SECTION A: TOPICWISE QUESTIONS

TOPIC 1: The Male Reproductive system

1. Read the following statements and find out the incorrect statement.

   a. Humans are sexually reproducing and viviparous.
   b. Transfer of sperm in female genital tract (vagina) is called ejaculation.
   c. There are remarkable differences between the reproductive events in the male and in the female.
   d. Sperm formation continues even in old men, but formation of ovum ceases in women around the age of fifteen years.
   e. The male and female reproductive system is located in the pelvic region.

   (A) a, c and d

   (B) b, c and e

   (C) b and d only

   (D) b only

2. The male reproductive system includes

   a. Primary sex organ
   b. Accessory duct
   c. Accessory glands
   d. External genitalia

   (A) a, b and d

   (B) a, c and d

   (C) a and d only

   (D) a, b, c and d

3. Number of testicular lobules in testes are

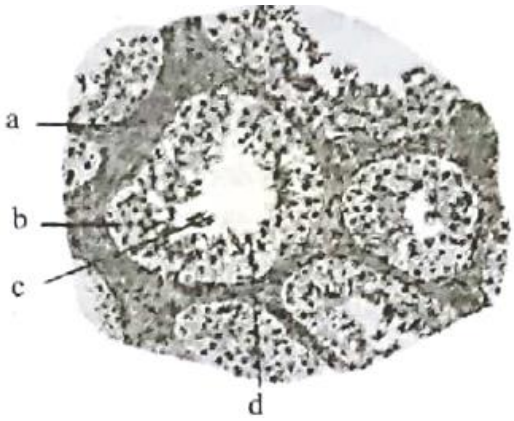
   (A) 250

   (B) 500

   (C) 750

   (D) 200-300

4. Recognise the figure and find out the correct matching.



(A) d—sertoli cells, c—spermatozoa, b—spermatogonia, a—interstitial cells

(B) a—sertoli cells, b—spermatozoa, c—spermatogonia, d—interstitial cells

(C) c—sertoli cells, a—spermatozoa, d—spermatogonia, b—interstitial cells

(D) b—sertoli cells, d—spermatozoa, a—spermatogonia, c—interstitial cells

5. Read the following statements and find out the incorrect statement.

a. Each testicular lobule contains one to three highly coiled seminiferous tubules in which sperm are produced.
b. Each seminiferous tubule is lined on its inside by two types of cells called Leydig cells and Sertoli cells.
c. The region outside the seminiferous tubules called interstitial space, contain small blood vessels and male germ cells (spermatogonia) which lead to sperm formation.
d. In testis immunologically component cells are also present.
e. The seminiferous tubules of the testis open into the retc testis through vasa efferentia.

(A) b and c

(B) b and d

(C) d and e

(D) b, c and e

6. The male accessory duct include

(A) Penis, testis and ureter

(B) Rete testis, vasa efferentia, epididymis and vas deferens

(C) Ureter, urinary bladder and urethra

(D) Ureter, urethra and penis

7. Which is correct sequence of male accessory ducts starting from testis?

(A) Rete testis, vasa efferentia, epididymis, vas deferens

(B) Rete testis, vasa efferentia, vas deferens, epididymis

(C) Rete testis, vas deferens, epididymis, vasa efferentia

(D) Rate testis, vas deferens, vasa efferentia, epididymis

8. The duct that leave the testis and open into epididymis is

(A) Rete testis

(B) Vas deferens

(C) Vasa efferentia

(D) Seminal vesicle

9. Which duct ascends to abdomen and loops over the urinary bladder?

(A) Rete testis

(B) Vasa efferentia

(C) Epididymis

(D) Vas deferens

10. Ejaculatory duct is formed by the

(A) Vas deferens along with a duct from seminal vesicie

(B) Epididymis along with a duct from seminal vesicle

(C) Epididymis along with the prostatic duct

(D) Vas deferens along with the prostatic duct

11. Ejaculatory duct open into

(A) Ureter

(B) Urethra

(C) Urinary bladder

(D) Testis

12. The function of the male sex accessory duct is

(A) Storage of sperms

(B) Transport of sperms

(C) Formation of sperms

(D) Both A and B

13. The urethra originates from the ...a... and extends through the ...b... to its external opening called ...c...

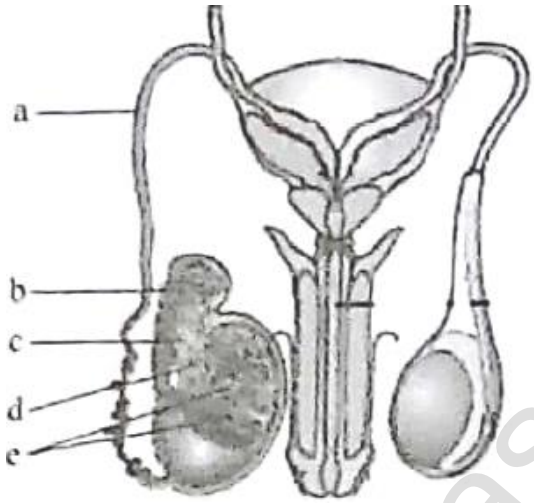
(A) a—ureters, b—urinary bladder, c—urethral sphincter

(B) a— urinary bladder, b—testis, c—urethral meatus

(C) a—penis, b—urinary bladder, c—urethral meatus

(D) a— urinary bladder, b—penis, c—urethral meatus

14. Recognise the figure and find out the correct matching.



(A) e—rete testis, d—testicular lobules, c—epididymis, b—vasa efferentia, a—vas deferens

(B) d—rete testis, e—testicular lobles, b—epididymis, a—vasa efferentia, c—vas deferens

(C) d—rete testis, e—testicular lobules, a—epididymis, c—vas efferentia, b—vas deferens

(D) d—rete testis, e—testicular lobules, b—epididymis, c—vasa efferentia, a—vas deferens

