

GPLUS EDUCATION

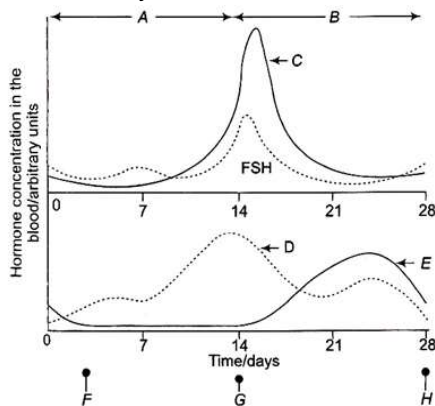
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BIOLOGY

HUMAN REPRODUCTION

Single Correct Answer Type

- Milk secreted from the cells of alveoli of mammary lobes reaches to the nipple by Lactiferous duct (L), Mammary duct (M), mammary Tubule (T) and mammary Ampulla (A) in following order
a) T A M L b) T M A L c) M T A L d) A T M L
- The diagram shows some of the changes in blood hormone concentration which occur during the menstrual cycle. Match A,B,C,D,E,F,G and H of graph with the hormones and events given below



Hormones and Events

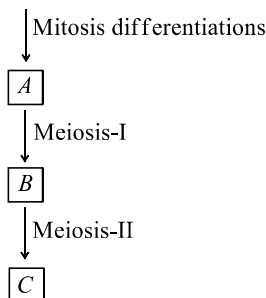
- I. Oestrogen
- II. Ovulation
- III. Repair of endometrium
- IV. Luteinizing hormone
- V. Menstruation
- VI. Luteal phase
- VII. Progesterone
- VIII. Ovarian phase

- | | |
|---|---|
| a) I-H, II-G, III-F, IV-E, V-D, VI-C, VII-B, VIII-A | b) I-D, II-E, III-F, IV-G, V-H, VI-A, VII-C, VIII-C |
| c) I-D, II-G, III-F, IV-C, V-H, VI-B, VII-E, VIII-A | d) I-A, II-C, III-E, IV-G, V-H, VI-F, VII-D, VIII-B |
- In frog, gastrulation process involves
a) Epiboly b) Emboly c) Invagination d) All of these
 - Name the most important hormone which causes the uterine contraction strongly
a) Oxytocin b) Inhibin c) Protection d) Progesterone
 - Correct sequence of hormone from beginning of menstrual cycle to the end is
a) FSH, progesterone, LH b) Oestrogen, FSH and progesterone
c) FSH, oestrogen, progesterone d) Oestrogen, progesterone, FSH
 - Which of the following is incorrectly matched?
a) Rabbit – Microlecithal, isolecithal b) Frog – Mesolecithal, telolecithal
c) Human – Mesolecithal, centrolecithal d) Birds – Macrolecithal, telolecithal
 - Capacitation takes place in
a) 12 hrs b) 10 hrs c) 8 hrs d) 6 hrs
 - Grey crescent is the area
a) At the point of entry of sperm into ovum
b) Just opposite to the site of entry of sperm into ovum
c) At the animal pole

- d) At the vegetal pole
9. Both corpus luteum and macula lutea are
 a) Found in human ovaries
 b) A source of hormones
 c) Characterized by a yellow colour
 d) Contributory in maintaining pregnancy
10. A cross section at the midpoint of the middle piece of a human sperm will show
 a) Centriole, mitochondria and 9+2 arrangement of microtubules
 b) Centriole and mitochondria
 c) mitochondria and 9+2 arrangement of microtubules
 d) 9+2 arrangement of microtubules only
11. Fertilization is
 a) Fusion of male and female gametes
 b) Fission of male and female gametes
 c) Formation of gametes
 d) Formation of embryo
12. Cleavage is
 a) Meiosis of zygote into blastomeres
 b) Mitosis of zygote into blastomeres
 c) Reductional division of zygote
 d) Reductional division of embryo
13. How many phases (stages) are there in menstrual cycle?
 a) 2
 b) 6
 c) 4
 d) 5
14. Rapid secretion of LH in ovulation causes
 a) Repturing of Graafian follicle
 b) Releasing of ova
 c) Ovulation
 d) All of the above
15. The phase of menstrual cycle in humans that lasts for 7-8 days, is
 a) Follicular phase
 b) Ovulatory phase
 c) Luteal phase
 d) Menstruation
16. Correct sequence in development is
 a) Fertilization → zygote → cleavage → morula → blastula → gastrula
 b) Fertilization → zygotes → blastula → cleavage → gastrula
 c) Fertilization → cleavage → morula → zygote → blastula
 d) cleavage → zygote → morula → zygote → blastula
17. Fertilization of ovum takes place in rabbit, man and other placental mammals in
 a) Ovary
 b) Fallopian tube
 c) Cervix
 d) Uterus
18. Placenta acts as an
 a) Endocrine gland
 b) Exocrine gland
 c) Apocrine gland
 d) Merocrine gland
19. Extraembryonic membranes, chorion and amnion are formed by
 a) Inner mass cells
 b) Trophoblast
 c) Both (a) and (b)
 d) None of these
20. Extraembryonic membranes are also called
 a) Foetal membranes
 b) Embryonic membranes
 c) Outer membranes
 d) Inner membranes
21. Capacitation of sperm occurs in
 a) Female genital tract
 b) Vas deferens
 c) Vas efferens
 d) Vagina
22. Temporary storage of sperms takes place in
 a) Vasa deferentia
 b) Vasa efferentia
 c) Epididymis
 d) Rete testis
23. The immediate cause of induction of ovulation in female is the large plasma surge of
 a) Progesterone
 b) Oestriadiol
 c) LH
 d) FSH
24. Which hormone level increases in the luteal phase?
 a) LH
 b) Progesterone
 c) Testosterone
 d) FSH
25. Process of maturation and development of sperm is called
 a) Oogenesis
 b) Spermatogenesis
 c) Spermiogenesis
 d) None of these
26. The collective term used for acrosomal chemicals is
 a) Sperm living
 b) Sperm lysins
 c) Pectinase
 d) Cellulase
27. Which of the following structures are derivatives of the endoderm?

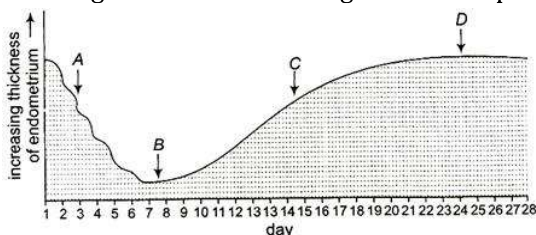
- a) Alimentary canal and respiratory structure b) Muscles and blood
 c) Excretory and reproductive structure d) Skin and nerve cord
28. Graafian follicle contains
 a) Oogaonial cells b) Corpus luteum
 c) Theca externa and theca interna d) Corpus albicans
29. If mammalian ovum fails to get fertilized, which one of the following is unlikely?
 a) Corpus luteum will disintegrate b) Oestrogen secretion further decreases
 c) Primary follicle starts developing d) Progesterone secretion rapidly declines
30. Identify *A*, *B* and *C* in the following figure

Spermatogonium

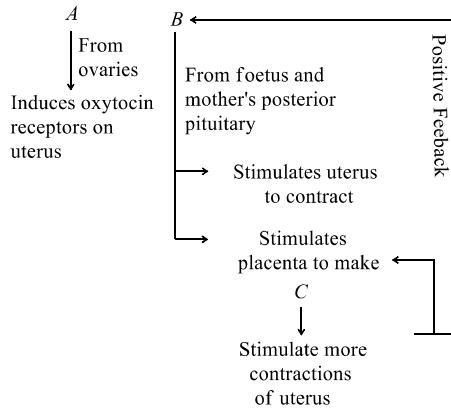


- a) A-Secondary spermatocytes, B-Primary spermatocytes, C-Spermatids b) A-Spermatids, B-Primary spermatocytes, C-Spermatocytes
 c) A-Spermatids, B-Secondary spermatocytes, C-Primary spermatocytes d) A-Primary spermatocytes, B-Secondary spermatocytes, C-Spermatids
31. Which is regarded as urinary bladder of embryo?
 a) Amnion b) Allantois c) Chorion d) Yolk sac
32. Each ovary is about 2-4 cm in length connected to the ...A... wall by ...B... Each ovary is covered by a thin epithelium which encloses the ovarian stroma. Stroma is divided into two zones ...C... and ...D...
 Fill the suitable choices for A to D
 a) A-inner medulla, B-peripheral cortex, C-ligament, D-pelvic wall
 b) A- pelvic, B- ligament, C- peripheral cortex, D- inner medulla
 c) A- pelvic, B-peripheral cortex, C-ligament, D- inner medulla
 d) A-inner medulla, B-peripheral cortex, C-ligament, D-pelvic wall
33. The female structures that corresponds (homologous) to the scrotum of the male are
 a) Labia Minora b) Labia majora c) Clitoris d) Urethral folds
34. Which part of ovary in mammals acts as an endocrine gland after ovulation
 a) Graafian follicle b) Stroma c) Germinal epithelium d) Vitelline membrane
35. According to which theory, ageing is due to accumulation of harmful protein?
 a) Error catastrophe b) Free radicle c) Cross linking d) Somatic mutation
36. Vasa efferentia are the ductules leading from
 a) Testicular lobules to rete testis b) rete testes to vas deferens
 c) Vas deferens to epididymis d) Epididymis to urethra
37. Hormone injected by doctors to induce delivery is
 a) Inhibin b) Oxytocin c) Oestrogen d) Prolactin
38. Which one of the following is the most likely reason of not occurring regular menstruation cycle in females?
 a) Fertilization of the ovum b) Maintenance of the hypertrophical endometrial lining
 c) Maintenance of high concentration of sex-hormones in the blood stream d) Retention of well-developed corpus luteum
39. Corpus luteum release

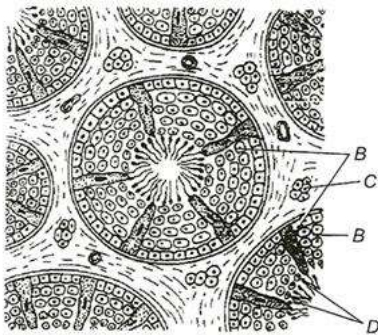
- a) Oestrogen b) Progesterone c) Both (a) and (b) d) Androgen
40. In the human female, menstruation can be deferred by the administration of
 a) LH only b) Combination of FSH and LH
 c) Combination of oestrogen and progesterone d) FSH only
41. Which of the following embryonic-membrane structure is excretory in function?
 a) Amnion b) Allantois c) Yolk sac d) Vitelline chorion
42. I. Sperm cells immediately when they are released from the body and are placed in a petri plate.
 II. Semen contains chemicals that causes females smooth muscles to contract
 a) Statement I is true, but II is false b) Both statements I and II are false
 c) Statement I is false, but II is true d) Both statements are true
43. The diagram shows the changes that take place in the endometrium during a normal menstruation



