** | LH only | prolactin | FSH | testosterone | ○○●○ |
| **42. FSH and LH are produced in:** | both sexes | females only | neither sex | males only | ●○○○ |
| **43. The female gonads are the:** | ovaries | uterus | oviducts | testes | ●○○○ |
| **44. The female reproductive system consists of ovaries, oviducts, uterus and:** | prostate | epididymis | vagina | scrotum | ○○●○ |
| **45. The ovaries produce ova and:** | sperm | hormones | milk | semen | ○●○○ |
| **46. Tiny saclike structures within the ovary are the:** | nephrons | alveoli | ovarian follicles | seminiferous tubules | ○○●○ |
| **47. Each ovarian follicle contains an immature egg called the:** | polar body | oocyte | spermatid | oogonium | ○●○○ |
| **48. The monthly release of an oocyte from the ovary is called:** | menstruation | ovulation | fertilisation | implantation | ○●○○ |

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| Questions | A | B | C | D | A B C D |
|---|---|---|---|---|---|
| **49. After ovulation, the ruptured follicle becomes the:** | polar body | corpus albicans | corpus luteum | Graafian follicle | ○○●○ |
| **50. The corpus luteum secretes:** | progesterone | FSH | LH | testosterone | ●○○○ |
| **51. The oviducts are also called:** | urethras | vasa deferentia | ureters | fallopian tubes | ○○○● |
| **52. Fertilisation generally occurs in the:** | uterus | oviduct | ovary | vagina | ○●○○ |
| **53. Each oviduct is about:** | 1 cm long | 50 cm long | 100 cm long | 10 cm long | ○○○● |
| **54. The uterus is a hollow, muscular organ shaped like an:** | cylinder | inverted pear | sphere | cube | ○●○○ |
| **55. The three portions of the uterus are the fundus, body and:** | ovary | cervix | oviduct | vagina | ○●○○ |
| **56. The outermost thin covering layer of the uterus is the:** | endometrium | mesometrium | myometrium | perimetrium | ○○○● |
| **57. The thick middle muscular layer of the uterus is the:** | endometrium | myometrium | serosa | perimetrium | ○●○○ |
| **58. The myometrium contracts rhythmically during:** | childbirth | menstruation only | fertilisation | ovulation | ●○○○ |
| **59. The inner spongy lining of the uterus is the:** | cervix | endometrium | myometrium | perimetrium | ○●○○ |
| **60. The embryo is implanted into the:** | myometrium | oviduct | endometrium | perimetrium | ○○●○ |
| **61. The narrow entrance to the uterus from the vagina is the:** | vulva | fundus | cervix | oviduct | ○○●○ |
| **62. The vagina is a thin-walled tube about:** | 8–10 cm long | 80–100 cm long | 1–2 cm long | 20–30 cm long | ●○○○ |
| **63. The vagina is often called the:** | fallopian tube | womb | birth canal | cervix | ○○●○ |
| **64. The sequence of reproductive events in the female is called the:** | menstrual cycle | gestation | puberty | oestrous cycle only | ●○○○ |
| **65. The female reproductive cycle is divided into the ovarian cycle and the:** | uterine cycle | pituitary cycle | hormonal cycle | menstrual cycle only | ●○○○ |

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|---|---|---|---|---|---|
| **66. The events of the ovarian and uterine cycles are coordinated by pituitary hormones called:** | thyroid hormones | androgens | corticoids | gonadotropins | ○○○● |
| **67. The three phases of the menstrual cycle are menstrual, proliferative and:** | ovulatory only | luteal only | follicular only | secretory | ○○○● |
| **68. The process of egg formation in females is called:** | ovulation | spermatogenesis | menstruation | oogenesis | ○○○● |
| **69. Oogenesis begins when the individual is at the stage of:** | adulthood | puberty | foetus | childhood | ○○●○ |
| **70. The diploid stem cells of the ovaries are the:** | oogonia | oocytes | spermatogonia | follicles | ●○○○ |
| **71. Primary oocytes are arrested in:** | telophase II | prophase I | anaphase I | metaphase II | ○●○○ |
| **72. The primary oocytes remain in this arrested state all through:** | menopause | pregnancy | childhood | adulthood | ○○●○ |
| **73. Each month at puberty, how many primary oocytes are selected to continue meiosis I?** | thirty | one | two | ten | ○●○○ |
| **74. Meiosis I of a primary oocyte produces a secondary oocyte and a:** | second polar body | first polar body | spermatid | ovum | ○●○○ |
| **75. The secondary oocyte is arrested at:** | telophase I | prophase I | metaphase II | anaphase I | ○○●○ |
| **76. The cell that is ovulated is the:** | ovum | oogonium | primary oocyte | secondary oocyte | ○○○● |
| **77. Meiosis II is completed only if the oocyte is:** | fertilised by two sperm | penetrated by a sperm | exposed to FSH | ovulated | ○●○○ |
| **78. Completion of meiosis II yields a large ovum and a:** | corpus luteum | second polar body | first polar body | spermatid | ○●○○ |
| **79. The unequal cytoplasmic divisions in oogenesis ensure that a fertilised egg has:** | a tail | a nucleus only | more chromosomes | ample nutrients | ○○○● |
| **80. The first phase of the menstrual cycle is the:** | menstrual phase | proliferative phase | luteal phase | secretory phase | ●○○○ |
| **81. During the menstrual phase, the:** | endometrium is shed | ovulation occurs | endometrium thickens | corpus luteum forms | ●○○○ |
| **82. The proliferative phase is also called the:** | luteal phase | menstrual phase | follicular phase | secretory phase | ○○●○ |