15. Which of the following is/are male external genitalia?

(A) Testis and scrotum

(B) Testis without scrotum

(C) Penis

(D) Prostate, seminal vesicle and bulbourethral glands

16. The enlarged end of penis is called

(A) Prepuce

(B) Glance penis

(C) Glanse penis

(D) Glans penis

17. Glans penis is covered by a loose fold of skin called

(A) Prepuce

(B) Hindskin

(C) Foreskin

(D) Both A and C

18. The male sex accessory glands include

a. Prostate gland
b. Bulbourethral gland
c. Seminal vesicle
d. Bartgikub gland

(A) a, c and d

(B) b, c and d

(C) a, b and c

(D) a, b, c and d

19. The secretion of which gland helps in the lubrication of the penis

(A) Prostate gland

(B) Bulbourethral gland

(C) Seminal vesicle

(D) All of the above

20. The secretions of the male sex accessory glands constitute the

(A) Seminal plasma

(B) Serum

(C) Semen

(D) Urine

21. Spermatozoa are nourished during their development by

(A) Sertoli cells

(B) Connective tissue cells

(C) Interstitial cells

(D) None of the above

22. Epididymis lies between

(A) Rete testis and vasa efferentia

(B) Vas deferens and vasa efferentia

(C) Vas deferens and ejaculatory duct

(D) Seminal tubules and rete testis

23. Sertoli cells secrete a harmonic

(A) Gonadotropin

(B) Testosterone

(C) Relaxin

(D) Inhibin

24. In human the unpaired male reproductive structure is

(A) Testis

(B) Seminal vesicle

(C) Bulbourethral gland

(D) Prostate

25. Serotal sacs of man and rabbit are connected with the abdominal cavity by

(A) Inguinal canal

(B) Haversian canal

(C) Vagina cavity

(D) Spermatic canal

26. Cryptorchidism is a condition of testes

(A) Unable to descend in scrotal sacs

(B) Unable to produce sperms

(C) Having been surgically removed

(D) Having remained undeveloped

27. Accessory genital gland found only in males is

(A) Cowper's gland

(B) Bartholin gland

(C) Perineal gland

(D) prostate gland

28. Corpus spongiosum occurs in

(A) Ovary

(B) Penis

(C) Testis

(D) Uterine wall

29. Function of prostate glands is

(A) Storage of semen

(B) Provide motility to sperms

(C) Formation of semen

(D) Release of hormones

30. Supporting cells found in between spermatogonia are

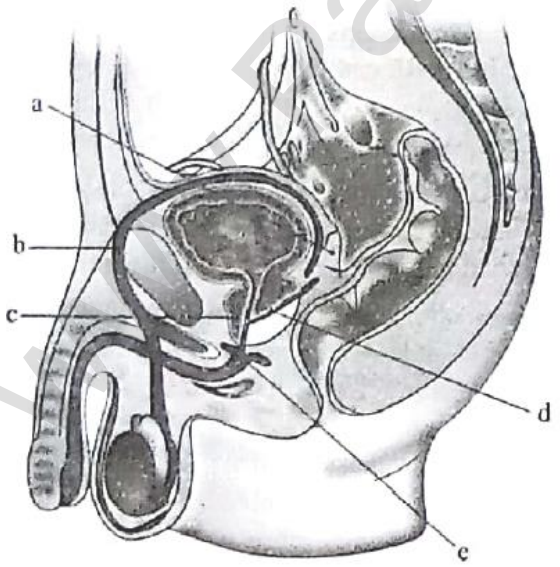
(A) Germinal cells

(B) Sertoli cells

(C) Epithelial cells

(D) Lymph space

31. Recognise the figure and find out the correct matching.



(A) d—vas deferens, c—seminal vesicle, a—cjaculatory duct, b—bulbourethral gland, e—prostate gland

(B) b— vas deferens, a—seminal vesicle, d—cjaculatory duct, c—bulbourethral gland, e—prostate gland

(C) d—vas deferens, e—seminal vesicle, b—cjaculatory duct, a—bulbourethral gland, c—prostate gland

(D) b—vas deferens, a—seminal vesicle, d—cjaculatory duct, e—bulbourethral gland, c—prostate gland

32. Testes descend into scrotum in mammals for

(A) Spermatogenesis

(B) Fertilization

(C) Development of sex organs

(D) Development of visceral organs

33. In mammals, the testes occur in scrotal sacs outside the abdomen because of the

(A) Presence of urinary bladder

(B) Presence of rectum

(C) Long vas deferens

(D) Requirement of low temperature for spermatogenesis

34. Testosterone is produced by

(A) Acinar cells

(B) Graafian follicies

(C) Leydig cells

(D) Hepatic cells

35. Seminal vesicles are located in

(A) Caput epididymis

(B) Uterus

(C) Above Cowper's glands

(D) Glans penis

36. Prostate gland is present

(A) On ureter

(B) On kidney

(C) On testis

(D) Around urethra

37. Which one is primary sex organ?

(A) Serotum

(B) Penis

(C) Testis

(D) Prostate

38. What would happen if vasa defferentia of man are cut?

(A) Sperms are non-nucleate

(B) Spermatogenesis does not occur

(C) Semen is without sperms

(D) Sperms are non-motile

TOPIC 2: The Female Reproductive System

39. The female reproductive system includes

a. Primary sex organ
b. Accessory duct
c. Accessory glands
d. External genitalia

(A) a, b and d

(B) a, c and d

(C) a and d only

(D) a, b, c and d

40. The function of ovary is

a. To produce female gamete.
b. To provide the site for fertilisation
c. To provide the site for implantation
d. To produce several steroid hormones

(A) a and b

(B) a, b and d

(C) a, b and c

(D) a and d

41. The ovarics are located one on each side of the lower abdomen and is connected to the pelvic wall and uterus by

(A) Ligaments

(B) Tendons

(C) Loose connective tissue

(D) Dense irregular connective tissue

42. Match the columns I and II and choose the correct combination from the options given.

Column I	Column II
a. Testis	1. Spherical
b. Infundibulum	2. Oval
c. Uterus	3. Finger-like
d. Fimbriae	4. Funnel shaped
e. Clitoris	5. Inverted pear like

(A) a—2, b—5, c—1, d—3, e—4

(B) a—1, b—4, c—5, d—2, e—3

(C) a—2, b—4, c—5, d—3, e—3

(D) a—1, b—4, c—5, d—3, e—3

43. The female sex accessory duets include

a. Fallopian tubes (oviducts)
b. Vagina
c. Hymen
d. Clitoris
e. Uterus
f. Mons pubis

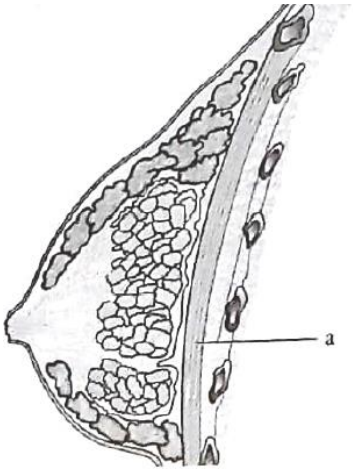
(A) a, b, c and d

(B) a, b, c, and e

(C) b, c, d and f

(D) a, b and e

44. In the give figure point ‘a’ represents



(A) External intercostals muscle

(B) Internal intercostals muscle

(C) Pectoralis minor muscle

(D) Pectoralis major muscle

45. The part of the fallopian tube which is closer to the ovary possess finger like projections called

(A) Infundibulum

(B) Isthmus

(C) Ampulla

(D) Fimbriae

46. The last part of the oviduct that joins the uterus is called

(A) Infundibulum

(B) Isthmus

(C) Ampulla

(D) Fimbriae

47. Womb is the another name of

(A) Vagina

(B) Cerivx

(C) Oviduct

(D) Uterus

48. The uterus open into vagina through a narrow

(A) Clitoris

(B) Hymen

(C) Cervix

(D) Pelvis

49. Birth canal is formed by

(A) Uterus along with vagina

(B) Uterus along with cervix

(C) Cervical canal along with vagina

(D) Uterus, cervix and vagina

50. The female external genitalia includes

a.	Mons pubis	b.	Labia majora
c.	Labia minora	d.	Hymen
e.	Clitoris	f.	Vagina

(A) a, b and c

(B) d, e and f

(C) a, b, c and f

(D) a, b, c, d and e

51. Read the following statements and find out the incorrect statement

a. Mons pubis is a cushion of fatty tissue covered by skin and pubic hair.
b. The labia minora are fleshy folds of tissue, which extend down from the mons pubis and surround the vaginal opening.
c. The opening of the vagina is often covered partially by a membrane called hymen.
d. The clitoris lies at the upper junction of two labia majora above the urethral opening.
e. The presence or absence of hymen is a reliable indicator of virginity or sexual experience.

(A) b, d and e

(B) b, c and d

(C) b, c and d

(D) a, c and e

52. The hymen can be torn by

a. First coitus (intercourse)
b. Sudden fall or jolt
c. Insertion of vaginal tampon
d. Active participation in cycling and horseback riding

(A) a, b and c

(B) b, c and d

(C) a, b and d

(D) a, b, c and d

53. A functional mammary gland is characteristic of all

(A) Female vertebrates

(B) Female mammals

(C) Female primates

(D) Female animals

54. The mammary glands are paired structure (breasts) that contain glandular tissue and variable amount of fat. The glandular tissue of breast is divided into