- a) A-ovulation; B-menstruation b) A-ovulation; C-menstruation
 c) C-ovulation; A-menstruation d) B-ovulation; D-menstruation
44. Sertoli's cells are found in
 a) Ovaries and secrete progesterone b) Adrenal cortex and secrete adrenaline
 c) Seminiferous tubules and provide nutrition to germ cells d) Pancreas and secrete cholecystokinin
45. Ovum receives the sperm in the region of
 a) Animal pole b) Vegetal pole c) Equator d) Pigmented area
46. hCS (Human Chorionic Somatomammotrophin) previously called
 a) Human placental lactogen (hPL) b) Chorionic thyrotrophin
 c) Chorionic corticotropin d) Relaxin
47. Women who consumed the drug thalidomide for relief from vomiting during early months of pregnancy gave birth to children with
 a) No spleen b) Hare-lip
 c) Extra fingers and toes d) Under developed limbs
48. Which of the following is not correct for gastrulation?
 a) Archenteron is formed b) All germinal layers are formed
 c) Morphogenetic movements d) Some blastomeres and blastocoel degenerate
49. Release of semen by penis into vagina during copulation (coitus) is called
 a) Insemination b) Fertilisation c) Zygote d) Gametogenesis
50. Temperature of human testis is
 a) 2-2.5 below body temperature b) 38°C
 c) 33°C d) 2.25 above body temperature
51. Follicular phase is also called
 a) Secretory phase b) Luteal phase c) Proliferative phase d) Menstrual phase
52. Name A, B, C hormones in the given figure

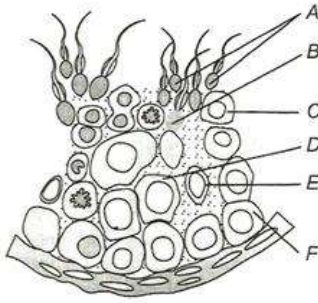


- a) A-Prostaglandin, B-Oxytocin, C-Oestrogen
 b) A- Oestrogen, B-Oxytocin, C- Prostaglandin
 c) A- Oestrogen, B- Prostaglandin, C- Oxytocin
 d) A-Prostaglandin, B- Oestrogen, C- Oxytocin
53. The vasa efferentia leave the testis and opens into the ...A..., located along the ...B... surface. Here A and B refers to
 a) A-rete testis; B-epididymis
 b) A-epididymis; B- rete testis
 c) A-epididymis; B-posterior
 d) A-epididymis; B-anterior
54. Where do sperms get matured?
 a) In seminal vesicle
 b) Seminiferous tubules
 c) In epididymis
 d) Vasa efferentia
55. Sertoli cells are also called
 a) Subtentacular cells b) Sperm cells c) Interstitial cells d) Leyding cells
56. Given below the diagram refers to the TS of testis showing sectional view of a few seminiferous tubules

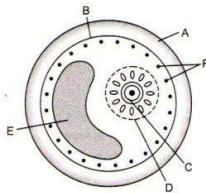


- a) A-Sertoli cells, B-Secondary spermatocyte, C-Interstitial cells, D-Sperms
 b) A-Interstitial cells, B-Spermatogonia, C-Sertoli cells, D-Sperms
 c) A-Sertoli cells, B-Spermatozoa, C-Interstitial cells, D-Sperms
 d) A-Sertoli cells, B- Spermatogonia, C-Interstitial cells, D-Sperms
57. Lobules contain cluster of cells called ...A... which secretes ...B.... Alveoli opens into mammary tubules, which joins to formC...
 A, B and C here, refers to
 a) A-milk, B-alveoli, C-mammary duct
 b) A- mammary duct, B- milk, C- alveoli
 c) A- mammary duct, B- milk, C- alveoli
 d) A- alveoli, B- milk, C-mammary duct
58. Female pronucleus is
 a) Cytoplasm of ovum
 b) Nucleus of ovum
 c) Nucleus of quaternary oocyte
 d) Both (b) and (c)
59. Correct statement with reference to a test tube bay is

- a) The fertilized egg is placed in the womb of the mother where the gastrula period is completed
b) Unfertilized egg is placed in the womb and allowed to grow parthenogenetically
c) A prematurely born baby is reared in an incubator
d) Fertilized egg is taken out and grown in a large test tube
60. Ovum is
a) Secondary oocyte b) Primary oocyte c) Tertiary oocyte d) None of these
61. Sperm lysins contains
a) Hyaluronidase
b) Corona penetrating enzyme
c) Acrosin
d) All of the above
62. The seminal plasma along with the sperm is called
a) Spermatid b) Spermatozoa c) Semen d) All of these
63. The superior portion of the uterus is
a) Body b) Cervix c) Fundus d) Infundibulum
64. hCG (Human Chorionic Gonado trophin) and hPL (Human Placental Lactogen) are released
a) Before pregnancy
b) During pregnancy
c) At parturition
d) During lactating stage
65. Process of delivery of the foetus is called
a) Parturition b) Implantation c) Fertilization d) Lactation
66. At which stage of the cell cycle, secondary oocyte gets arrested before pregnancy?
a) Anaphase-I b) Prophase-II c) Metaphase-III d) Telohase-I
67. Lactation produces milk
a) Towards the end of pregnancy b) Towards the beginning pregnancy
c) Towards the beginning of puberty d) Through out the life cycle
68. Which one of the following statements with regard to embryonic development in humans is correct?
a) Cleavage divisions bring about considerable increase in the mass of protoplasm
b) In the second cleavage division, one of the two blastomeres usually divides a little sooner than the second
c) With more cleavage divisions, the resultant blastomeres become larger and larger
d) Cleavage division results in a hollow ball of cells called morula
69. Which of the following hormones is not a secretory product of human placenta?
a) Human chorionic gonadotropin b) Prolactin
c) Oestrogen d) Progesterone
70. Hyaluronidase acts on ground tissue of ...A... cells. Corona penetrating enzyme dissolves the ...B... and zonolysin dissolve the ...C... . Here A, B and C refers to
a) A-follicle, B-corona radiata, C-zona pellucida
b) A- zona pellucida, B-corona radiata, C- follicle
c) A-follicle, B- zona pellucida, C-zona radiata
d) A- corona radiata, B- zona pellucida, C- follicle
71. The corpus luteum secretes progesterone which negatively feeds back and inhibits the release of
a) ABP and ICSH b) LH and ICSH c) LH and FSH d) FSH and TSH
72. Find out spermatid and Sertoli cell in given diagram



- a) D to E b) E to F c) A to C d) B to E
73. During embryonic development, endoskeleton and muscle develop from which germinal layer?
 a) Ectoderm b) Endoderm c) Mesoderm d) Blastopore
74. Eggs which have yolk in the centre surrounded by cytoplasm are called
 a) Centrolecithal b) Homolecithal c) Microlecithal d) Alecithal
75. Whether a child died after normal birth or died before birth can be confirmed by measuring
 a) Tidal volume of air b) Residual volume of air
 c) The weight of the child d) The dead space air
76. The movement of spermatozoa, from the epididymal duct and seminal fluid into the ejaculatory duct to urethra is under the control of
 a) Parasympathetic and sympathetic nerve
 b) Parasympathetic nerve only
 c) Sometimes sympathetic and sometimes parasympathetic nerves
 d) Sympathetic nerve only
77. Sertoli's cell are regulated by the pituitary hormone known as
 a) FSH b) GH c) Prolactin d) LH
78. 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
79. The gestation period of elephant is about
 a) 11 months b) 15 months c) 22 months d) 32 months
80. Which one of the following systems is not mesodermal in origin?
 a) Circulatory system b) Muscular system c) Nervous system d) None of the above
81. In the diagram of section of Graafian follicle, different parts are indicated by alphabets; choose the answer in which these alphabets have been correctly matched with the parts they indicate.



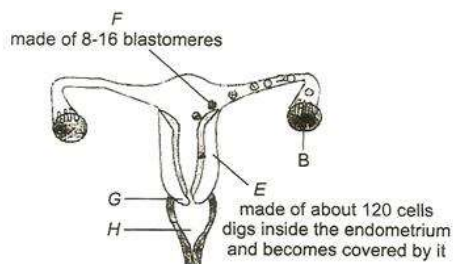
- a) A - Theca externa, B-Theca interna, C-Ovum
 D-Cumulus oophorus, E-Antrum, F-Membrana granulosa
- b) A - Membrana granulosa, B- Theca externa, C- Ovum
 D-Cumulus oophorus, E-Antrum,
 F-Theca interna,
- c) A - Membrana granulosa, B-Theca interna,
 C-Ovum, D-Cumulus oophorus,
 E-Antrum,

F-Theca externa

- d) A –Theca externa, B-Theca interna, C-Ovum
D-Membrana granulosa, E-Antrum,

F-Cumulus oophorus,

82. Which part of a sperm enters into an ovum during fertilization?
a) Head b) Tail c) Whole of it d) Middle piece
83. Graafian follicle after releasing ovum is called
a) Corpus luteum b) Polar body c) Nuclear body d) Ootid
84. External genitalia of male are called
a) Testis b) Penis c) Scrotum d) All of these
85. Enzyme present in sperm acrosome to dissolve egg membrane is
a) Sperm lysine b) Ovolysin c) Spermatogenolysin d) Spermatocynin
86. The second maturation division of the mammalian ovum occurs
a) Shortly after ovulation before the ovum makes entry into the fallopian tube
b) Until after the ovum has been penetrated by a sperm
c) Until the nucleus of the sperm has fused with that of the ovum
d) In the Graafian follicle following the first maturation division
87. Luteal phase is also called
a) Secretory phase b) Bleeding phase
c) Menses phase d) Ovulatory phase
88. Spermatogenesis is influenced by
a) Progesterone b) FSH c) STH d) LTH
89. How many mature, functional follicles are produced by a female in a lifetime?
a) About 1 million b) 400 c) 4000 d) 350000
90. Androgen Binding Protein (ABP) and inhibin are secreted by
a) Interstitial cells b) Leydig cells
c) Sertoli cells d) Germinal epithelium
91. Neubenkern is a part to
a) Human ovum b) Foetus c) Human sperm d) Graafian follicle
92. Enlarged end of penis (called the glans penis) is covered by the skin called
a) Foreskin b) Prepuce c) Both (a) and (b) d) None of the above
93. Interstitial cells secretes
a) Androgens b) Oestrogen c) FSH d) Inhibin
94. Most mammals have their testis sac called scrotal sac which is for
a) Protection b) Ova formation
c) Sperm formation d) Temperature regulation
95. The main function of trophoectoderm in mammalian embryo is
a) Protection of the developing cells b) Drawing food for the developing cell
c) Formation of future ectoderm d) Formation of placenta
96. The correct sequence of male reproductive structures of rabbit through which sperms pass out is
I. Rete testes
II. Vasa efferentia
III. Epididymis
IV. Vasa deferentia
a) I, II, III, IV b) II, III, IV, I c) II, III, I, IV d) I, III, II, IV
97. Label the following diagram which illustrates the fertilization followed by cleavage and the early stages of embryonic development. Identify *B, E, F, G* and *H*