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| Questions | A | B | C | D | A B C D |
|---|---|---|---|---|---|
| **83. During the proliferative phase, FSH stimulates the:** | ovarian follicles | endometrium directly | corpus luteum | oviduct | ●○○○ |
| **84. Out of competing follicles, how many become dominant?** | two | ten | one | four | ○○●○ |
| **85. The dominant mature follicle is called the:** | polar body | corpus luteum | primary follicle | Graafian follicle | ○○○● |
| **86. The failure of other follicles to grow and their disintegration is called:** | menstruation | follicle atresia | implantation | ovulation | ○●○○ |
| **87. The Graafian follicle secretes:** | testosterone | FSH | estrogen | progesterone | ○○●○ |
| **88. Estrogen stimulates the:** | vascularisation and thickening of the endometrium | breakdown of the endometrium | growth of the corpus luteum | release of FSH | ●○○○ |
| **89. Rising estrogen levels make the cervical mucus:** | blocked | thin and watery | dry | thick and sticky | ○●○○ |
| **90. Estrogen has negative feedback on:** | inhibin | FSH | progesterone | LH always | ○●○○ |
| **91. At the end of the proliferative phase (about day 14), the anterior pituitary releases a surge of:** | FSH | GnRH | progesterone | LH | ○○○● |
| **92. Release of the egg from the mature follicle in response to the LH surge is called:** | menstruation | implantation | fertilisation | ovulation | ○○○● |
| **93. The ovulation takes place in less than:** | five hours | five days | five minutes | five seconds | ○○●○ |
| **94. LH converts the ruptured follicle into a yellowish glandular structure called the:** | polar body | Graafian follicle | corpus luteum | corpus albicans | ○○●○ |
| **95. The secretory (post-ovulatory) phase lasts from days:** | 29–35 | 6–14 | 15–28 | 1–5 | ○○●○ |
| **96. During the secretory phase, the hormone that acts on the estrogen-primed endometrium is:** | FSH | progesterone | GnRH | testosterone | ○●○○ |
| **97. In the secretory phase, uterine glands secrete nutritious:** | glycogen | insulin | testosterone | FSH | ●○○○ |
| **98. The nutrients secreted by the uterine glands sustain the:** | corpus luteum | sperm | embryo until implantation | ovum | ○○●○ |
| **99. If fertilisation does not occur, the corpus luteum begins to:** | secrete more LH | degenerate | secrete FSH | grow | ○●○○ |


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| Questions | A | B | C | D | A B C D |
|---|---|---|---|---|---|
| **100. When progesterone levels fall, the endometrial cells:** | die and menstruation begins | multiply | become glandular | become cervical | ●○○○ |
| **101. The menstrual cycle ceases around the age of about:** | 70 years | 20 years | 30 years | 50 years | ○○○● |
| **102. The cessation of the menstrual cycle is called:** | puberty | ovulation | menopause | menarche | ○○●○ |
| **103. The first menstruation in a female is called:** | menopause | menstruation | menarche | pregnancy | ○○●○ |
| **104. Cyclic menstruation is an indicator of:** | diseases | normal reproductive life in females | infection | pregnancy | ○●○○ |
| **105. Cyclic menstruation extends between menarche and:** | ovulation | puberty | menopause | pregnancy | ○○●○ |
| **106. If a woman's cycle is 28 days and the first day of menstrual loss was 1 March, ovulation is most likely on:** | 5 March | 20 March | 28 March | 14 March | ○○○● |
| **107. If the ruptured mature follicle degenerates without forming a corpus luteum, then:** | follicular atresia occurs | menstruation will never occur | pregnancy cannot be sustained | ovulation will not occur | ○○●○ |
| **108. A zygote, compared with a gamete, has:** | no chromosome | diploid chromosome number | a tail | haploid chromosome number | ○●○○ |
| **109. A zygote is formed by the fusion of:** | two sperm | sperm and ovum | polar body and ovum | two ova | ○●○○ |
| **110. The primary organs of the female reproductive system are the:** | ovaries | vagina | uterus | oviducts | ●○○○ |
| **111. In females, the foetus develops in the:** | uterus | ovary | oviduct | vagina | ●○○○ |
| **112. The male reproductive organ that stores spermatozoa is the:** | epididymis | penis | urethra | prostate | ●○○○ |
| **113. The female reproductive organ known as the site of fertilisation is the:** | vagina | ovary | uterus | oviduct | ○○○● |
| **114. Which hormones are responsible for attaining reproductive maturity?** | thyroxine | insulin | adrenaline | FSH, LH and sex steroids | ○○○● |
| **115. Hormones secreted by both the testes and the ovary include:** | inhibin and sex steroids | GnRH | FSH | LH | ●○○○ |
| **116. Ovulation normally takes place during the menstrual cycle:** | during menstruation | at about mid cycle after the LH surge | at the start of the proliferative phase | just before the end of the secretory phase | ○●○○ |