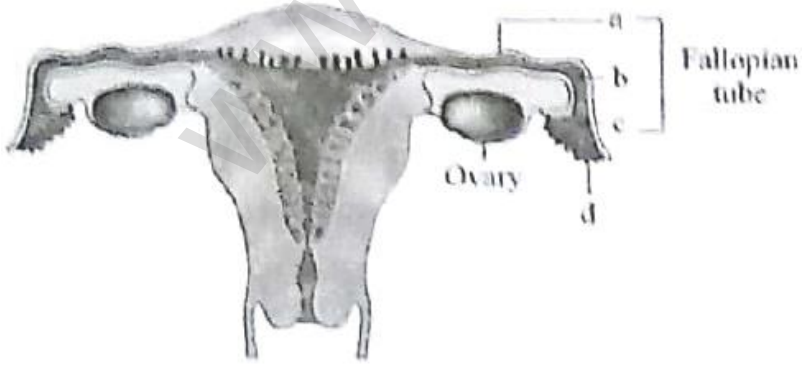
(A) 10 – 12 mammary lobes

(B) 12 – 16 mammary tubules

(C) 15 – 20 mammary alveoli

(D) 15 – 20 mammary lobes

55. Recognise ther figure and find out the correct matching.



(A) c—infundibulum, b—ampulla, a—isthmus, d—fimbriac

(B) a—infundibulum, b—ampulla, c—isthmus, d—fimbriac

(C) b—infundibulum, a—ampulla, d—isthmus, c—fimbriac

(D) c—infundibulum, a—ampulla, b—isthmus, d—fimbriac

56. The cells of the mammary gland that secrete and store milk are called

(A) Alveoli

(B) Ampulla

(C) Ateola

(D) Nephron

57. From the mammary gland, the milk is sucked out through

(A) Mammary duct

(B) Mammary tubule

(C) Mammary ampulla

(D) Lacuferous duct

58. In breast, the mammary alveoli open into the

(A) Mammary duct

(B) Mammary tubule

(C) Mammary ampulla

(D) Lacuferous duct

59. Match the Columns I and II, and choose the correct combination form the options given

Column I	Column II
1. Length of testis	a. 2-3 cm
2. Width of testis	b. 2-4 cm
3. Length of ovary	c. 4-5 cm
4. Length of oviduct	d. 10-12 cm

(A) d—1, a—2, b—3, c—4,

(B) c—1, b—2, a—3, d—4,

(C) c—1, a—2, b—3, d—4,

(D) b—1, a—2, c—3, d—4,

60. The tubules of each lobe join to form a

(A) Mammary duct

(B) Mammary tubule

(C) Mammary ampulla

(D) Lacuferous duct

61. Barttholm's glands occur in

(A) Females and help m vesubular lubrication

(B) Females and produce estrogen for regulation secondary sexual characters

(C) Males and form liquid part of spermatic fluid

(D) Males and produce alkaline fluid for neutralising urethral acidity

62. Cervix occurs in

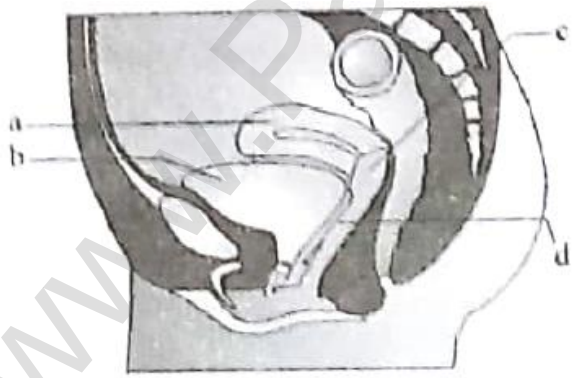
(A) Kidney

(B) Fallopian tube

(C) Between uterus and vagina

(D) Epididymis

63. Recognise the figure and find out the correct matching.



(A) d—vagina, c—cervix, b—urinary bladder, a—uterus, e—utethra

(B) c—vagina, d—cervix, a—urinary bladder, b—uterus, e—utethra

(C) e—vagina, b—cervix, c—urinary bladder, d—uterus, a—utethra

(D) d—vagina, c—cervix, a—urinary bladder, b—uterus, e—utethra

64. Bartholin's glands are sitated

(A) On the side of head of some amphibians

(B) At the reduced tail end of birds

(C) On either side of vagina in humans

(D) On either side of vas deferens in humans

65. Mammary glands are modification of

(A) Sebaccous glands

(B) Sweat glands

(C) Meibomian glands

(D) None of the above

66. Accessory glands associated with genital organs of female are

a) Vestibular or Bartholin's
b) Cowper's
c) Ampullary
d) Vesicular

(A) a, b

(B) a only

(C) b, c

(D) d only

TOPIC 3: Gametogenesis

67. A large number of primary follicles degenerate during the phase form birth to puberty. Therefore, at puberty each ovary has about

(A) 1 Million primary follieles

(B) A coupole of million primary follicles

(C) 60,000-80,000 primary follicles

(D) 1,20,000-1,60,000 primary follicles

68. The first meiotic division during oogenesis is completed at the stage of

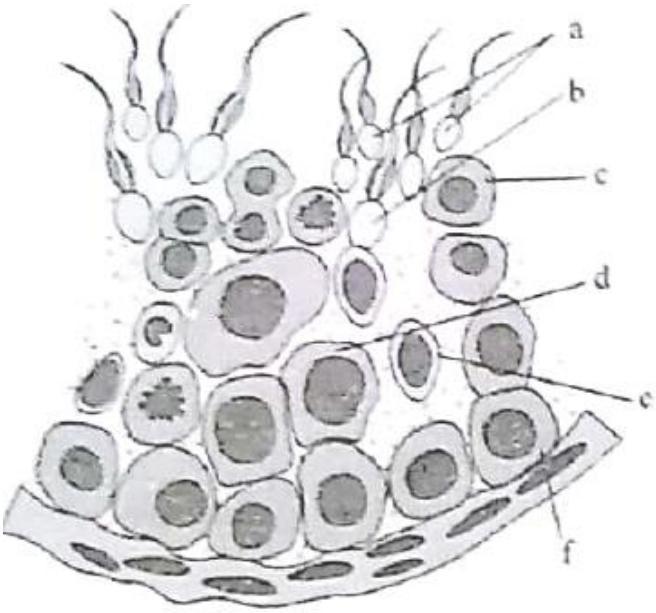
(A) Primary oocyte within primary follicle

(B) Primary oocyte within secondary follicle

(C) Primary oocyte within tertiary follicle

(D) Secondary oocyte within tertiary follicle

69. Recognise the figure and find out the correct matching.



(A) a—spermatozoa, b—spermatid, c—primary spermatocyte, d—secondary spermatocyte, e—spermatogonia, f—Sertoli cell

(B) a—spermatozoa, b—spermatid, d—primary spermatocyte, c—secondary spermatocyte, f—spermatogonia, e—Sertoli cell

(C) b—spermatozoa, a—spermatid, c—primary spermatocyte, d—secondary spermatocyte, e—spermatogonia, f—Sertoli cell

(D) b—spermatozoa, a—spermatid, d—primary spermatocyte, c—secondary spermatocyte, f—spermatogonia, e—Sertoli cell

70. The primary sex organ in males and females respectively are

(A) Testis and ovary

(B) Penis and vagina

(C) Scrotum and mammary gland

(D) Testis and uterus

71. The process of spermatogenesis and oogenesis is started respectively at

(A) Puberty and puberty

(B) Puberty and menopause

(C) Embryonic stage and menarche

(D) Puberty and embryonic stage

72. Spermatogenesis starts at the age of puberty due to significant increase in the secretion of

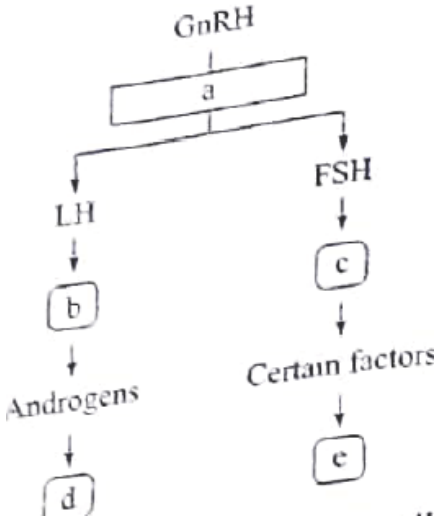
(A) Somatostatin form hypothalamus

(B) GnRH from hypothalamus

(C) GnRH from anterior pitutitary

(D) GnRH from posterior pituitary

73. Recognise the figure and find out the correct matching.



(A) a—anterior pituitary, b—Sertoli cell, c—Leydig cell, d—spermiogenesis, e—spermatogenesis

(B) a—posterior pituitary, b—Leydig cell, c—Sertoli cell, d—spermiogenesis, e—spermatogenesis