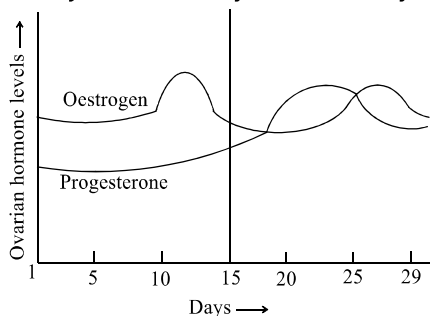


- a) B-Ovary, E-Morula, F-Blastocyst, G-Cervix, H-Vagina
- b) B-Ovary, E- Blastocyst, F- Morula, G-Cervix, H-Vagina
- c) B-Ovary, E- Blastocyst, F- Morula, G- Vagina, H- Cervix
- d) B-Ovary, E- Blastocyst, F-Gastrula, G- Vagina, H- Cervix

98. Binary fission is a mode of

- a) Micropropagation
- b) Vegetative propagation
- c) Macropropagation
- d) Sexual reproduction

99. Read the graph and correlate the uterine events that takes place according to the hormonal levels on A. 6-15 days B. 16-25 days C. 26-28 days (if the ovum is not fertilized)



- a) A-Degeneration of endometrium, B-Myometrium thickens, becomes vascularized ready to receive and implant embryo, C-Regeneration of endometrium
- b) A-Degeneration of endometrium, B-Endometrium thickens, becomes vascularized, ready to receive and implant embryo, C-Regeneration of endometrium
- c) A-Degeneration of endometrium, B- Endometrium thicknes, becomes vascularized, ready to receive and implant embryo, C-Regeneration of endometrium
- d) A-Regeneration of endometrium, B- Endometrium thickens, becomes vascularized ready to receive and implant embryo, C-Degeneration of endometrium

100. In human beings

- a) Chorion and amnion are well developed
- b) Allantois and yolk sac are less developed
- c) Yolk cell have very little yolk
- d) All of the above

101. The part of fallopian tube closest to the ovary is

- a) Isthmus
- b) Infundibulum
- c) Cervix
- d) Ampulla

102. Human male ejaculates ...A... to ...B... million sperm. Atleast ...C... should have normal shape and size and ...D... should show vigorous motility. Here A, B, C and D refers to

- a) A-100, B-200, C-30%, D-40%
- b) A-200, B-300, C-60%, D-40%
- c) A-300, B-400, C-60%, D-40%
- d) A-400, B-500, C-60%, D-40%

103. Acrosome secretes

- a) Hyaluronic acid
- b) Hyaluronidase
- c) TSH
- d) Fertilizin

104. Find out the spermatogonium and spermatozoa in above figure

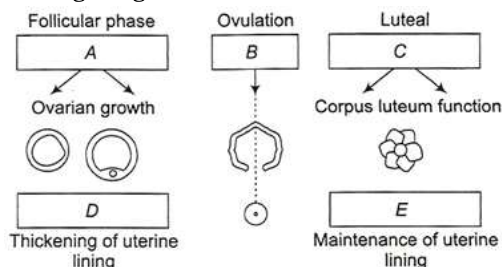
- a) A and F
- b) C and D
- c) F and A
- d) D and E

105. Second meiotic division in ovum leads to the formation of

- a) Haploid ovum
- b) Second polar body
- c) Tertiary polar body
- d) Both (a) and (b)

106. In implantation the blastocyst attached to the wall of uterus

- a) Endometrium b) Myometrium c) Perimetrium d) Mesoderm
107. Which of the following groups of cell in the male gonad, represent haploid cells?
 a) Spermatogonial cells b) Germinal epithelial cells
 c) Secondary spermatocytes d) Primary spermatocytes
108. Parturition is
 a) Child birth
 b) Expulsion of the baby from uterus
 c) Both (a) and (b)
 d) None of the above
109. Several mammary ducts joins to form a wider mammary ampulla, which is connected to
 a) Lactiferous duct b) Seminiferous duct c) Seminiferous tubules d) Lactiferous canal
110. External opening of penis is called
 a) Ureter b) Urinary bladder c) Urethral meatus d) Prepuce
111. Insemination is
 a) A sperm injection to increase male fertility b) A cure of male infertility
 c) Inability of male to produce sperms d) The transfer of sperms by male in to the genital tract of female
112. Sertoli's cells are found
 a) Between these seminiferous tubules b) In the germinal epithelium of ovary
 c) In the upper part of the fallopian tube d) In the germinal epithelium of the seminiferous tubules
113. The maximum growth rate occurs in
 a) Stationary phase b) Senescence phase c) Lag phase d) Exponential phase
114. Heart is formed is embryo during of development
 a) 15 days b) One months c) 1.5 months d) 2 months
115. The figure given below illustrates the changes taking place during the human menstruation cycle



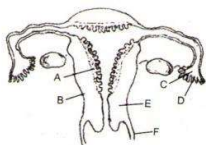
Identify hormones A, B, C, D and E from the figures

In the boxes shown in the figure write the name of the hormone (or hormones) controlling the stage in the human menstrual cycle

- a) A-FSH, B-LH, C-LH, D-Oestrogen, E-Progesterone
 b) A- LH, B- FSH, C-LH, D-Oestrogen, E-Progesterone
 c) A-FSH, B-LH, C- FSH, D-Oestrogen, E-Progesterone
 d) A-FSH, B-LH, C-LH, D- Progesterone, E- Oestrogen
116. Organogenesis is the formation of
 a) Organs b) Tissue c) Ova d) Spinal cord
117. ...A... is composed of endoderm inside and splanchnopleuric extraembryonic mesoderm outside. In humans it is small and non-functional except for ...B... to placenta. A and B in the statement refers to
 a) A-Allantois; B-blood vessel b) A- Blood vessel; B- allantois
 c) A-Amnion; B-amniotic cavity d) A-Endoderm; B-ectoderm
118. *In vitro fertilization* is a technique that involves transfer of which one of the following into the fallopian tube?
 a) Embryo only, upto 8 celled stage

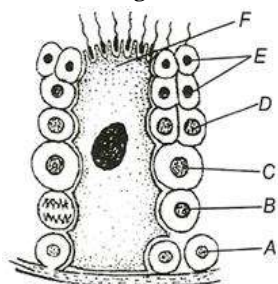
- b) Either zygote or early embryo upto 8 celled stage
 c) embryo of 32 celled stage
 d) Zygote only
119. What happens during the follicular phase of menstrual cycle?
 a) Proliferation of endometrium wall b) Reduction of endometrium wall
 c) Shading of endometrium wall d) No effect on endometrium wall
120. Adrenal gland is derived from
 a) Ectoderm b) Mesoderm
 c) Both (a) and (b) d) Ectoderm and endoderm
121. The males of honey bee are produced by
 a) Sexually b) Budding c) Spore formation d) Parthenogenesis
122. During pregnancy which one of the following is excreted?
 a) hCG b) FSH c) LH d) Progesterone
123. Identical twins are
 a) Monozygotic b) Isozygotic c) Bizygotic d) All of these
124. If for some, reason, the vasa efferentia in the human reproductive system get blocked, the gametes will not be transported form
 a) Epididymis to vas deferens b) Ovary to uterus
 c) Vagina to uterus d) Testes to epididymis
125. Which one of the following pairs correctly matches a hormone with a disease resulting from its deficiency?
 a) Luteinizing hormone – failure of ovulation b) Insulin - Diabetes insipidus
 c) Thyroxine - Tetany d) Parathyroid hormone - Diabetes mellitus
126. Pouch in which is the testes are suspended outside the abdominal cavity, is
 a) Tunica albuginia b) Inguinal canal c) Epididymis d) Scrotum
127. Hormone which causes the parturition is
 a) Oestrogen b) Oxytocin c) Prostaglandin d) All of these
128. Select the correct statement.
 a) Cleavage follows gastrulation b) Yolk content in egg has no role in cleavage
 c) Cleavage is repeated mitotic division of zygote d) Gastrulation and blastulation are followed by each other
129. Colostrum is important for newly born because
 a) Colostrum have antigen
 b) Colostrum have antibody
 c) Both (a) and (b)
 d) Colostrum have more nutrients than ordinary milk
130. A pair of bulbourethral gland also called ...A... gland present on the either side of ...B... . It secrets ...C... fluid and ...D... for lubricating the penis. Here A, B, C and D are
 a) A-Cowper's, B-Urethra, C-Alkaline, D-Mucous
 b) A-Prostate, B-Urethra, C-Acidic, D-Mucous
 c) A-Cowper's B-Scrotum, C-Acidic, D-Mucous
 d) A-Prostate, B-Scrotum, C-Alkaline, D-Mucous
131. ZIFT is
 a) Transfer of zygote into the fallopian tube
 b) Transfer of embryo into the uterus
 c) Transfer of mixture of sperms and ova into the fallopian tube
 d) Transfer of mixture of sperms and ova into the uterus
132. Maturation of sperm before penetration is called
 a) Spermatogenesis b) Spermiogenesis c) Capacitation d) Spermatid
133. Attachment of blastocyst of uterine wall is called

- a) Fertilization b) Implantation c) Deplantation d) All of these
134. In testis, the immature germ cells produce sperm by ...A... at puberty ...B... present on the inside wall of seminiferous tubules multiply by ...C... division and increase their number. Identify A, B and C from the above statement
- a) A-secondary spermatocytes, B-primary spermatocytes, C-mitosis b) A- primary spermatocytes, B- secondary spermatocytes, C-mitosis
- c) A-spermatogenesis, B-spermatogonia, C-mitosis d) A- spermatogonia, B- spermatogenesis, C-meiosis
135. Ovaries are the ...A... sex organs which produce ovum and several steroid hormone called ...B... Here A and B refers to
- a) A-secondary; B-testosterone b) A-tertiary; B-inhibin
- c) A-primary; B-ovarian hormones d) A-primary; B-testosterone
136. Ceasation of menstrual cycle at the age of 50 is called
- a) Ovulation b) Gametogenesis c) Menses d) Menopause
137. Programmed cell death is scientifically termed as
- a) Autotomy b) Cell lysis c) Apoptosis d) None of these
138. During spermatogenesis, which stage is the first to contain haploid number of chromosomes?
- a) Spermatogonium b) Primary spermatocyte
- c) Secondary spermatocyte d) Spermatid
139. The figure given below depicts a diagrammatic sectional view of the female reproductive system of humans. Which one set of three parts out of A-F have been correctly identified?



