

Name: _____

1. The human ovum and spermatozoon are similar in that:
 - A. about the same number of each is produced each month
 - B. they have the same degree of motility
 - C. they are about the same size
 - D. they have the same number of chromosomes
2. Spermiogenesis involves:
 - A. the formation of spermatozoa from spermatogonia
 - B. the movement of spermatozoa in the female reproductive tract
 - C. the formation of primordial or primitive reproductive cells in the yolk sac membrane
 - D. the transformation of spermatids into spermatozoa
3. During early and middle fetal life, the testes are located in the:
 - A. inguinal canal
 - B. abdominal cavity
 - C. pelvic cavity
 - D. scrotal
4. Inflammation of the seminiferous tubules could interfere with the ability to:
 - A. make semen alkaline
 - B. secrete testosterone
 - C. produce spermatozoa
 - D. eliminate urine from the bladder
5. The mitochondria in mature sperm cells are located in the:
 - A. head of the sperm
 - B. body (middle piece) of the sperm
 - C. acrosome of the sperm
 - D. tail (flagellum) of the sperm
6. The movement of spermatozoa, from the epididymal duct, and seminal fluid into the ejaculatory duct and the urethra is called and is under control.
 - A. ejaculation / parasympathetic
 - B. emigration / parasympathetic
 - C. erection / parasympathetic
 - D. emission / sympathetic
7. Prostaglandins within the seminal fluid are thought to:
 - A. cause ovulation
 - B. decrease sperm motility
 - C. stimulate muscular contractions within the uterus
 - D. stimulate the vestibular glands to produce mucus
8. Which of the following is not paired in the male?
 - A. epididymis
 - B. ejaculatory duct
 - C. urethra
 - D. ductus deferens (vas deferens)
9. Short-lived immunity acquired from mother to foetus across placenta or through mother's milk to the infant is categorized as:
 - A Cellular immunity
 - B Passive immunity
 - C Active immunity
 - D Innate non-specific immunity

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10. The onset of menstruation at puberty is referred to as:
- A. menopause
 - B. menorrhagia
 - C. menarche
 - D. amenorrhea
11. During the ovarian cycle, ovulation occurs
- A. during the period of menstrual flow
 - B. when estrogen levels are very low
 - C. when the corpus luteum degenerates
 - D. during the surge in LH and FSH concentration.
12. In the menstrual cycle, the menstrual phase or menses, usually occurs between which days of the cycle?
- A. (25 and 28)
 - B. (1 and 5)
 - C. (13 and 15)
 - D. (20 and 25)
13. The secretory phase of the endometrium corresponds to which of the following ovarian phases?
- A. follicular phase
 - B. ovulation
 - C. luteal phase
 - D. menstrual phase.
14. Which of the following is shed as menses?
- A. the perimetrial layer
 - B. the fibrous layer
 - C. the functional layer
 - D. the basal layer
 - E. the myometrial layer.
15. The dominant hormone controlling the proliferative phase of the uterine endometrium is:
- A. estrogen
 - B. FSH
 - C. LH
 - D. progesterone
16. A woman with a typical 28-day menstrual cycle is most likely to become pregnant as a result of sexual intercourse on days:
- A. 1 - 3
 - B. 5 – 8
 - C. 12 – 15
 - D. 22 – 24
17. A polar body is formed:
- A. before fertilization
 - B. after fertilization
 - C. during fertilisation
 - D. answers A and B.
18. The cervix is a portion of the:
- A. vulva
 - B. vagina
 - C. uterus
 - D. uterine (fallopian) tubes.