(C) a—anterior pituitary, b—Leydig cell, c— Sertoli cell, d—spermiogenesis, e—spermatogenesis

(D) a—anterior pituitary, b—Leydig cell, c— Sertoli cell, d—spermiogenesis, e—spermatogenesis

74. Which produce energy for the movement of tail that facilitate sperm motility essential for fertilisation?

(A) Acrosome

(B) Mitochondria

(C) Nucleus

(D) Head

75. During coitus, the human male ejaculates about

(A) 200 to 400 million sperms

(B) 100 to 200 million sperms

(C) 200 to 300 million sperms

(D) 200 to 300 billion sperms

76. Number of autosomes in human primary spermatocyte is

(A) 22

(B) 23

(C) 44

(D) 46

77. Primary spermatocyte differs from spermatogonium in

(A) Size and volume

(B) Size of chromosomes

(C) DNA content

(D) Number of chromosomes

78. In spermatogenesis, reduction division of chromosomes occurs during conversion of

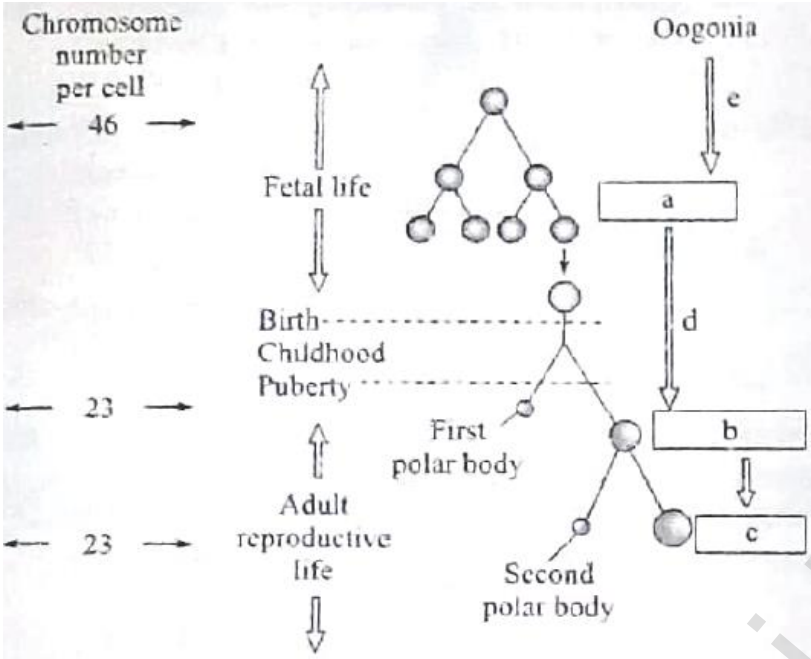
(A) Primary spermatocytes to secondary spermatocytes

(B) Spermatogonia to primary spermatocytes

(C) Spermatids to sperms

(D) Secondary spermatocytes to spermatids

79. Recognise the figure and find out the correct matching.



(A) a—primary oocyte, b—secondary oocyte, c—ovurn, d—second meiotic division, e—first meiotic division

(B) a—primary oocyte, b—secondary oocyte, c—ovurn, d—first meiotic division, e—mitosis differentiation

(C) a—primary oocyte, b—secondary oocyte, c—polar body, d—second meiotic division, d—first meiotic division

(D) a—first polar body, b—second polar body , c—ovurn, d—first meiotic division, e—mitosis differentiation

80. The cavity contained in Graafian follicle is

(A) Antrum

(B) Centrocoel

(C) Blastocoel

(D) Archenteron

81. An egg is released and fertilised b sperm at which stage

(A) Primary oocyte

(B) Secondary oocyte

(C) Oogonium

(D) Ovum

82. Germ cells in female gonad and male gonad begin undergoing meiosis simultaneously. What will be ratio of ove and sperms produced?

(A) 1:1

(B) 1:2

(C) 1:4

(D) 2:1

83. Movement of sperm is by

(A) Head

(B) Acrosome

(C) Middle piece

(D) Tail/flagellum

84. Function of Sertoli cells is controlled by

(A) Estrogen

(B) FSH

(C) Testosterone

(D) ACTH

85. Proximal centriole of sperm is found in

(A) Head

(B) Neek

(C) Middle piece

(D) Tail

86. Release of second polar body from human egg occurs

(A) After entry of sperm

(B) After fertilization

(C) Before sperm entry

(D) With no relation to sperm entry

87. Polar body 15 produced during the formation of

(A) Sperm

(B) Secondary oocyte

(C) Oogonium

(D) Spermatocytes

88. Spermatogoma develop through division

(A) Amitosis

(B) Mitosis

(C) Melosis I

(D) Melosis II

89. A cross section at midpoint of the middle piece of human sperm will show

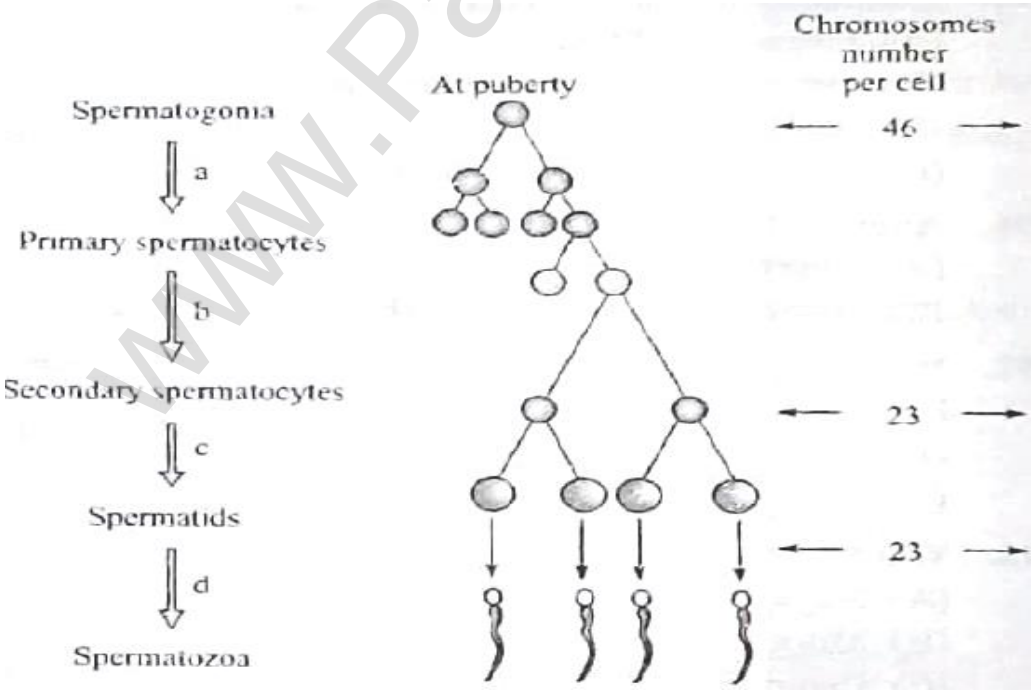
(A) Centriole, mitochondria, 9+2 arrangement of microtubules

(B) Centriole and mitochondria

(C) Mitochondria and 9+2 arrangement of microtubules

(D) 9+2 arrangement of microtubules only

90. Recognise the figure and find out the correct matching.



(A) d—mitosis differentiation, a—first metiotic division, b—second meiotic division, c—differentiation

(B) a—mitosis differentiation, b—first metiotic division, c—second meiotic division, d—differentiation

(C) c—mitosis differentiation, a—first metiotic division, b—second meiotic division, d—differentiation

(D) d—mitosis differentiation, c—first metiotic division, a—second meiotic division, b—differentiation

91. Spermiogenesis/spermateleosis is formation of spermatozoa from

(A) Primary spermatocyte

(B) Secondary spermatocyte

(C) spermatids

(D) Germianl cells of testes

92. Gametes are formed in animals from

(A) Muscular tissue

(B) Nervous tissue

(C) Connective tissue

(D) Epithelial tissue

93. Which is wrong about oogenesis?

(A) Unequal meiotic division

(B) Growth phase

(C) Formation of polar bodies

(D) Equal meiotic division

94. In spermatogenesis, the phase of maturation involves

(A) Growth of spermatogonia into spermatocytes

(B) Formation of spermatogonia from gonocytes through mitosis

(C) Formation of spermatogonia from primary spermatocytes through meiosis

(D) Formation of oogonia from spermatocytes through meiosis.