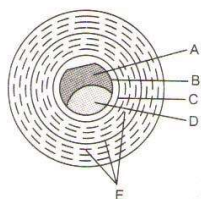
- a) C-Infundibulum, D-Fimbriae, E-Cervix b) D-Oviducal funnel, E-uterus, F-Cervix
- c) A-Perimetrium, B-Myometrium, C-fallopian tube d) B-Endometrium, C- Infundibulum, D- Fimbriae
140. Middle piece of sperm contains
- a) Mitochondria, Golgi bodies, centriole
- b) Axial filament, centriole, axial filament
- c) Mitochondria, centriole, axial filament
- d) Golgi bodies, axial filament, centriole
141. Ejaculation is the ...A... response. Erection is a ...B... response. Here, A and B refers to
- a) A-parasympathetic, B-sympathetic b) A-parasympathetic, B-parasympathetic
- c) A-sympathetic, B-parasympathetic d) A-sympathetic, B-sympathetic
142. The polar body of human ovum is formed
- a) Before birth b) After birth c) During birth d) Both (a) and (b)
143. Find out primary follicle and tertiary follicle in question number 114
- a) B and C b) C and D c) D and E d) A and F
144. With increasing age, secretion of which of the following reduces to almost half?
- a) GTH b) Melatonin c) hGH d) Oestrogen
145. Soon after implantation, the inner cell mass differentiation into outer ...A... and inner ...B... occursC.... soon appears between ectoderm and mesoderm. A, B and C in the above sentence are
- a) A-mesoderm, B-ectoderm, C-endoderm
- b) A-ectoderm, B-mesoderm, C-endoderm
- c) A-ectoderm, B-endoderm, C-mesoderm
- d) A-mesoderm, B-endoderm, C-ectoderm
146. Luteal phase last for how many days?
- a) 15-20 days b) 15-28 days c) 15-25 days d) 15-22 days
147. Saheli is a oral contraceptive containing

- a) Oestrogen and progesterone
c) Progesterone
- b) Oestrogen
d) Testosterone and FSH
148. What stage of the menstrual cycle is characterized by the event labelled *A* in the figure of previous question?
a) Corpus luteum formation
c) Flow
b) Ovulation
d) Fertilization
149. Cauda epididymis lead to
a) Vas efferens
b) Vas deferens
c) Ejaculatory duct
d) Rete testis
150. After implantation, finger-like projections on the trophoblast are called ...A.... which are surrounded by ...B... and maternal blood.
Here A and B refers to
a) A-chorion; B-foetal cell
c) A-uterine tissue; B-chorionic villi
b) A-chorionic villi; B-uterine tissue
d) A-foetal cell; B-chorion
151. Ovulation takes place in menses between
a) 9-14 days
b) 14-16 days
c) 16-28 days
d) 20-26 days
152. Male's testes are contained in the scrotal sacs because
a) Other organs do not make space of the testes in the abdominal cavity
b) Testes in the abdomen will hamper maturation of sperms
c) It provides temperature that is slightly lower than body temperature required for formation of functional sperms
d) It facilitates ejaculation
153. Two major entities seen in human testis TS are
a) Sertoli cells and interstitial cells
c) Seminiferous tubules and Leydig cells
b) Spermatozoa and Sertoli cells
d) Seminiferous tubules and Sertoli cells
154. Oviducts are also called
a) Fallopian tubes
b) Uterus
c) Vagina
d) Ovary
155. Seminal plasma in human males is rich in
a) Fructose and calcium
b) Glucose and Calcium
c) DNA and testosterone
d) Ribose and potassium
156. Given a diagram showing a portion of a seminiferous tubule. Identify the marked alphabates

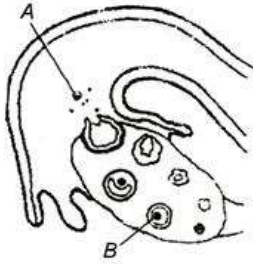


- a) A-Sertoli cells, B-Spermatogonium, C-Primary spermatocyte, D-Secondary spermatocyte, E-Spermatids, F-Leydig cell
b) A- Leydig cells, B- Primary spermatocyte, C- Spermatogonium, D-Secondary spermatocyte, E- Spermatids, F- Sertoli cells
c) A- Leydig cells, B-Spermatogonium, C-Primary spermatocyte, D-Secondary spermatocyte, E- Spermatozoa, F- Sertoli cell
d) A- Leydig cells, B-Spermatogonium, C-Primary spermatocyte, D-Secondary spermatocyte, E-Spermatids, F- Sertoli cell
157. The egg of frog is

- a) Telolecithal b) Microlecithal c) Alecithal d) centrolecithal
158. Which hormone level reaches peak during luteal phase of menstrual cycle?
 a) Luteinizing hormone b) Progesterone
 c) Follicle stimulating hormone d) Oestrogen
159. Skin epidermis, tooth, enamel, lens and corner of outer ear, brain, spinal cord, skeletal muscles of human head are derived from
 a) Ectoderm b) Mesoderm c) Endoderm d) Both (c) and (d)
160. Primary sex organ in males is
 a) Testes b) Sertoli cells c) Ovum d) Spermatogonia
161. The signals for parturition originates from
 a) Placenta only b) Placenta as well as fully developed foetus
 c) Oxytocin released from maternal pituitary d) Fully developed foetus only
162. Infertility could develop when the sperm cells display
 a) A count of 120 million/mL semen b) Increased acrosomal activity
 c) Normal morphology d) Count of less than 20 million/mL semen
163. Exact time of human gestation period is
 a) 9 month \pm 15 days b) 9 month \pm 20 days c) 9 month \pm 7 days d) 9 month \pm 1 days
164. Vitellogenesis occurs during the formation of
 a) Primary oocyte in the Graafian follicle
 b) Oogonial cell in the Graafian follicle
 c) Ootid in the fallopian tube
 d) Secondary oocyte in the fallopian tube
165. In mammals, corpus luteum is found in which organ?
 a) Brain b) Ovary c) Liver d) Eyes
166. External genitalia develops in the of development
 a) 2nd month b) 5th month c) 3rd month d) 1st month
167. Acrosome is the modified
 a) Mitochondria b) Lysosome c) Golgi body d) Nucleus
168. The following is a diagram of the just spawned frog's egg; with the parts labelled from A to E. identify the parts and choose the correct option from those given figure.



- a) A –cytoplasm, B-plasma membrane, C-vitelline membrane, D-yolk, E-jelly coat b) A –cytoplasm, B- vitelline membrane, C- plasma membrane, D-yolk, E-jelly coat
 c) A -yolk, B- plasma membrane, C- vitelline membrane, D- cytoplasm, E- jelly coat d) A - yolk, B-jelly coat, C- vitelline membrane, D- cytoplasm, E-plasma membrane
169. The chemical substance released by activated spermatozoa that acts on the ground substances of the follicle cells is known as
 a) Progesterone b) Hyaluronidase c) Relaxin d) Gonadotropin
170. The haemoglobin of a human foetus
 a) Has lower affinity for oxygen than that of the adult b) has affinity for oxygen same as that of an adults
 c) Has only two protein subunits instead of four d) Has higher affinity for oxygen than that of an adult
171. When did the structure labelled B in the given figure starts to form

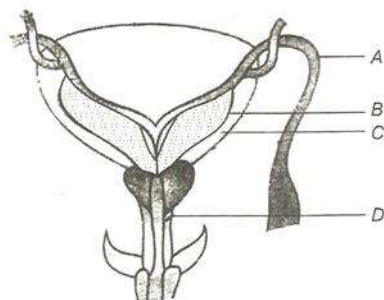


- a) Infancy
 - b) Before birth
 - c) At the start of the menstrual cycle
 - d) At puberty
172. In human, cleavage/divisions are
- a) Slow and synchronous
 - b) Fast and synchronous
 - c) Show and asynchronous
 - d) Fast and asynchronous
173. There is no DNA in
- a) An enucleated ovum
 - b) Mature RBCs
 - c) A mature spermatozoan
 - d) Hair root
174. Natural parthenogenesis is found in
- a) Housefly
 - b) Honey bee
 - c) *Drosophila*
 - d) All of these
175. Inner cell mass contains certain cells called, which have the potency to give rise to all the tissues and organs. The suitable word for blank in the above sentence is
- a) Stem cell
 - b) Germ cell
 - c) Mesodermal cell
 - d) Special cell
176. The given diagram refers to ovum surrounded by few sperms. Identify A, B and C in the diagram

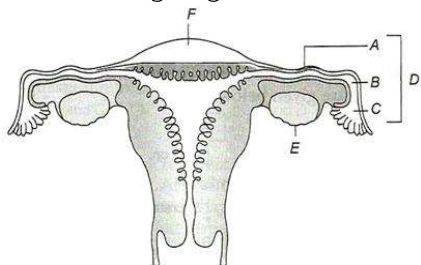


- a) A-Zona pellucida, B-Perivitelline space, C-Corona reticulata
 - b) A-Zona pellucida, B-Viteline membrane, C-Corona radiata
 - c) A-Zona pellucida, B-Perivitelline space, C-Corona radiata
 - d) A-Oolemma, B-Perivitelline space, C-Corona radiata
177. Which chemical event of fertilization involves the presence of hyaluronidase enzyme?
- a) Acrosomal reaction
 - b) Cortical reaction
 - c) Amphimixis
 - d) Activation of egg
178. Leydig's cells are concerned with
- a) Ovary
 - b) Seminiferous tubule
 - c) Liver
 - d) Pituitary gland
179. Tunica albugenia is the covering of
- a) Liver
 - b) Spleen
 - c) Testis
 - d) Penis
180. Which of the following cells present in the mammalian testis and nourishes the sperm?
- a) Leydig cells
 - b) Oxyntic cells
 - c) Interstitial cell
 - d) Sertoli cell
181. Progesterone is needed for the maintenance
- a) Of ovary
 - b) Of ovum
 - c) Of endometrium wall
 - d) Of ootid
182. The target ICSH is
- a) Prostate
 - b) Seminiferous tubule
 - c) Interstitial cells
 - d) Seminal vesicle
183. Proliferation of endometrium of uterus is controlled by

- a) Relaxin b) Oxytocin c) Progesterone d) Oestrogen
184. Sugar fructose is present in the secretion of
a) Bartholin's gland b) Cowper's gland c) Seminal vesicles d) Prostate gland
185. ...A... are the certain agents that causes abnormal development in the developing embryo. The most well known is ...B... which causes phenomelia is foetus
a) A-Barbiturates, B-anesthetic
b) A-Thalidomide, B-teratogens
c) A-Teratogens, B-thalidomide
d) A-Aspirin, B-anesthetis
186. The number of autosomes in human primary spermatocyte is
a) 46 b) 44 c) 23 d) 22
187. Seminal vesicles are present at the base of
a) Penis b) Bladder c) Testis d) Prostate gland
188. The main function of fimbriae of Fallopian tube is
a) Help in development of ovary
b) Help in collection of the ovum after ovulation
c) Help in development of ova
d) Help in fertilization
189. Saheli is a
a) Oral contraceptive for females b) Surgical sterilization method for females
c) Diaphragm for females d) Surgical method of sterilization in males
190. The nutritive cells found in seminiferous tubules are
a) Leydig cells b) Sertoli cells c) Spermatogonial cells d) Follicular cells
191. Label *A, B, C, D* in following diagram