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19. The female structures that correspond (are homologous) to the scrotum of the male are the:
- A. labia minora
 - B. labia majora
 - C. clitoris
 - D. urethral folds
20. An oocyte surrounded by one layer of squamous follicle-like cells is most likely a:
- A. Primordial follicle
 - B. Primary follicle
 - C. Secondary follicle
 - D. Graafian follicle
21. Sertoli cells produce:
- A. mucus
 - B. androgen-binding protein (ABP)
 - C. testosterone
 - D. FSH and LH
22. The site of oogenesis is the:
- A. ovary
 - B. ovum
 - C. fallopian tube
 - D. uterus
23. In the first phase of the menstrual cycle:
- A. oogonia differentiate into primary oocytes
 - B. secondary oocytes begin to enlarge
 - C. the Graafian follicle ruptures
 - D. the dominant follicle gobbles up all other oocytes
24. During ovulation all of the following occur EXCEPT:
- A. rupture of the Graafian follicle
 - B. estrogen production is very low
 - C. FSH and LH production is high
 - D. formation of the corpus luteum
25. The primary sex organ in the male is the
- A) penis
 - B) testis
 - C) scrotum
 - D) epididymis
26. Where do the testes originate in a fetus?
- A) scrotal sac
 - B) pelvic cavity
 - C) abdominal cavity
 - D) retroperitoneal space
27. When do the testes begin to descend?
- A) at birth
 - B) two months after birth
 - C) two months prior to birth
 - D) in the fifth month of pregnancy

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28. Male Accessory Glands and their functions are listed in the table below. Match the columns and select the correct option.

Column I (male Accessory Glands)

(a) Seminal vesicle

(b) Prostate gland

(c) Bulbourethral gland

A (a) - (ii), (b) - (iii), (c) - (i)

B (a) - (i), (b) - (ii), (c) - (iii)

C (a) - (ii), (b) - (i), (c) - (iii)

D (a) - (iii), (b) - (i), (c) - (ii)

Column II (Functions)

(i) Secretes watery alkaline fluid for raising vaginal pH

(ii) Secretes lubricating mucus

(iii) Secretes fructose & seminal fluid

29. What is the source of the male sex hormones?

A)epididymis

B)vas deferens

C)seminiferous tubules

D)interstitial cells

30. Where do sperm cells attain fertilization competence and motility?

A)rete testis

B)epididymis

C)vas deferens

D)seminiferous tubule

31. Which structure contains lysosomal-like enzymes?

A)Sertoli cells

B)sperm head

C)acrosome

D)sperm tail

32. Where does the epididymis direct sperm cells into?

A)vas efferens

B)vas deferens

C)rete testis

D)prostate gland

33. The end of the vas deferens is a dilated sac called the

A)ductus deferens

B)seminal vesicle

C)ampulla

D)ejaculatory duct

34. The ejaculatory duct is the union of the vas deferens and

A)seminal vesicle

B)prostate

C)ampulla

D)urethra

35. The substrate used for sperm metabolism is produced by the

A)prostate

B)seminal vesicle

C)Cowper's gland

D)testes

36. The main function of the prostate seems to be

A)spermatogenesis

B)production of glycogen

C)secretion of alkaline mucus

D)maturation of sperm cells

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37. Infertility could develop when the sperm cells display
- A) a count of 120 million per ml semen
 - B) increased acrosomal activity
 - C) normal morphology
 - D) a count of less than 20 million per ml semen
38. The process of capacitation usually occurs in the
- A) vagina
 - B) testis
 - C) prostate
 - D) epididymis
39. Which term includes the other terms?
- A) spermatozoa
 - B) alkaline mucus
 - C) semen
 - D) fructose
40. Which of the following is not compatible with penile erection?
- A) parasympathetic stimulation
 - B) arterial dilation
 - C) venous compression
 - D) blood leaves erectile tissue
41. Which hormone initiates the changes in puberty?
- A) FSH
 - B) ICSH
 - C) testosterone
 - D) GnRH
42. The target of FSH is the
- A) prostate
 - B) seminiferous tubule
 - C) pituitary
 - D) penis
43. Which of these is **not** a function of testosterone?
- A) loss of body hair
 - B) thickening of the larynx
 - C) anabolism of skeletal muscle
 - D) thickening of bones
44. What normally inhibits testosterone production?
- A) increasing FSH
 - B) increasing ICSH
 - C) decreasing ICSH
 - D) decreasing FSH
45. How many oocytes are there in the ovaries of an adult?
- A) fewer than 400
 - B) 10 million
 - C) 50 million
 - D) 400,000
46. Which cell has been fertilized by a sperm cell?
- A) primary oocyte
 - B) secondary oocyte
 - C) ovum
 - D) oogonia