95. Chromosome number is halved during

(A) Formation of first polar body

(B) Formation of second polar body

(C) Meiosis II

(D) Division of secondary oocyte

96. Atretic follicles occur in

(A) Ovary

(B) Thymus

(C) Testis

(D) Liver

97. Number of chromosomes in secondary oocyte stage in humans is

(A) 23

(B) 46

(C) 18

(D) 20

98. Which is absent in human sperm?

(A) Nucleus

(B) Mitochondria

(C) Centriole

(D) Enadoplasmic reticulum

99. Graafian follicle contains

(A) Many oocytes

(B) Many sperms

(C) A single oocyte

(D) Site for egg fertilisation

100. Estrogen is secreted by

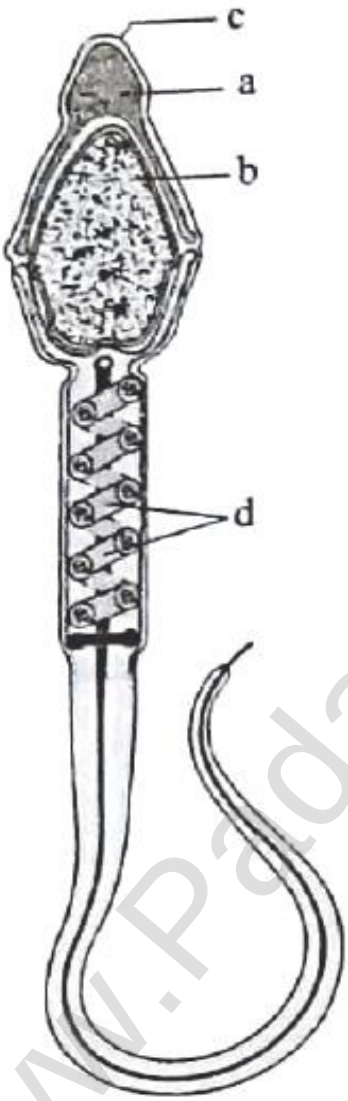
(A) Copus luteum

(B) Membranous granulose of Graafian follicle

(C) Germinal epithelium of ovary

(D) Pituitary

101. Recognise the figure and find out the correct matching.



(A) c—plasma membrane, b—acrosome, a—nucleus, d—mitochondria

(B) a—plasma membrane, b—acrosome, d—nucleus, c—mitochondria

(C) a—plasma membrane, d—acrosome, c—nucleus, b—mitochondria

(D) c—plasma membrane, a—acrosome, b—nucleus, d—mitochondria

102. 50 secondary oocytes in female and 50 secondary sper-matocytes in male give rise to