- a) A-Ureter, B-Seminal vesicle, C-Prostate, D-Bulbourethral gland b) A-Ureter, B-Prostate, C- Seminal vesicle, D-Bulbourethral gland
- c) A-Vas deferens, B-Seminal vesicle, C-Prostate, D-Bulbourethral gland d) A- Vas deferens, B-Vesicle, C-Bulbourethral gland, D-Prostate
192. The following diagram refers to the female reproductive system of human. Identify *A* to *F*

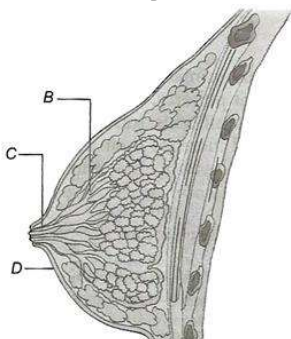


- a) A-Ampulla, B-Isthmus, C-Infundibulum, D-Fallopian tube, E-Ovary, F-Uterine fundus
b) A- Isthmus, B- Infundibulum, C- Ampulla, D-Fallopian tube, E-Ovary, F-Uterine fundus
c) A- Isthmus, B- Ampulla, C-Infundibulum, D-Fallopian tube, E-Ovary, F-Uterine fundus
d) A-Ampulla, B- Infundibulum, C-Isthmus, D-Fallopian tube, E-Ovary, F-Uterine fundus

193. Identify the odd one
 a) Labia minora b) Fimbriae c) Infundibulum d) Isthmus
194. FSH is given to a rat which don't have anterior lobe of pituitary. What will not happen in rat?
 a) Proliferation of endometrium
 b) Development of corpus luteum
 c) Maturation of Graafian follicle
 d) Build-up of oestrogen in blood stream
195. Ejaculatory duct contains
 a) Sperms b) Secretion of seminal vesicles
 c) Both (a) and (b) d) Androgen
196. At what stage in test tube babies, the zygote is implanted in human female?
 a) 32-celled stage b) 64-celled stage c) 100-celled stage d) 164-celled stage
197. Notochord, skeletal system and dermis of the skin are the derivatives of
 a) Mesoderm b) Endoderm c) Ectoderm d) All of these
198. Chorionic villi are formed by the modification of
 a) Outer layer of trophoblast b) Inner layer of trophoblast
 c) Inner mass cell d) Blastocyst
199. Male pronucleus is
 I. Head of sperm
 II. Neek of sperm
 III. Middle piece of sperm
 IV. Tail of sperm
 a) I and III b) III and IV c) I d) II and IV
200. Hormones plays a very significant role in puberty. ...A... secreted by ...B... stimulates ...C... lobe of pituitary to secrete ...D... and ...E... hormones. Testosterone brings developmental of secondary sex organs and secondary characters.
 A, B, C, D and E in the above statement are
 a) A-FSH, B-hypothalamus, C-posterior, D-LH, E-ICSH
 b) A-GnRH, B-hypothalamus, C-anterior, D-LH, E-FSH
 c) A- GnRH, B- anterior, C- hypothalamus, D-LH, E- FSH
 d) A- GnRH, B-hypothalamus, C-posterior, D-LH, E- FSH
201. Which cells come earliest in the sequence of sperm production?
 a) Spermatozoa b) Spermatocyte c) Spermatid d) Spermatogonia
202. Superficial meroblastic cleavage occurs in
 a) Reptiles b) Birds c) Mammals d) Insects
203. Which of the following is viviparous?
 a) Running birds b) Whales c) Bats d) Both (b) and (c)
204. The dominant hormone controlling the proliferative phase of the uterine endometrium is
 a) Oestrogen b) FSH c) LH d) Progesterone
205. Test tube baby means a baby born when
 a) The ovum is fertilized externally and thereafter implanted in the uterus
 b) It develops from a non-fertilized egg
 c) It is developed in a test tube
 d) It is developed through tissue culture method
206. Withdrawal of which of the following hormones is the immediate cause of menstruation?
 a) Oestrogen b) FSH c) FSH-RH d) Progesterone
207. Fertilization takes place in
 a) Cervix
 b) Isthmus
 c) Ampullary isthmic junction

- d) Follicle
208. In telolecithal egg
 a) Yolk is present in the centre
 b) Yolk is unevenly distributed
 c) Yolk is absent
 d) Yolk is present all over the ovum
209. Which hormone is produced throughout the menstrual cycle?
 a) FSH
 b) Oestrogen
 c) LH
 d) Progesterone
210. Accessory sexual character in female is promoted by
 a) Androgen
 b) Progesterone
 c) Oestrogen
 d) Testosterone
211. Uterine endometrium, epithelial glands and connective tissue are broken in menstrual phase. This is due to
 a) Over secretion of FSH
 b) Lack of oestrogen
 c) Lack of progesterone
 d) Over production of progesterone
212. Which one of the following statements is incorrect about menstruation?
 a) During normal menstruation about 40 mL blood is lost
 b) The menstrual fluid can easily clot
 c) At menopause in the female, there is especially abrupt increase in gonadotropic hormones
 d) The beginning of the cycle of menstruation is called menarche
213. Ovulatory phase lasts for
 a) 1 day
 b) 2 days
 c) 3 days
 d) 4 days
214. In the beginning of menstruation what will happen?
 a) Ovulation takes place
 b) Corpus luteum degenerates
 c) Levels of LH and FSH increases
 d) Progesterone and oestrogen level increase
215. Type of cell division taking place at I, II and III stages of previous question are
 a) I-meiosis, II-mitosis, III-mitosis-II
 b) I- mitosis, II-mitosis, III- meiosis
 c) I-meiosis-I, II- meiosis-II, III-mitosis
 d) I- mitosis, II-mitosis-I, III- meiosis -II
216. Fusion of dissimilar gametes is known as
 a) Fertilization
 b) Dichogamy
 c) Autogamy
 d) Allogamy
217. Identify *A, B, C* and *D* in the figure given below
-
- a) A-Yolk sac, B-Amnion, C-Allantois, D-Chorion
 b) A-Chorion, B-Amnion, C- Yolk sac, D- Allantois
 c) A-Chorion, B-Amnion, C-Allantois, D- Yolk sac
 d) A-Chorion, B- Allantois, C- Amnion, D- Yolk sac
218. At the time of birth, the oocyte have the stage
 a) Prophase-I
 b) Prophase-II
 c) Meiosis-II
 d) Mitosis
219. Vaginal orifice, urethral orifice are open in
 a) Vulva
 b) Labia majora
 c) Labia minora
 d) Cervix
220. The extra-embryonic membranes of mammalian embryo are derived from
 a) Trophoblast
 b) Follicle cells
 c) Formative cells
 d) Inner cell mass
221. Relaxin (a hormone) is secreted by
 a) Placenta
 b) Ovary

- c) Anterior lobe of pituitary
 222. Leydig cells secretes hormone
 a) Testosterone b) Inhibin c) Oxytocin d) FSH
223. Which of the following is correct about mammalian testes?
 a) Graafian follicles, sertoli's cells, Leydig's cells b) Graafian follicles, sertoli's cells, seminiferous tubules
 c) Sertoli's cells, seminiferous tubules, Leydig's cells, d) Graafian follicles, Leydig's cells, seminiferous tubules
224. Given the diagrammatic sectional view of mammary gland. Identify *A, B, C* and *D*

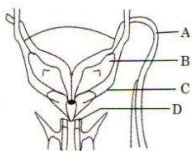


- a) A-Alveolus, B-Mammary duct, C-Lactiferous duct, D-Areola
 b) A-Alveolus, B- Lactiferous duct, C- Mammary duct, D-Areola
 c) A-Alveolus, B-Mammary duct, C-Lactiferous duct, D-Lactogenic spot
 d) A- Mammary gland, B-Mammary duct, C- Lactiferous duct, D-Areola
225. During oogenesis, the small structure separated from egg is
 a) Polar bodies b) Secondary endosperm
 c) Herring bodies d) Hela cells
226. Structure connecting the foetus to placenta is
 a) Umbilical cord b) Amnion c) Yolk sac d) Chorion
227. Sperm is a microscopic structure composed of head, neck, ...A... and ...B... Sperm head contains elongated haploid nucleus, which is covered by cap like structure called ...C...
 A, B and C in the above statement refers to
 a) A-middle piece, B-tail, C-acrosome
 b) A- tail, B- middle piece, C-acrosome
 c) A- tail, B- acrosome, C- middle piece
 d) A-middle piece, B- acrosome, C- tail
228. Which part of the sperm is motile?
 a) Head b) Neck c) Middle d) Tail
229. Cytoplasm of ovum does not contain
 a) Golgi complex b) Centrosomes c) Mitochondria d) Ribosomes
230. Appearance of hair on head is observed during of development
 a) 2nd month b) 3rd month c) 4th month d) 5th month
231. A. Humans reproduces.....
 B. Humans are.....
 C. Fertilization is in humans
 D. Male and female gametes are.....
 E. Zygote is.....
 F. The process of release of ovum from a mature follicle is called.....
 G. Ovulation is induced by a hormone called.....
 H. The fusion of male and female gametes is called.....
 I. Zygote divides to form... which is implanted in uterus
 J. The structure which provides vascular connection between foetus and uterus is called.....

Blanks in the statements A to J in the above statement is

- a) A-asexually, B-viviparous, C-external, D-diploid, E-haploid, F-ovulation, G-LH, H-fertilisation, I-blastocyst, J-placenta
- b) A-sexually, B-viviparous, C-external, D- haploid, E- diploid, F-ovulation, G-LH, H-fertilisation, I-blastocyst, J-placenta
- c) A-asexually, B-viviparous, C-internal, D- haploid, E- diploid, F-ovulation, G-LH, H-fertilisation, I-blastocyst, J-placenta
- d) A-sexually, B-viviparous, C-internal, D- haploid, E- diploid, F-ovulation, G-LH, H-fertilisation, I-blastocyst, J-placenta

232. Given below is a diagrammatic sketch of a portion of human male reproductive system. Select the correct set of the names of the parts labelled A, B, C, D.