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| **117. After ovulation, the Graafian follicle regresses into the:** | polar body | corpus callosum | corpus luteum | follicle atresia | ○○●○ |
| **118. Immediately after ovulation, the mammalian egg is covered by the:** | cell wall | amnion | chorion | zona pellucida | ○○○● |
| **119. The endometrium secretes nutrients for implantation during days:** | 6–14 | 15–28 | 1–5 | 29–35 | ○●○○ |
| **120. The rise in progesterone level occurs during days:** | 6–14 | 1–14 | 1–5 | 15–28 | ○○○● |
| **121. The role of the corpus luteum in the menstrual cycle is to secrete:** | testosterone | LH | progesterone and estrogen | FSH | ○○●○ |
| **122. Sperm count of how many million/ml is needed to avoid inhibin suppression?** | about 400 | about 1000 | below 20 | above 150 | ○○●○ |
| **123. Androgens increase in both males and females during puberty and are secreted by the:** | adrenal glands and gonads | thyroid | pancreas | pineal | ●○○○ |
| **124. The hormone that provides the hormonal trigger for ovulation is:** | progesterone | FSH | estrogen | luteinising hormone | ○○○● |
| **125. Many sperms are produced but only one fertilises the egg because:** | most sperm are lost on the journey to the oviduct | the oviduct is wide | all sperm fertilise | ova are too numerous | ●○○○ |
| **126. Large numbers of sperm are needed for fertilisation because sperm release enzymes that:** | make the ovum swim | digest the egg's outer layers | digest the sperm tail | activate FSH | ○●○○ |
| **127. In vitro fertilisation means fertilisation:** | inside the uterus | inside the oviduct | in the ovary | outside the body | ○○○● |
| **128. Infertility means the inability to:** | ovulate once | produce milk | conceive a child | menstruate | ○○●○ |
| **129. The primary male infertility problem is:** | menstruation | lack of ovulation | uterine fibroids | low sperm count | ○○○● |
| **130. The structures through which a sperm passes in order from the testis are seminiferous tubules, epididymis, vas deferens, ejaculatory duct and:** | urethra | ureter | bladder | prostate | ●○○○ |
| **131. The organ that carries both urine and semen in males is the:** | urethra | epididymis | vas deferens | ureter | ●○○○ |
| **132. The gland that surrounds the urethra just below the bladder is the:** | bulbourethral gland | seminal vesicle | thyroid gland | prostate gland | ○○○● |
| **133. The seminal vesicles secrete a fluid rich in:** | bile | urea | fructose | glycogen only | ○○●○ |



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|---|---|---|---|---|---|
| **134. The head of a sperm contains the:** | nucleus | flagellum | mitochondria only | centrioles only | ●○○○ |
| **135. The sperm tail is used for:** | protection | digestion | storage | motility | ○○○● |
| **136. The mitochondria of a sperm are located in the:** | tail end | head | acrosome | middle piece | ○○○● |
| **137. The cap over the sperm head containing enzymes is the:** | mitochondrion | nucleus | centriole | acrosome | ○○○● |
| **138. Hormonal control of the testis shows:** | no feedback | neural control only | positive feedback only | negative feedback | ○○○● |
| **139. In the female cycle, the LH surge results from:** | negative feedback of progesterone | positive feedback of high estrogen | inhibin | testosterone | ○●○○ |
| **140. One primary oocyte finally produces how many functional ova?** | three | four | two | one | ○○○● |
| **141. One primary spermatocyte finally produces how many sperm?** | three | one | two | four | ○○○● |
| **142. The main function of the uterus is to receive, retain and nourish a:** | fertilised ovum | polar body | sperm | spermatid | ●○○○ |
| **143. The menstrual phase lasts for about:** | twenty days | fourteen days | five days | one day | ○○●○ |
| **144. The proliferative phase lasts from about day:** | 1 to 5 | 28 to 35 | 6 to 14 | 15 to 28 | ○○●○ |
| **145. The hormone that prepares the endometrium for implantation is:** | inhibin | progesterone | FSH | testosterone | ○●○○ |
| **146. FSH also stimulates the Graafian follicle to secrete:** | estrogen | testosterone | inhibin | progesterone | ●○○○ |
| **147. The ovulated oocyte is carried toward the uterus by the:** | cervix | vagina | oviduct | urethra | ○○●○ |
| **148. The sperm production in males is regulated by negative feedback involving testosterone and:** | progesterone | estrogen | inhibin | insulin | ○○●○ |
| **149. In the female reproductive system, the organs are responsible for oogenesis, fertilisation, embryo development and:** | production of bile | production of semen | production of sperm | production of female sex hormones | ○○○● |
| **150. The glandular structure formed after ovulation secretes progesterone and:** | estrogen | LH | testosterone | FSH | ●○○○ |



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