(A) 50 ova and 100 sperms

(B) 100 ova and 200 sperms

(C) 200 ova and 50 sperms

(D) 100 ova and 100 sperms

103. In a mammalian sperm, spirally arranged mitochondria around an axial filament occurs in

(A) Middle piece (B) Head

(C) End piece of tail (D) Principal price of tail

104. The head of mature mammalian sperm is made of

(A) An acrosome

(B) Elongated nucleus covered by acrosome

(C) Two centrioles and an axial filament

(D) Nucleus, acrosome, cytoplasm and mitochondrial sheath

105. Human sperm was discovered by

(A) Leeuwenhock (B) Aristotle

(C) Graaf (D) Pander

106. What is the total number of polar bodies formed during oogenesis in the ovary?

(A) 4 **(B) 3**

(C) 1 (D) 2

TOPIC 4: Menstrual Cycle

107. Menstrual cycle is characteristic of all female

(A) Man, apes and monkeys (B) Mammals

(C) Primates **(D) Both A and C**

108. The cycle of events starting from one menstruation till the next one is called

(A) Pregnancy (B) Parturition

(B) Implantation **(D) Menstrual cycle**

109. Lack of menstruation may be due to the

(A) Pregnancy (B) Stress

(C) Poor health **(D) All of the above**

110. The correct sequence of phases in the menstrual cycle is

(A) Menstrual phase, follicular phase and luteal phase

(B) Menstrual phase, luteal phase and follicular phase

(C) Menstrual phase, proliferative phase and secretory phase

(D) Both A and C

111. The main cause of the disintegration of the endometrial lining

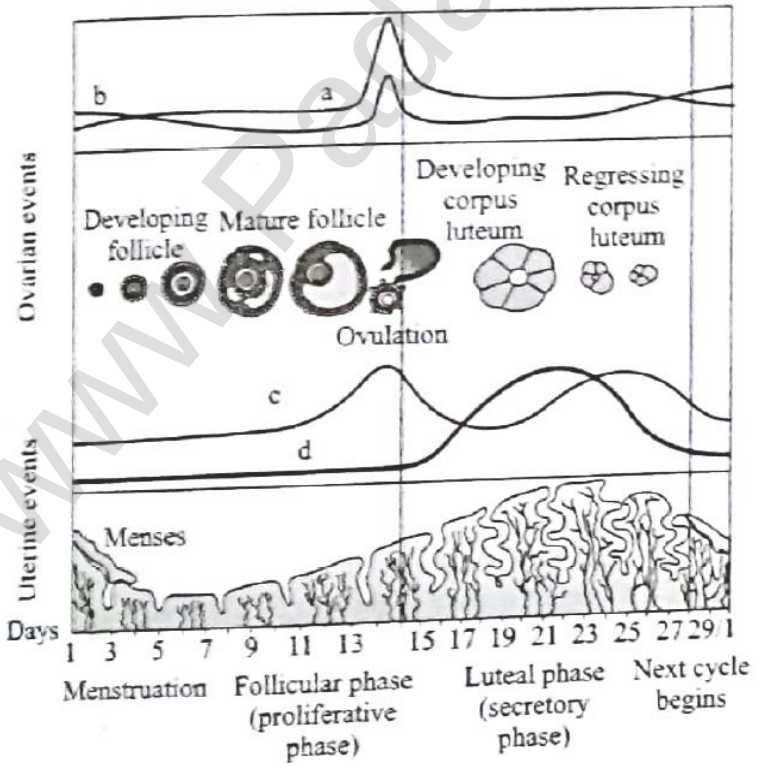
(A) LH surge

(B) Degeneration of corpus luteum

(C) Ovulation during mid-cycle

(D) Implantation leads to pregnancy

112. Recognise the figure and find out the correct matching.



(A) a—LH, b—FSH, c—estrogen, d—progesterone

(B) b—LH, a—FSH, c—estrogen, d—progesterone

(C) c—LH, d—FSH, a—estrogen, b—progesterone

(D) d—LH, c—FSH, b—estrogen, a—progesterone

113. In mammals, the onset of pregnancy causes

(A) Secretion of testosterone

(B) Degeneration of ovary

(C) Inhibition of further ovulation

(d) Inhibition of fertilization

114. Which is correct?

(A) Menstrual cycle is present in all mammals

(B) Menstrual cycle is present in all primates

(C) Estrous cycle occurs in all mammals

(D) Most mammals are ovoviviparous

115. Egg is liberated from ovary in

(A) Secondary oocyte stage

(B) Primary oocyte stage

(C) Oogonial stage

(D) Mature ovum stage

116. In 28 day human ovarian cycle, ovulation occurs on

(A) Day 1 (B) Day 5

(C) Day 14 (D) Day 28

117. In case of non-fertilization, corpus luteum

(A) stops secreting progesterone

(B) Changes to corpus albicans

(C) Starts producing progesterone

(D) None of the above

118. Immediately after ovulation, the mammalian egg is covered by membrane called

(A) Chorion **(B) Zona pellucida**

(C) Corona radiata (D) Vitelline membrane

119. Number of eggs released in the life time of a women is approximately

(A) 40 **(B) 400**

(C) 4000 (D) 20000

120. Secretion of progesterone by corpus luteum is initiated by

(A) MSH **(B) LH**

(C) Testosterone (D) Thyroxine

121. Graafian follicle of ovary secretes

(A) Estrogen (B) Relaxin

(C) Progesterone (D) Cortisone

122. Release of oocytes\ova from ovary is

(A) Gestation **(B) Ovulation**

(C) Parturition (D) Implantation

123. The process of formation of ova is called

(A) Ovulation **(B) Oogenesis**

(C) Oviparity (D) Oviposition

124. Human female reaches menopause at the age of about

(A) 25 years (B) 35 years

(C) 50 years (D) 70 years

125. Phase of menstrual cycle when ovulation occurs in

(A) Luteal (B) Menstrual

(C) Proliferative (D) Secretory

126. Oocyte is liberated from ovary under the influence of LH, after completing

(A) Meiosis and before liberating polar bodies

(B) Meiosis I and before liberating polar bodies

(C) Meiosis I before completion of meiosis II

(D) Meiosis I after release of polar body

127. Corpus luteum occurs in

(A) Uterus (B) Oviduct

(C) Ovary (D) Vagina

128. Hormone responsible for ovulation and development of corpus luteum is

(A) FSH **(B) LH**

(C) LTH (D) ICSH

129. Hormone controlling human menstrual cycle is

(A) Estrogen (B) FSH

(C) LH **(D) All the above**

130. Which is incorrect for human female?

(A) Menstrual cycle takes 28 days

(B) Menopause occurs at 45-55 years

(C) Ovulated egg released during pregnancy die

(D) Menstruation takes 4 days

131. Both corpus lutea and macula lutea are

(A) Found in human ovaries

(B) source of hormones

(C) Characterised by yellow colour

(D) Contributory in maintaining pregnancy

132. Phase of menstrual cycle in human that lasts for 7-8 days is

(A) Follicular phase (B) Ovulatory phase

(C) Luteal phase (D) Menstruation

133. Which of the following does not occurs between 15-28 day of menstrual cycle?

(A) Premenstrual phase (B) Luteal phase

(C) Secretory phase **(D) Proliferative phase**

134. Correct sequence of hormone secretion from beginning of menstruation is

(A) FSH, progesterone, estrogen

(B) Estrogen, FSH, progesterone

(C) FSH, estrogen, progesterone

(D) Estrogen, progesterone, FSH

135. Match the column.

Column-I	Column-II
(a) FSH	1. Prepare endometrium for implantation
(b) LH	2. Develops female secondary sexual characters
(c) Progesterone	3. Contraction of uterine wall
(d) Estrogen	4. Development of corpus luteum
	5. Maturation of Graafian follicle

(A) (a)—5, (b)—4, (c)—1, (d)—2

(B) (a)—4, (b)—5, (c)—2, (d)—1

(C) (a)—4, (b)—3, (c)—2, (d)—5

(D) (a)—5, (b)—1, (c)—2, (d)—4

136. In human female, ovulation occurs during menstrual cycle

(A) At the end of proliferative phase

(B) In the middle of secretory phase

(C) Just before the end of secretory phase

(D) In the beginning of proliferative phase

137. Which is correctly matched in a normal menstrual cycle?

(A) Endometrium regenerates—5 to 10 days

(B) Release of egg —5th day

(C) Endometrium secretes nutrients for implantation —11 to 18 days

(D) Rise in progesterone level —1 to 15 days

138. If mammahan ovum fails to get fertilized, which of the following is unlikely?

(A) Corpus lutcum will disintegrate

(B) Primary follicle starts developing

(C) Progesterone secretion rapidly declines

(D) Estrogen secretion further decreases

139. At menopause there is rise in urinary excretion of

(A) FSH

(B) STH

(C) MSH

(D) LH

140. Withdrawal of which hormone is the immediate cause of menstruation

(A) Estrogen

(B) FSH

(C) FSH-RH

(D) Progesterone

141. Which hormone level reaches peak during luteal phase of menstrual cycle?

(A) Luteinising hormone

(B) Progesterone

(C) Follicle stimulating hormone

(D) Estrogen

142. Disintegration of corpus luteum occurs due to inhibition of secretion of hormone

(A) LTH

(B) FSH

(C) Progesterone

(D) LH

143. Level of estrogen and progesterone are minimum at the time of

(A) Follicular phase

(B) Ovulation

(C) Secretory phase

(D) Onset of menstrual phase

144. Arrange the events in human females reproductive cycle

a—Secretion of FSH, b—Growth of copus lutsum,

c—Growth of follicle and oogenesis, d—Ovulation,

e—Sudden increase in level of LH

(A) a – c – e – d – b

(B) c – a – d – b – c

(C) a – d – c – e – b

(D) b – a – c – d – e

145. What is false?

(A) Menarche is beginning of menstruation

(B) Menstruation is shedding of endometrial lining

(C) Menopause occurs in the beginning of puberty

(D) Ovulation occurs under high titre of LH

TOPIC 5: Fertilisation and Implantation

146. A temporary endocrine gland in humans is

(A) Islets of Langerhans

(B) Pincal body

(C) Corpus luteum

(D) Corpus allata

147. Fertilization membrane is formed to

(A) Eacilitate entry of sperm into egg

(B) Provide stability to egg

(C) Prevent monospermy

(D) Prevent polyspermy

148. Fertilizin is

(A) Phospholipid

(B) Steroid

(C) Carbohydrate

(D) Glycoprotcin

149. Sperm of animal species a connot fertilise ovum species b because

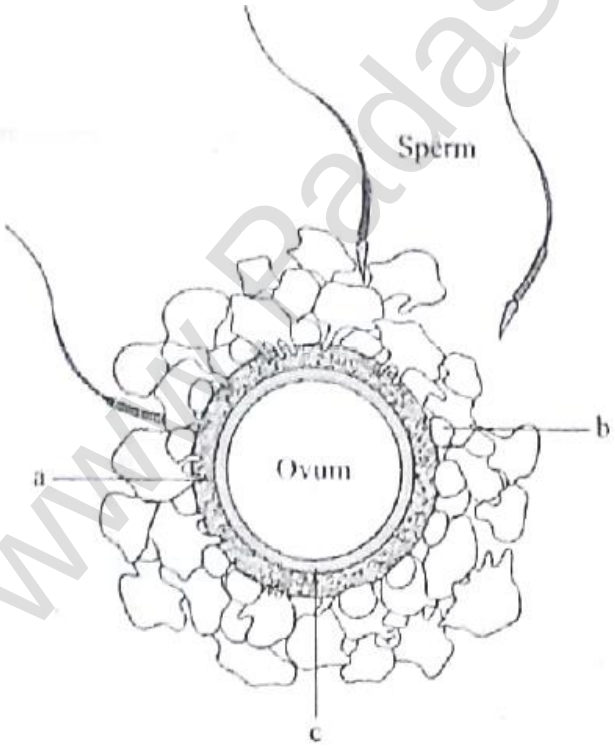
(A) Fertilize of a and b are not compatible