	A	B	C	C
a)	Ureter	prostate	seminal vesicle	bulbourethral gland
c)	Vas deferens	seminal vesicle	bulbourethral gland	prostate

b)	Vas deferens	Seminal vesicle	prostate	bulbourethral gland
d)	Ureter	seminal vesicle	prostate	bulbourethral gland

233. Blastopore is found in

- a) Blastula and is opening of archenteron
- b) Blastula and is opening of blastocoels
- c) Gastrula and is opening of archenteron
- d) Gastrula and is opening of blastocoels

234. Seminal vesicle secretes 60% of semen content, these contents are

- a) Glucose, prostaglandin, clotting protein
- b) Cellulose, prostaglandin, clotting factor
- c) Fructose, prostaglandin, clotting protein
- d) Glyceraldehyde 3-phosphate, prostaglandin, clotting factor

235. A sectional view of mammary gland shows

- I. Nipple areola
- II. Mammary lobes (alveolus) and duct
- III. Antibody and ribs
- IV. Ampulla and lactiferous duct

Choose the correct option from the above

- a) I, II, IV
- b) I, II, III
- c) III, IV, II
- d) I, IV, III

236. The Bartholin glands of female resembles the male's

- a) Cowper's gland
- b) Vestibular gland
- c) Seminal vesicles
- d) Prostate gland

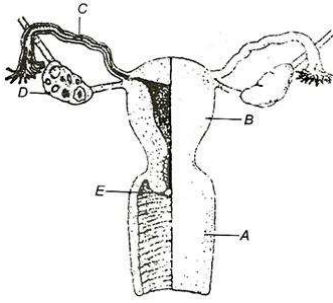
237. Cleavage in frog's zygote is

- a) Diploblastic
- b) Heteroblastic
- c) Holoblastic
- d) meroblastic

238. Post-embryonic period is also called

- a) Prenatal
- b) Postnatal
- c) Embryonal period
- d) None of the above

239. Match each function below with its associated part (or parts) of the human female reproductive system shown in the figure



- I. Where is the egg produced?
 II. Where does fertilization occur?
 III. Where would implantation of a fertilized egg take place?
 IV. Where are oestrogen and progesterone produced?
 V. What part receives the penis during copulation?

- a) I-D, II-C, III-B, IV-E, V-A
 b) I-D, II-C, III-B, IV-A, V-E
 c) I-D, II-C, III-B, IV-D, V-A
 d) I-E, II-C, III-B, IV-D, V-A

240. Spermatogenesis starts at puberty due to

- a) GnRH
 b) Lactin
 c) Testosterone
 d) Oestrogen

241. Mark the odd one

- a) Acrosome
 b) Endometrium
 c) Corpus luteum
 d) Graafian follicle

242. Name the hormone, which stimulates growth and development of breast in preparation for lactation?

- a) Oestrogen
 b) Human placental lactogen
 c) Progesterone
 d) Chorionic gonadotropin

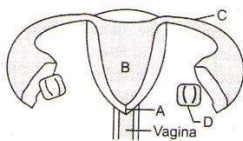
243. At which stage of the development, ovum is released from the ovary of human female?

- a) Primary oocyte
 b) Oogonium
 c) Secondary oocyte
 d) Ootid

244. The 60% of semen is produced by the

- a) Prostate gland
 b) Seminal vesicle
 c) Cowper's gland
 d) Testes

245. Choose the correct combination of the labelling for the following structure.



- a) A-Oviduct, B-Uterus, C-Cervix, D-Ovary
 b) A- Cervix, B-Uterus, C-Ovary, D- Tumor
 c) A- Uterus, B-Uterine cavity, C-Oviducal funnel, D- Ovary
 d) A- Cervix, B- Uterine cavity, C-Fallopian tube, D- Ovary

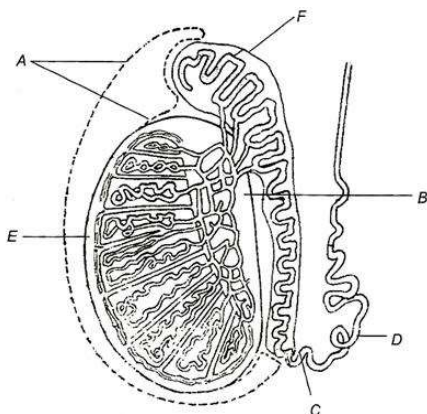
246. Foetus develops limbs and digits in its ... of development

- a) 2nd month
 b) 3rd month
 c) 4th month
 d) 5th month

247. Spermatogenesis is induced by

- a) FSH
 b) ACTH
 c) ICSH
 d) ATH

248. Identify A to F in the diagram given below



- a) A-Tunica vaginalis, B-Rete testis, C-Caput epididymis, D-Vas deferens, E-Septa of testis, F-Cauda epididymis
 b) A-vaginalis, B-Rete testis, C- Cauda epididymis, D-Mediastinum testis, E- Vas deferens, F- Caput epididymis
 c) A-Tunica vaginalis, B-Rete testis, C- Cauda epididymis, D-Vas deferens, E-Tunica albuginea, F- Caput epididymis
 d) A-Tunica vaginalis, B-Rete testis, C-Caput epididymis, D- Mediastinum testis, E- Vas deferens, F-Cauda epididymis
249. Sertoli's cells are nourishing cells in the testis. They also secrete a hormone. Identify the same
 a) Gonadotropin b) Testosterone c) Relaxin d) Inhibin
250. Through invagination of which of the following, mesoderm is formed?
 a) Primitive streak b) Inner mass of cell c) Endoderm d) Ectoderm
251. The receptor site of acrosome are exposed and become active to penetrate the egg. This process is called
 a) Activation b) Capitation c) Reactivation d) Deactivation
252. Primary oocyte surrounded by a layer of granulosa cells is called
 a) Secondary follicle b) Ootid c) Primary follicle d) Tertiary follicle
253. In human secretion, which of the following is used to confirm implantation of emryo?
 a) Gastrula b) Trophoblast c) Inner mass of cell d) Blastocyst
254. When both ovaries are removed from rat, which hormone is decreased in blood?
 a) Oxytocin b) Prolactin
 c) Oestrogen d) Gonadotrophic releasing factor
255. Study the following sentences.
 V. Testosterone influences the male secondary sexual characters.
 VI. Gestation period in rabbit is approximately 276 days.
 VII. Bulbourethral glands secrete a vaginal lubricant.
 VIII. Placenta secretes oestrogen
 Identify the correct statements.
 a) I and IV b) II and III c) III and IV d) I and II
256. Secretion from which of the following structures is preparing inner wall of uterus for implantation?
 a) Ovary b) Pituitary gland c) Corpus luteum d) Ovarian follicle
257. At the time of implantation, the human embryo is called
 a) Embryo b) Blastocyst c) Zygote d) Foetus
258. Vas deferentia receives a duct from ...A... and opens into the ...B... as ejaculatory duct.
 A and B in above statement is
 a) A-vas deferens; B-urinary bladder b) A-seminal vesicles; B-urethra
 c) A-urethra; B-seminal vesicles d) A-urethra; B-urinary bladder
259. In numans, dermis of skin, circulatory system and muscles are derived from
 a) Mesoderm b) Ectoderm c) Endoderm d) Both (a) and (b)

260. ...A... completely surrounds the embryo and protect it. It also take part in formation ofB....

A and B here refers to

- a) A-Chorion; B-Placenta
- b) A-Amnion; B-Amniotic cavity
- c) A-Allantois; B-Endoderm
- d) A-Yolk sack; B-Endoderm

261. Cu ions released from copper- releasing Intra Uterine Devices (IUDs)

- a) Make uterus unsuitable for implantation
- b) Increase phagocytosis of sperms
- c) Suppress sperm motility
- d) Prevent of ovulation

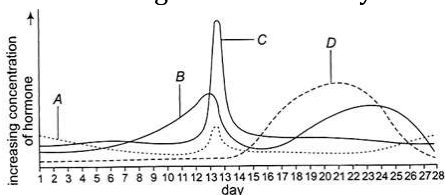
262. Which one of the following is the most widely accepted method of contraception in India, at present?

- a) Tubectomy
- b) Diaphragm
- c) IUDs (intra uterine devices)
- d) Cervical caps

263. Which of the following undergoes, the meiosis-I division?

- a) Primary spermatocytes
- b) Secondary spermatocytes
- c) Sertoli cell
- d) Leydig cell

264. The following graph of relative concentrations of the four hormones present in the blood plasma of a woman during her menstrual cycle. Identify the hormones *A, B, C* and *D*



- a) A-FSH, B-Progesterone, C-LH, D-Oestrogen
- b) A- LH, B-Progesterone, C- FSH, D-Oestrogen
- c) A-FSH, B- Oestrogen, C-LH, D- Progesterone
- d) A- LH, B- Oestrogen, C- FSH, D- Progesterone

265. A chemical fertilizin is produced from

- a) Polar bodies
- b) Middle piece of sperm
- c) Acrosome
- d) Mature eggs

266. Milk secretion is maintained by ...A.... This hormone inhibits the release from the pituitary and counters the ...B... and ...C.... Hence in nourishing mother, the menstrual cycle is suppressed. Here A, B and C are

- a) A-FSH, B-LH, C-prolactin
- b) A-prolactin, B-FSH, C-LH
- c) A-LH, B-FSH, C-prolactin
- d) A-LH, B-prolactin, C-FSH

267. Which one of the following events is correctly matched with the time period in a normal menstrual cycle?

- a) Release of egg - 5th days
- b) Endometrium regenerates - 5 -14 days
- c) Endometrium secretes Nutrients for implantation - 11-18days
- d) Rise in progesterone level - 1-15 days

268. A single ejaculation contains ...A... to ...B... million spermatozoa. Semen has pH of ...C... to ...D.... Its alkalinity helps to neutralize the acidity of urethra. Here A, B, C and D refers to

- a) A-300, B-400, C-8, D-9
- b) A-200, B-300, C-7.35, D-7.50
- c) A-100, B-200, C-5, D-6
- d) A-150, B-200, C-7, D-8

269. Some important events in the human female reproductive cycle are given below. Arrange the events in proper sequence.