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47. The result of oogenesis is
A)one secondary oocyte
B)two secondary oocytes
C)one ovum
D)four ootids
48. The initiation of puberty and menses in a female involves increased levels of
A)FSH
B)LH
C)estrogen
D)progesterone
49. The outside layer of the oocyte is the
A)theca interna
B)theca externa
C)zona pellucida
D)antrum
50. The mature follicle is also called a
A)Graafian follicle
B)granulosa cell
C)primary follicle
D)secondary follicle
51. When do the corona radiata cells appear?
A)at birth
B)12 days
C)28 days
D)1 day
52. What is the first structure to receive the oocyte?
A)fimbriae
B)uterine tube
C)infundibulum
D)uterus
53. The largest component of the uterus by weight is the
A)broad ligament
B)myometrium
C)round ligament
D)endometrium
54. The outer serosal layer of the uterus is the
A)perimetrium
B)cervix
C)endometrium
D)myometrium
55. The epithelium at the inner lining of the vagina is
A)simple cuboidal
B)simple columnar
C)mucous
D)stratified squamous

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56. The endocrine structure and the corresponding hormones are listed in the table below. Match the columns and select the correct option.

Column I

- (a) Hypothalamus
- (b) Anterior Pituitary
- (c) Testis
- (d) Ovary

Column II

- (p) Relaxin
- (q) Estrogen
- (r) FSH and LH
- (s) Androgens
- (t) Gonadotropin releasing hormone

- A (a) - (t), (b) - (r), (c) - (s), (d) - (q)
- B (a) - (t), (b) - (r), (c) - (q), (d) - (s)
- C (a) - (p), (b) - (q), (c) - (s), (d) - (r)
- D (a) - (r), (b) - (t), (c) - (s), (d) - (q)

57. What structure corresponds to the scrotum in the male?

- A)labia major
- B)labia minor
- C)pudendal cleft
- D)mons pubis

58. Which of these is not a function of estrogen?

- A)decreases adipose
- B)breast development
- C)increased skin blood vessels
- D)enlarges clitoris

59. What area experiences the greatest structural changes in a menstrual cycle?

- A)vagina
- B)perimetrium
- C)cervix
- D)endometrium

60 Which of the following is not a source of estrogen?

- A)adrenal gland
- B)ovary
- C)pituitary
- D)Follicle

61. Which factor causes the act of ovulation?

- A)blood pressure
- B)LH levels
- C)FSH levels
- D)estrogen

62. Where is the majority of progesterone produced during the menstrual cycle?

- A)Graafian follicle
- B)corpus luteum
- C)secondary follicle
- D)adrenal cortex

63. Which hormone is produced throughout a menstrual cycle?

- A. FSH B. Oestrogen C. LH D. Progesterone

64. What factor will inhibit LH secretion?

- A)FSH
- B)progesterone
- C)estrogen
- D)LH

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65. Which of the following is the most accurate sequence of hormones?
A)FSH, LH, estrogen, progesterone
B)LH, FSH, estrogen, progesterone
C)FSH, estrogen, LH, progesterone
D)FSH, estrogen, progesterone, LH
66. Which hormone thickens the lining of the uterus?
A)FSH
B)estrogen
C)LH
D)progesterone
67. Which hormone causes the uterus to increase glycogen?
A)progesterone
B)FSH
C)LH
D)estrogen
68. Which of the following is not a result of menopause?
A)loss of hormones
B)reduction in breast mass
C)increase in calcium deposition
D)psychological changes
69. Males have a number of internal accessory organs. Which one(s) is/are responsible for secreting fluid containing fructose and prostaglandins?
A)epididymis
B)seminal vesicles
C)vas deferens
D)prostate gland
70. A number of hormonal secretions begin or increase during puberty. Which hormone appears to initiate the process of puberty?
A)testosterone
B)luteinizing hormone (LH or ICSH)
C)gonadotropin-releasing hormone (GnRH)
D)follicle-stimulating hormone (FSH)
71. Within the female ovary, primordial follicles begin their development
A)at puberty
B)around age 5
C)at birth
D)during prenatal development
72. What is the purpose of polar bodies during oogenesis?
A)They serve as a dumping ground for extra sets of chromosomes.
B)They rid the body of defective sets of chromosomes, leaving the "good" set within the ovum.
C)They are merely the by-product of meiosis and serve no function.
D)They prevent the development of most sets of multiple births.
73. Which of the following is the most effective means of preventing conception?
A)coitus interruptus
B)rhythm method
C)condoms
D)tubal ligation