(B) Antifertilize of a and b are not compatible

(C) Fertilize of a and Anti fertilize of b are not compatible

(D) Anti fertilize of a and fertilize of b are not compatible

150. Recognise the figure and find out the correct matching.



(A) a—cells of corona radiate, b—zone pellucid, c—perivitelline space

(B) c—cells of corona radiate, a—zone pellucid, b—perivitelline space

(C) b—cells of corona radiate, c—zone pellucid, a—perivitelline space

(D) b—cells of corona radiate, a—zone pellucid, c—perivitelline space

151. Animals with cleidoic eggs show

(A) External fertilization, internal development

(B) Internal fertilization, internal development

(C) External fertilization, external development

(D) Internal fertilization, external development

152. Stage of embryo development at which implantation occurs in human female is

(A) Morula

(B) Zygote

(C) Blastocyst

(D) Neurula

153. In the absence of acrosome the sperm

(A) Cannot penetrate the egg

(B) Cannot get food

(C) Cannot get energy

(D) Cannot swim

154. Mammalian blastula is know as

(A) Trophoderm

(B) Blastocyst

(C) Foetal blastula

(D) Oedema

155. Sperms produce an enzymatic substance or lysine for dissolving egg coverings. It is called

(A) Hyaluronic acid

(B) Hyaluronidase

(C) Androgamone

(D) Macrolecithal

156. Hormone that prepares and maintains the uterus during pregnancy is produced by

(A) Corpus albican

(B) Corpus lutcum

(C) Graafian follicles

(D) Corpora cardiac

157. Capacitation of sperms occurs in

(A) Female genital tract

(B) Vagina

(C) Vas efferens

(D) Vas deferens

158. Cytoplasm of ovum does not possess

(A) Golgi complex

(B) Mitochondria

(C) Centrosome

(D) Ribosomes

159. Which secretions are produced by spermatozoa at the time of fertilization?

(A) Fertilize and spermlysin

(B) Only spermlysin

(C) Fertilizin and antifertillizin

(D) Antifertilizin and spemlysin

160. Which chemical of the egg attracts and holds sperm?

(A) Fertilizin

(B) Antifertilizin

(C) Agglutin

(D) Antiagglutin

161. Fertilization was discovered by

(A) Strasburger

(B) Robert Brown

(C) Lamarck

(D) Darwin

162. Pregnancy begins with implantation of

(A) Embryo

(B) Fertilized ovum

(C) Blastopore

(D) Blastocyst

163. Grey crescent is the area

(A) At the point of entry of sperm into ovum

(B) At the animal pole

(C) Just opposite the site of entry of sperm into ovum

(D) At the vegetal pole

164. Sperm enters the egg from

(A) Animal pole

(B) Vegetal pole

(C) Micropyle

(D) Megapyle

165. A cell formed from cleavage is called

(A) Blastomere

(B) Blastopore

(C) Blastula

(D) Morula

166. Solid ball like structure formed after completion of cleavage is

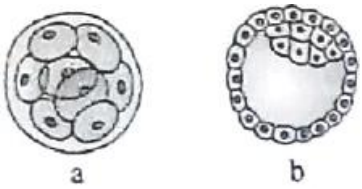
(A) Blastula

(B) Morula

(C) Gastrula

(D) Neural plate

167. Recognise the figure and find out the correct matching.



(A) a—morula, b—blastocyst

(B) a—blastocyst, b—morula

(C) a—blastocyst, b—gastrula

(D) a—morula, b—gastrula

168. Thick/follicular cells surrounding oocyte in Graffian follicle belong to

(A) Zone pellucida

(B) Corona radiata

(C) Zone vesiculosa

(D) Membrana granulosa.

169. Part of sperm that passes into ovum is

(A) Tail

(B) Acrosome

(C) Head

(D) Head, neck and middle piece

170. Release of seminal fluid in the vagina of female is

(A) Ejaculation

(B) Implantation

(C) Insemination

(D) Copulation

171. Site of fertilization in a mammal is

(A) Ovary

(B) Uterus

(C) Vagina

(D) Fallopian tube

172. Fertilised ovum is transplanted is uterus after

(A) 1 day

(B) 7 days

(C) 8 days

(D) 10 days

173. Preparation of sperm before penetration of ovum is

(A) Spermation

(B) Coition

(C) Insemination

(D) Capacitation

174. Cleavage in the fertilised egg of humans

(A) Starts in uterus

(B) Is meroblastic

(C) Starts when egg is in fallopian tube

(D) Is discoidal

175. A change in ovum after penetration of sperm is

(A) Formation of first polar body

(B) Second meiosis

(C) First meiosis

(D) Formation of pronuclei

176. Fertilization is fusion of

(A) Diploid spermatozoan with diploid ovum to form diploid zygote

(B) Haploid spermatozoan with diploid ovum to form diploid zygote

(C) Diploid spermatozoan with haploid ovum to form diploid zygote

(D) Haploid spermatozoan with haploid ovum to form diploid zygote

177. Type of cleavage in an egg is determined by

(A) Amount and distribution of yolk

(B) Number of egg membranes

(C) Size and location of nucleus

(D) Shape and size of sperm

178. Extrusion of second polar body from egg nucleus occurs

(A) After entry of sperm before completion of fertilization

(B) After completion of fertilization

(C) Before entry of sperm

(D) Without any relation of sperm entry

179. Enzyme hayluronidase is synthesised in

(A) Head of sperm

(B) Golgi bodies of acrosome

(C) Lysosome of acrosome

(D) Tail of sperm

TOPIC 6: Pregnancy and embryonic Development

180. Human placenta is formed by

(A) Chorionic villi

(B) Umbilical cord

(C) Uterine tissue

(D) Both A and C

181. The structural and functional unit between developing embryo (foetus) and maternal body is called

(A) Parturition

(B) Umbilical cord

(C) Placenta

(D) Chorionic villi

182. The gestation period in human is a

(A) 9 months

(B) 365 days

(C) 265 days

(D) Both A and C

183. Fill in the blanks:

1. By the end of the ...a... of pregnancy, the foetus develops limbs and digits.
2. By the end of ...b..., the body is covered with fine hair, eye—lids separate and eyelashes are formed.
3. After ...c... of pregnancy, the embryos heart is formed.

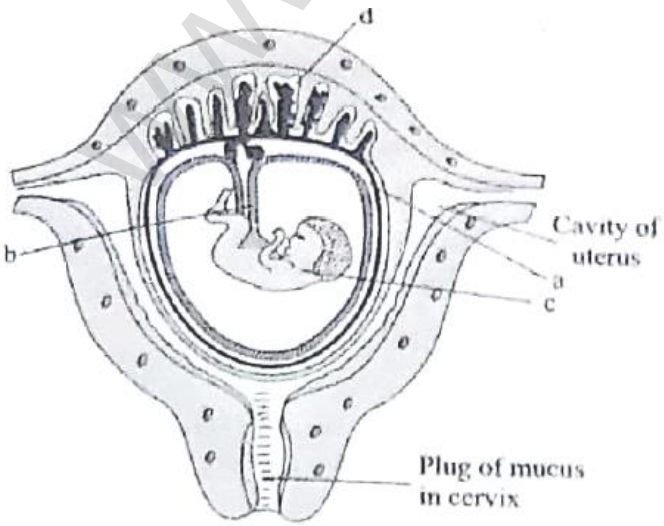
(A) a—first month, b—second month, c—first trimester

(B) a— second month, b— first trimester, c—first month

(C) a— second month, b— second trimester, c—first trimester

(D) a— second month, b— second trimester, c—first month

184. Recognise the figure and find out the correct matching.



(A) c—embryo, d—placental villi, a—yolk sac, b—umbilical cord

(B) c—embryo, a—placental villi, b—yolk sac, d—umbilical cord

(C) b—embryo, d—placental villi, a—yolk sac, c—umbilical cord

(D) c—embryo, a—placental villi, d—yolk sac, b—umbilical cord

185. Fill in the blanks:

a. Zygote divides to form ...1... which is implanted to uterus.
b. The structure which provides vascular connection between foctus and uterus is called ...2...
c. Inner cell mass contain certain cells called ...3... which have the potency to give rise to all the tissues and organs.
d. By the end of ...4... most of the major organ systems are formed, for example, the limbs and external genital organs are well-developed.
e. Immediately after implantation, the ...5. differentiates into an outer layer called ectoderm and an inner layer called endoderm.

(A) 1—morula, 2—umbilical cord, 3—trophoblast, 4—second trimester, 5—stem cells

(B) 1 – blastocyst, 2 – placenta, 3 – stem cells, 4 – first trimester, 5 – trophoblast

(C) 1 – blastocyst, 2 – umbilical cord, 3 – stem cells, 4 – second trimesters, 5 – inner cell mass

(D) 1 – blastocyst, 2 – placenta, 3 – stem cells, 4 – first trimester, 5 – inner cell mass.