- I. Secretion of FSH
- II. Growth of corpus luteum

III. Growth of the follicle and oogenesis
 IV. Ovulation
 V. Sudden increase in the levels of LH

- a) III → I → IV → II → V
 b) I → III → V → IV → II
 c) I → IV → III → V → II
 d) II → I → III → IV → V

270. Mammary gland is a

- a) Modified sweat gland
 b) Modified perineum
 c) Modified ear wax gland
 d) Both (a) and (c)

271. The tertiary follicle changes into

- a) Graafian follicle
 b) Oocyte
 c) Megaspore mother cell
 d) ovum

272. Male accessory glands includes ...A..., ...B... and ...C.... Here A, B and C represents

- a) A-one seminal vesicle, B-a pair of prostate gland, C-a bulbourethral gland
 b) A-pair of seminal vesicle, B-prostate gland, C-a pair of bulbourethral gland
 c) A-two pairs of seminal vesicle, B-two pairs of prostate gland, C-two pairs of bulbourethral gland
 d) A-three pairs of seminal vesicle, B-three pairs of prostate gland, C-three pairs of bulbourethral gland

273. GnRH stimulates two hormones from anterior lobe of pituitary

- a) FSH and GH
 b) FSH and LH
 c) LH and testosterone
 d) Testosterone and LH

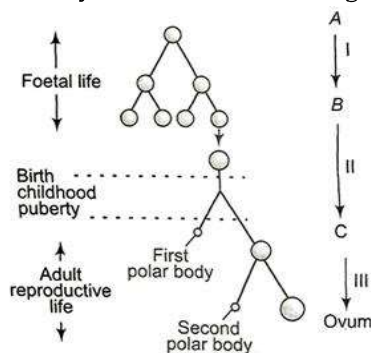
274. Female gamete mother cell are called

- a) Oogonia
 b) Ovum
 c) Ootid
 d) Oocyte

275. Why the fusion of sperm and ova do not occur during pregnancy?

- a) High levels of oestrogen and progesterone maintained by corpus luteum or placenta during pregnancy inhibit the secretion of gonadotropin and ovulation
 b) Woman cannot intercourse during pregnancy
 c) High level of HCl kill the releasing ovum
 d) The ova releasing during pregnancy is abnormal

276. Identify of A, B and C in the figure given below



- a) A-Secondary oocyte, B-Oogonia, C-Primary oocyte
 b) A- Oogonia, B- Primary oocyte, C- Secondary oocyte
 c) A-Secondary oocyte, B- Primary oocyte, C- Oogonia
 d) A- Oogonia, B- Secondary oocyte, C-Primary oocyte

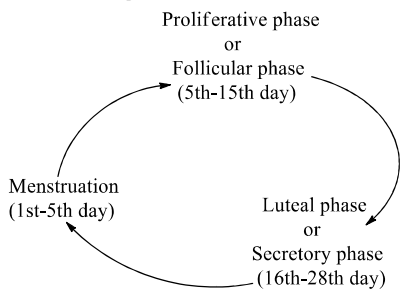
277. $2n=16$ is a primary spermatocyte, which is in metaphase of first meiotic division. What shall be the total number of chromatids in each of the secondary spermatocyte?

- a) 32
 b) 8
 c) 16
 d) 24

278. Which of the following statement is correct?

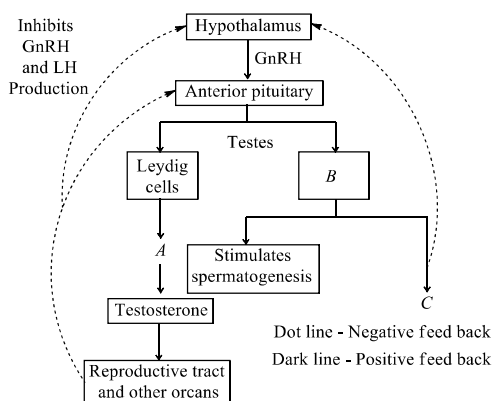
- a) hCG, hPL and relaxin are produced women only during pregnancy
 b) During pregnancy the level of other hormones like oestrogens, progestogens, cortisol, prolactin, thyroxine, etc., are increased several folds in the maternal blood
 c) Increased production of hCG, hPL, progesterone, etc., is essential for supporting the foetal growth, metabolic changes in the mother and maintenance of pregnancy
 d) All of the above
279. ...A... are the paired folds of tissue under the labia majora. The opening of vagina is covered partially by ...B... ...C... is the finger-like projection, which lies at the upper junction of two labia minora and urethral opening.
 A, B and C in the above statements are
 a) A-Labia minora, B-Hymen, C-Clitoris
 b) A-Labia minora, B- Clitoris, C- Hymen
 c) A- Hymen, B-Clitoris, C- Labia minora
 d) A- Hymen, B- Labia minora, C- Labia majora
280. The seminiferous tubules of the testis opens into the vasa efferentia by
 a) Vasa deferentia
 b) Rete testis
 c) Epididymis
 d) Seminiferous tubules
281. ...A... is made up of trophoblastic mesoderm inside and somatopleuric extraembryonic mesoderm outside. The space between embryo and the amnion is called ...B... which is filled with clear watery fluid secreted by both embryo and membrane. It protects the embryo from shock and desiccation. A and B in above sentence are
 a) A-Chorion; B-Placenta
 b) A-Amnion; B-Amniotic cavity
 c) A-Chorion; B-Amniotic cavity
 d) A-Yolk sac; B-Amniotic cavity
282. Placenta secretes
 a) hCG (Human Chorionic Gonadotrophin)
 b) Human placental lactogen
 c) Oestrogen
 d) All of the above
283. Scrotum remains connected with abdomen or pelvic cavity by
 a) Spermatic cord
 b) Inguinal canals
 c) Testis
 d) Lobules
284. Hormone responsible for ovulation is
 a) LH
 b) FSH
 c) Progesterone
 d) Testosterone
285. Wall of each seminiferous tubules is formed of a single layer called
 a) Germinal epithelium
 b) Germ cell
 c) Spermatogonia
 d) Spermatozoa
286. Reproduction in larval stage is called
 a) Neoteny
 b) Parthenogenesis
 c) Parthenocaryp
 d) Paedogenesis
287. The ...A... secrete human chorionic gonadotropin hormone. The hCG maintains the ...B... and stimulates it to secrete ...C... The latter maintains the ...D... of the uterus and causes it to grow throughout pregnancy This also prevents ...E... Progesterone also cause increased secretion of mucous in the cervix of the uterus that forms a protective plug during pregnancy
 A to E in above paragraph, is
 a) A-trophoblastic cell, B-corpor luteum, C-progesterone, D-endometrium, E-menstruation
 b) A-trophoblast, B-corpor luteum, C-progesterone, D- menstruation, E- endometrium
 c) A-trophoblast, B-corpor luteum, C- endometrium, D- menstruation, E- progesterone
 d) A-trophoblast, B- progesterone, C- corpor luteum, D- menstruation, E- endometrium
288. Human placenta is derived from
 a) Ectoderm
 b) Trophoblast
 c) Endoderm
 d) Mesoderm
289. In which of the following animal, cleavage divisions are restricted to a small part of cytoplasm and nucleus in animal pole of egg?
 a) Cockroach
 b) Frog
 c) Chick
 d) Rabbit

290. Fertilization is
 a) Fission of sperm and ova
 b) Fusion of sperm and ova
 c) Zygote formation
 d) Gamete formation
291. Maturation of sperm before penetration is called
 a) Spermatogenesis b) Spermiogenesis c) Capacitation d) Spermatid
292. At menopause, there is rise in urinary excretion to
 a) FSH b) STH c) LH d) MSH
293. Identify *E, F, G* and *H* in the diagram of previous question
 a) E-Glans penis, F-Foreskin, G-Testis, H-Urethra
 b) E-Testis, F-Foreskin, G-Glans penis, H-Urethra
 c) E-Urethra, F-Testis, G-Foreskin, H-Glans penis
 d) E-Glans penis, F-Foreskin, G-Testis, H-Urethra
294. The events of the menstrual cycle are represented below. In which of the following option the level of FSH, LH and progesterone is mentioned correctly



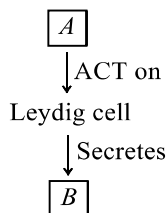
	13-14 Day			21st to 23rd day		
	FSH	LH	Progesterone	FSH	LH	Progesterone
a)	High	High	Low	Low	High	High
b)	High	High	High	Low	Low	Low
c)	Low	Low	Low	High	High	High
d)	Low	Low	High	High	Low	Low

295. Mammary glands are modified
 a) Sweat gland b) Sebaceous gland c) Lacrimal gland d) Endocrine gland
296. Primary sex organ in man is
 a) Scrotum b) Accessory gland c) Testis d) Urinary bladder
297. Find out *A, B* and *C* in the figure given below



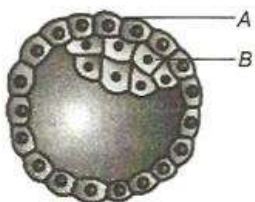
- a) A-Sertoli cell, B-Testosterone, C-Inhibin
 b) A- Inhibin, B- Sertoli cell, C-Testosterone
 c) A-Testosterone, B-Sertoli cell, C-Inhibin
 d) A-Testosterone, B-Sertoli cell, C-Testosterone

298. In menstrual phase, the production of LH considerably
 a) Reduced b) Increases c) Does not change d) None of these
299. Cytoplasm surrounding mitochondria present in the middle piece of sperm is
 a) Manchette b) Centrioplasm c) Microplasm d) Acrosome
300. During menstrual phase, the hormones which show reduction in sufficient quantity are
 a) Progesterone b) LH c) Inhibin d) Both (a) and (b)
301. A woman with a typical 28 day menstrual cycle is most likely to become pregnant as a result of sexual intercourse on of cycle
 a) 1-3 days b) 5-8 days c) 12-15 days d) 24-28 days
302. What is the purpose of polar bodies during oogenesis?
 a) Polar bodies serves both as a dumping ground for extra sets of chromosomes and ensure that the ovum will have most of the cytoplasm
 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 birth
303. Funnel-shaped part closer to the ovary is called
 a) Filmbriae b) Infundibulum c) Ampulla d) Isthmus
304. Give the name of two hormones A and B in the figure given below



- a) FSH and GH b) LH and androgen c) GH and LH d) GH and lacticin
305. Which of the following represents a condition, where the motility of the sperms is highly reduced?
 a) Oligospermia b) Athenospermia c) Azoospermia d) Poolyspermy
306. Male reproductive system contains a pair of ...A... along with accessory ...B... and ...C... and an external ...D... . Here A, B, C, and D refers to
 a) A-genitalia, B-glands, C-ducts, D-testis
 b) A- testis, B-glands, C-ducts, D- genitalia
 c) A-urethra, B-testis, C-foreskin, D-rete testis
 d) A-uterus, B-vasa deferentia, C-epididymis, D-rete testis
307. The wolffian duct gives rise of

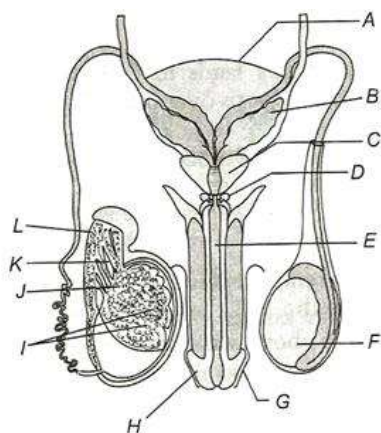
- a) Scrotum b) Labia majora c) Both (a) and (b) d) Epididymis
308. Second meiotic division in ova takes place
 a) After ovulation b) After spermatogenesis
 c) After fusion of sperm and ova d) After sperm reaches to the oviduct
309. Which of the given option maintains?
 I. Endometrium wall
 II. Pregnancy
 a) Graafian follicle b) Secondary oocyte c) Corpus luteum d) Corona radiata
310. Which of the following provides nutrition to sperm?
 a) Leydig's cell b) Scrotum c) Sertoli's cell d) Epididymis
311. Identify *A* and *B* and their respective functions