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74. What is the primary advantage to using the rhythm method or natural family planning?
- A. It does not introduce additional hormones as does the pill.
 - B. It is highly effective because of the predictable release of the egg from the ovary.
 - C. It allows for intercourse during 3 weeks of each month.
 - D. It is appealing to men because it does not involve a condom.
75. What is a significant drawback to sterilization in both the male and female?
- A. It is major abdominal surgery.
 - B. It must be done in both the male and female to prevent pregnancy.
 - C. It is permanent.
 - D. It is seldom completely successful and pregnancies often result.
76. How does the pill containing both oestrogen and progesterone prevent pregnancy?
- A. preventing ovulation by suppressing FSH and LH
 - B. increasing levels of testosterone in the woman
 - C. preventing implantation of the fertilized egg
 - D. thickening the mucus of the cervix
77. Which of the following is MOST likely to prevent both pregnancy and the spread of STDs?
- A. abstinence
 - B. oral contraceptive
 - C. sterilization
 - D. diaphragm
78. What happens to the corpus luteum if pregnancy does not occur?
- A. It degenerates.
 - B. It remains and continues to secrete progesterone and estrogen.
 - C. It remains and develops a new secondary oocyte.
 - D. It remains to bring on menopause.
79. When do the primary oocytes develop within the primary follicles?
- A. from age 14-26
 - B. during puberty
 - C. between age 10 and puberty
 - D. before birth of the woman
80. What hormones stimulate the growth of mammary glands and the initial steps of the milk-secreting process?
- A. estrogen and testosterone
 - B. progesterone and testosterone
 - C. estrogen and progesterone
 - D. progesterone and adrenaline
81. What would most likely result if mitosis was not accompanied by cytoplasmic division?
- A. two cells, each with one nucleus
 - B. two cells, each without a nucleus
 - C. one cell with two identical nuclei
 - D. one cell without a nucleus
82. When semen is discharged, what is the approximate percentage by volume of spermatozoa?
- A. 1%
 - B. 10%
 - C. 40%
 - D. 75%
83. which of the following is the correct order for the path of sperm from the testes to outside the body?
- A. ductus deferens - epididymis - ejaculatory duct – penis
 - B. epididymis - ductus deferens - ejaculatory duct – penis
 - C. ejaculatory duct - ductus deferens - epididymis – penis
 - D. penis - ejaculatory duct - epididymis - ductus deferens