186. Which is urinary bladder of child in womb?

(A) Urinary bladder

(B) Liver

(C) Allantois

(D) Amnion

187. Vascular and excretory organs are formed from

(A) Endoderm

(B) Mesoderm

(C) Ectoderm

(D) Mesendoderm

188. In development, Eustachian tube is

(A) Ectodermal

(B) Mesodermal

(C) Endodermal

(D) Both mesodermal and endodermal

189. Gonads/testes develop from embryonic

(A) Ectoderm

(B) Endoderm

(C) Mesoderm

(D) Bothe mesoderm and endoderm

190. Gastrula end stage is characterised by

(A) End of Blastocoel

(B) Blastopore

(C) Formation of neural tube

(D) End of archenteron

191. Termination of gastrulation is indicated by

(A) Obliteration of blastocoel

(B) Obliteration of archenteron

(C) Closure of blastopore

(D) Closure of neural tube

192. In mammals, the archenter on/primitive gut is lined with

(A) Ectoderm

(B) Mesoderm

(C) Endoderm

(D) Mesoderm and endoderm

193. Vascular tissue is derived from

(A) Epithelium

(B) Ectoderm

(C) All germinal layers

(D) Mesoderm

194. Foctal membrane that provides the first blood corpuscle for circulation in embryo is

(A) Trophoblast

(B) Yolk sac

(C) Amnion

(D) Chorion

195. Which one is not formed from ectoderm?

(A) Notochord

(B) Epidermis

(C) Internal car

(D) Branchial arches

196. When do the three germinal layers differentiate?

(A) Blastula

(B) Gastrula

(C) Cleavage

(D) Fertilization

197. Villi of human placenta develop from

(A) Chorion

(B) Allantois

(C) Yolk sac

(D) Both A and B

198. Correct sequence in development is

(A) Fertilization → Zygote → Cleavage → Morula → Blastula → Gastrula

(B) Fertilization → Zygote → Blastula → Morula → Cleavage → Gastrula

(C) Fertilization → Cleavage → Morula → Zygote → Blastula → Gastrula

(D) Cleavage → Zygote → Fertilization → Morula → Blastula → Gastrula

199. Eye develop% from

(A) Eetoderm

(B) Mesoderm

(C) Endoderm

(D) Both A and B

200. Retina, eye lens, brain and skin are formed from

(A) Mesoderm

(B) Ectoderm

(C) Endoderm

(D) Both ectoderm and endoderm

201. Ammotic fluid protects the foetus from

(A) Shock

(B) Encystment

(C) Degeneration

(D) Disease

202. Intestine develops from

(A) Eetoderm

(B) Endoderm

(C) Mesoderm

(D) Pharyngeal pouch

203. Germinal layer formed from trophoblast of mammalian blastoeyst is

(A) Ectoderm

(B) Endoderm

(C) Mesoderm

(D) None of the above

204. Which one develops from endoderm?

(A) Nervous system, urmary bladder and eye

(B) Liver, connective tissue and heart

(C) Thymus, spinal cord and brain

(D) Liver, pancreas and thymus/thyroid

205. In higher animals blastopore generally forms

(A) Anus

(B) Mouth

(C) Liver

(D) Gut

206. In deuterostomes second opening forms

(A) Anus

(B) Mouth

(C) Nose

(D) Both A and B

207. Cavity of gastrula is

(A) Coclom

(B) Blastococl

(C) Archenteron

(D) Chorion

208. Gastrulation comprises

(A) Morphogenetic movements

(B) Differentiation of archenteron

(C) Differentiation of three germ layers

(D) All the above

209. Inhibin is produced by

(A) Corpus luteum

(B) Testis

(C) Placenta

(D) All the above

210. Ectoderm forms

(A) Sweat glands

(B) Nervous system

(C) Lens of eye

(D) All the above

211. Extra structure that provides nutrition to embryo is

(A) Umbilicus

(B) Amnion

(C) Chorion

(D) Placenta

212. Which are derivatives of endoderm?

(A) Muscles and blood

(B) Alimentary canal and respiratory organs

(C) Excretory and reproductive organs

(D) Skin and nerve cord

213. Attachment of foetus to placenta occurs through

(A) Chorda mesoderm

(B) Spinal cord

(C) Umbilical cord

(D) Notochord

214. Mesoderm is formed through invagination of

(A) Ectoderm

(B) Endoderm

(C) Inner mass of cells

(D) Primitive streak

215. Which hormones is produced in women during pregnancy?

(A) Human chorionic gonadotropin (hCG)

(B) Relaxin

(C) Human placental lactogen (hPL)

(D) All the above

216. Correct sequence of human embryonic development is

(A) Gastrocoel Blaslococl Neural Crest Notochord

(B) Gastrocoel Blastocoel Notochord Neural Crest

(C) Blastocoel Neural Crest Gastrocoel Notochord

(D) Blastocoel Gastroccoel Neural Crest Notochord

TOPIC 7: Parturition and Lactation

217. Read the following statements and find out the incorrect statement.

(a) Androgens are produced by Sertoli cells
(b) Spermatozoa get nutrition from Sertoli cells
(c) Leydig cells are found in ovary
(d) Leydig cells synthesise androgens

(e) Oogenesis takes place in corpus luteum
(f) Menstrual cycle ceases during pregnancy
(g) Presence or absence of hymen is not a reliable indicator of virgmity or sexual experience

(A) a, c and e

(B) b, d, f and g

(C) a, b, c and e

(D) a, c, e and g

218. Match the columns:

Column-I		Column-II
a.	Parturition	p. Attachment of zygote to endometrium
b.	Gestation	q. Release of egg from Graafian follicle.
c.	Ovulation	r. Delivery of baby from uterus
d.	Implantation	e. Duration between pregnancy and birth
e.	Conception	f. Formation of zygote by fusion of egg and sperm
		h. Stoppage of ovulation and menstruation

(A) a—q, b—s, c—p, d—t, e—r

(B) a—r, b—r, c—p, d—t, e—q

(C) a—r, b—s, c—q, d—p, e—t

(D) a—r, b—s, c—q, d—p, e—t

219. The mammary glands of the female undergo differentiation during pregnancy and starts producing milk towards the end of pregnancy by the process called

(A) Parturition

(B) Gestation

(C) Lactation

(D) Colostrum

220. Match the columns:

Column-I		Column-II
(a)	Hyaluronidase	(i) Acrosomal reaction
(b)	Corpus hriteum	(ii) Morphogenetic movements
(c)	Gastrulation	(iii) Progesterone
(d)	Capacitation	(iv) Mammary glands
(e)	Colostrum	(v) Sperm activation

(A) a—v, b—ii, c—iv, d—i, e—iii

(B) a—i, b—iii, c—ii, d—v, e—iv

(C) a—iii, b—ii, c—v, d—iv, e—i

(D) a—iv, b—ii, c—v, d—iii, e—i

221. Thick yellow, high protein fluid produced by mammary glands of a women during first 2-3 days after child birth is

(A) Meconium

(B) Hymen

(C) Cumulus oophorus

(D) Colostrum

222. Match the columns and find the correct combination:

Column-I	Column-II
a. Hypothalamus	1. Sperm lysins
b. Acrosome	2. Estrogen
c. Graafian follicile	3. Relaxin
d. Leydig cells	4. GnRH
e. Parturition	5. Testosterone

(A) a—2, b—1, c—4, d—3, e—5

(B) a—4, b—1, c—2, d—5, e—3

(C) a—2, b—1, c—5, d—4, e—3

(D) a—4, b—1, c—2, d—3, e—5

223. Delivery of developed foetus is

(A) Ovulation

(B) Oviposition

(C) Parturition

(D) Abortion

224. Match the columns:

Column-I	Column-II
a. Oxytocin	p. Stimulates ovulation
b. Prolactin	q. Implantation and maintenance of pregnancy

c. Luteinising hormone
d. Progesterone

r. Lactation after child birth
s. Uterine contraction during labour
t. Reabsorption of water by nephrons

(A) a—s, b—r, c—p, d—q,

(B) a—s, b—r, c—p, d—s,

(C) a—s, b—q, c—r, d—t,

(D) a—t, b—p, c—s, d—r,