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84. Human seminal plasma, the fluid part of semen, is produced by contributions from the:
i. Urethra ii. Prostate iii. Seminal vesicle iv. Bulbourethral gland
A i and iii
B i and iv
C i, iii and iv
D ii, iii and iv
85. Which one of the following statement is correct?
A Spermatogenesis is the formation of sperm cells.
B Spermatogenesis occurs in the seminiferous tubules.
C FSH indirectly stimulates spermatogenesis.
D All of these are correct
86. Which one of the following statements is incorrect about menopause?
A Generally occurs between the ages of 45 and 55
B Causes the cessation of the female reproductive cycle
C Anterior pituitary no longer produces FSH and LH
D Ovaries slowly reduce their secretion of estrogen
87. Which one of the following statement is correct about sertoli cells also called as nurse cells? Found in:
A adrenal cortex and secrete adrenaline
B ovaries and secrete progesterone
C pancreas and secrete cholecystokinin
D seminiferous tubules and provide nutrition of germ cells
88. Which one of the following statements about morula in humans is correct?
A It has more cytoplasm and more DNA than an uncleaved zygote
B It has almost equal quantity of cytoplasm as an uncleaved zygote but much more DNA
C It has far less cytoplasm as well as less DNA than in an uncleaved zygote
D It has more or less equal quantity of cytoplasm and DNA as in uncleaved zygote
89. Foetal ejection reflex in human female is induced by
A Differentiation of mammary glands
B Pressure exerted by amniotic fluid
C Release of oxytocin from pituitary
D Fully developed foetus and placenta
90. Which one of the following is the most likely root cause why menstruation is not taking place in regularly cycling human female?
A Retention of well-developed corpus luteum
B Fertilisation of the ovum
C Maintenance of the hypertrophical endometrial lining
D Maintenance of high concentration of sex-hormones in the blood stream
91. The correct sequence of spermatogenetic stages leading to the formation of sperms in a mature human testis is
A Spermatogonia-spermatid-spermatocyte-sperms
B Spermatocyte-spermatogonia-spermatid-sperms
C Spermatogonia-spermatocyte-spermatid-sperms
D Spermatid-spermatocyte-spermatogonia-sperms
92. Which of the following is the correct sequence of embryo development?
A Gamete → Zygote → Morula → Blastula → Gastrula
B Gamete → Zygote → Blastula → Morula → Gastrula
C Gamete → Neurula → Gastrula
D Gamete → Neurula → Morula

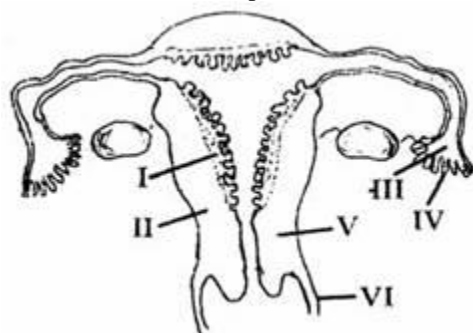
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93. Which one of the following statements is incorrect about menstruation?
- A The beginning of the cycle of menstruation is called menarche
 - B During normal menstruation about 40 ml blood is lost
 - C The menstrual fluid can easily clot
 - D At menopause in the female, there is especially abrupt increase in gonadotropic hormones

94. The haemoglobin of a human foetus:
- A Has a higher affinity for oxygen than that of an adult
 - B Has a lower affinity for oxygen than that of the adult
 - C Its affinity for oxygen is the same as that of an adult
 - D Has only two protein subunits instead of four

95. What happens during fertilisation in humans after many sperms reach close to the ovum?
- A Cells of corona radiata trap all the sperms except one
 - B Only two sperms nearest the ovum penetrate zona pellucida
 - C Secretions of acrosome helps one sperm enter cytoplasm of ovum through zona pellucida
 - D All sperms except the one nearest to the ovum lose their tails

96. The figure given below depicts a diagrammatic sectional view of the female reproductive system of humans. Which one set of three parts out of **I – VI** have been correctly identified?



- A (I) Perimetrium, (II) Myometrium, (III) Fallopian tube
- B (II) Endometrium, (III) Infundibulum, (IV) Fimbriae
- C (III) Infundibulum, (IV) Fimbriae, (V) Cervix
- D (IV) Oviducal funnel, (V) Uterus, (VI) Cervix

97. Foramen ovale
- A Is a shallow depression in the interventricular septum
 - B Is a condition in which the heart valves do not completely close
 - C Is a connection between the pulmonary trunk and the aorta in the fetus
 - D Connects the two atria in the fetal heart

98. Signals for parturition originate from
- A Placenta only
 - B Fully developed foetus only
 - C Both placenta as well as fully developed foetus
 - D Oxytocin released from maternal pituitary

99. The Leydig cells as found in the human body are the secretory source of
- A. Glucagon
 - B. Androgens
 - C. Progesterone
 - D. Intestinal mucus

100. In a normal pregnant woman, the amount of total gonadotropin activity was assessed. The result expected was high levels of:

- A FSH and LH in uterus to stimulate endometrial thickening
- B circulating HCG to stimulate estrogen and progesterone synthesis
- C circulating FSH and LH in the uterus to stimulate implantation of the embryo
- D circulating HCG to stimulate endometrial thickening

END.