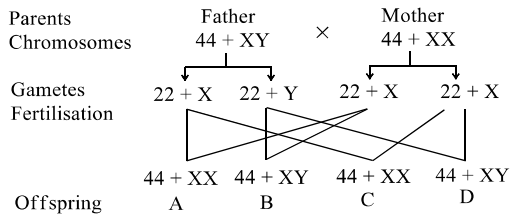
- | A | B | Function of A | Function of B |
|--------------------|-----------------|---------------------------------|---------------------------------|
| a) Trophoblast | Inner cell Mass | get attached to the endometrium | differentiated as embryo |
| b) Inner cell Mass | Trophoblast | get attached to the endometrium | differentiated as embryo |
| c) Trophoblast | Inner cell Mass | differentiated as embryo | get attached to the endometrium |
| d) Ectoderm | Endoderm | differentiated as embryo | get attached to the endometrium |
312. The leydig's cells secrete
 a) Oestrogen b) Testosterone c) Progesterone d) Corticostierone
313. Germinal epithelium gives rise to
 a) Sertoli cells b) Interstitial cells c) Spermatogonium d) Scrotum
314. The cells of the trophoblast in contact with inner mass of cells, are called
 a) Cells of embryo
 b) Cells of rauber
 c) Cells of organogenesis
 d) Cells of blastula
315. The cell division that takes place in a zygote is known as
 a) Meiosis b) Mitosis c) Cleavage d) Differentiation
316. If the size of a fertilized egg of frog is compared with the size of its blastula and gastrula stages, which of the following observations will be correct?
 a) There is a progressive increase in size from zygote to blastula to gastrula
 b) All the three will be of the same size
 c) Zygote will be smaller, while blastula and gastrula will be larger
 d) Gastrula will be larger, while zygote and blastula will be of same size
317. Bartholin glands are also called
 a) Vestibular glands b) Lenticular glands c) Rudimentary glands d) Does not exist
318. Sperm acrosome is derived from
 a) Golgi bodies
 b) Endoplasmic reticulum

- c) Lysosome
d) Mesosome
319. Chorionic villi and uterine tissue become interdigitated with each other and jointly form
a) Trophoblast b) Inner cell mass c) Placenta d) Implantation
320. Menstruation is due to sudden
a) Reduction of FSH b) Increase of LH
c) Reduction in oestrogen and progesterone d) None of the above
321. Anti-fertilizin is present on
a) Egg b) Tail c) Ovum d) Spermatozoa
322. During early and middle fetal life, the testis are located in the
a) Inguinal canal b) Abdominal cavity c) Pelvic cavity d) Scrotal sacs
323. Human egg is
a) Alecithal b) Centrolecithal c) Telolecithal d) Megalecithal
324. Cleavage forms 2-4-6-8-16 cells. These cells are called
a) Blastocysts b) Blastomeres c) Morula d) Trophoblast
325. In frog, chromosome number is reduced to half
a) When 2nd polar body is separated b) When 2nd polar body is divided
c) When 3rd polar body is separated d) When 1st polar body is separated
326. Testicular lobules contains
a) 3-5 seminiferous tubules b) 2-6 seminiferous tubules
c) 5-7 seminiferous tubules d) 1-3 seminiferous tubules
327. Lowest regeneration power is found in
a) *Amoeba* b) Sponges c) Coelenterates d) Brain cells
328. Which of the following is a mechanical barrier used in birth control?
a) Tubectomy b) Dalcon shield c) Vasectomy d) Diaphragm
329. Amphimixis is
a) Fusion of sperm with egg b) Fusion of pronucleus of sperm with egg
c) No fusion d) Fusion of diploid cells
330. Our all bones are derived from the mesoderm. Except
a) Facial b) Femur c) Ribs d) Occipital
331. Layers of an ovum from outside to inside is
a) Corona radiata, zona pellucida and vitelline membrane b) Zona pellucida, Corona radiata, and vitelline membrane
c) vitelline membrane, zona pellucida, and Corona radiata d) Zona pellucida, vitelline membrane, and Corona radiata
332. A human female has the maximum number of primary oocytes in her ovaries
a) At birth b) Just prior to puberty
c) Early in her fertile years d) Midway through her fertile years
333. Onset of menstruation of human female is called
a) Menopause b) Puberty c) Gestation d) Menarche
334. Ovulation takes place in a month between
a) 11-14 days b) 14-16 days c) 15-28 days d) 21-26 days
335. The best definition of the process of gastrulation is that it is a process where the
a) Single layered blastula become two layered b) Archenteron is formed
c) Zygote gets converted into larva d) Cells move to occupy their definite position
336. A boy who has not passed through puberty sustains an injury to his anterior pituitary such that FSH is no longer released, but LH secretion is normal. After he grows to maturity, one would expect that he would
a) Develop secondary sex characters
b) Be sterile

- c) Have improper functioning of the testicular interstitial cells
d) Both (a) and (b)
337. Which of the following is not a case of epimorphosis?
a) Formation of sperms from small clumps of cells b) Regeneration of tail in a lizard
c) Replacement of several arm in starfish d) Replacement of limb in salamander
338. Androgen stimulates the ...A... FSH acts on the ...B... and stimulates factors for spermiogenesis. Here A and B refers to
a) A-Sertoli cell; B-Leydig cell
b) A-Spermatogenesis; B-Spermatid
c) A-Spermatogenesis; B-Sertoli cell
d) A- Spermatogenesis; B-Leydig cell
339. Which of the following is the group of external genitalia in human female?
a) Labium minora, labium majora, vagina
b) Labium minora, labium majora, clitoris
c) Labium minora, labium majora, oviduct
d) Labium minora, labium majora, cervix
340. Cushion of fatty tissue covered by skin and pubic hair is called
a) Mono pubis b) Labia majora c) Labia minora d) Clitoris
341. A. The mature follicle is called Graafian follicle
B. The mature follicle is called secondary follicle
a) Statement A is correct, statement B is incorrect
b) Statement B is correct, statement A is incorrect
c) Both statement are incorrect
d) Both statement are correct
342. After one month of pregnancy, the embryo's ...A... is formed. By the end of theB... month of pregnancy, the foetus develops limbs and digits. By the end of ...C... most of the major organ systems are formed for example, the limbs and external genital organs are well-developed. By the end of ...D..... the body is covered with fine hair, eyelids separate, and eyelashes are formed
Here A and D refers to
a) A-heart, B-second, C-first trimester, D-second trimester
b) A-heart, B-second, C-first month, D-second month
c) A-heart, B-second, C-first week, D-second week
d) A-heart, B-fourth, C-first trimester, D-second trimester
343. Find out the correct statement.
a) Amnion is the outer layer containing amniotic fluid that acts as shock absorber to the soft embryo
b) Yolk sac is foetal membrane that helps in the nourishment of the embryo in general
c) In mammals, allantois is not excretory in function
d) Chorion-allantoic membrane develops villi and contribute much to the development of placenta
344. Identify A, B, C and D in the given diagram



- a) A-Urinary bladder, B-Bulbourethral gland, C-Prostate gland, D-Seminal vesicles
 b) A-Urinary bladder, B-Seminal vesicles, C-Prostate gland, D- Bulbourethral gland
 c) A- Prostate gland, B- Seminal vesicles, C- Urinary bladder, D- Bulbourethral gland
 d) A- Bulbourethral gland, B- Urinary bladder, C- Seminal vesicles, D- Prostate gland
345. Which is formed in gastrulation?
 a) Archenteron b) Heart c) Brain d) None of these
346. Everytime copulation do not lead to fertilization and pregnancy because of failure of sperm to reach the
 a) Ampulla b) Cervix c) Endometrium d) Myometrium
347. 64 celled stage of embryo is called
 a) Blastocyst b) Blastomere c) Morula d) Inner mass of cell
348. Uterus is also called
 a) Cervical canal b) Womb c) Oviduct d) Ampulla
349. Oral contraceptives are prescribed in females to check
 a) Entry of sperms in vagina b) Implantation
 c) Ovulation d) Fertilization
350. Which of the correct example of the type of regeneration out of the two major types?
 a) Morphallaxis-regeneration of two transversely cut equal pieces of one *Hydra* into two small *Hydras*
 b) Epimorphosis -replacement of old and dead erythrocytes by the now ones
 c) Morphallaxis-healing of wound in the skin
 d) Epimorphosis-regeneration of crushed and filtered out pieces of *Planaria* into as many new *planarian*
351. Trophoblast gives to embryo
 a) Nourishment b) Development c) Extra cells d) Movements
352. Fleшы folds of tissue which extends down the mons pubis and surrounds the vaginal opening is called
 a) Labia minora b) Labia majora c) Hymen d) Clitoris
353. The embryo at 16-celled stage is known as
 a) Morula b) Gastrula c) Blastula d) Blastomere
354. Non -participation of male pronucleus in fertilization is
 a) Androgenesis b) Polyandry c) Gynogenesis d) Polygyny
355. Ovulation in the human female normally takes place during the menstrual cycle
 a) At the mid secretory phase b) Just before the end of the secretory phase
 c) At the beginning of the proliferative phase d) At the end of the proliferative phase
356. Releasing of sperms from seminiferous tubules is called
 a) Spermiogenesis b) Spermiation c) Spermatogenesis d) Spermatid
357. Identify the sex of baby A, B, C, D



- a) A-Girl, B-Boy, C-Girl, D-Boy
 b) A- Boy, B- Girl, C- Boy, D- Girl
 c) A- Boy, B-Boy, C-Girl, D- Girl
 d) A-Girl, B- Girl, C- Boy, D-Boy

358. The testes in humans are situated outside the abdominal cavity inside a pouch called scrotum. The purpose served is for

- a) Escaping any possible compression by the visceral organs
 b) Providing more space for the growth of epididymis
 c) Providing a secondary sexual feature for exhibiting the male sex
 d) Maintaining the scrotal temperature lower than the internal body temperature

359. Which is present in male rabbit but not present in female rabbit?

- a) Urethra b) Vagina c) Uterus d) Vas deferens

360. The tertiary follicle changes into mature follicle called ...A... The secondary oocyte form a new membrane called ...B... surrounding it. The Graafian follicle ruptures to release the secondary oocyte ovum from the ovary by the process called ...C...

A, B and C in the above passage refers to

- a) A-Graafian follicle; B-primary follicle; C-ovulation b) A- ovulation; B-primary follicle; C- Graafian follicle
 c) A- ovulation; B-primary follicle; C- secondary follicle d) A-Graafian follicle; B-zona pellucida; C-ovulation follicle

361. is composed of endoderm inside and splanchoropleuric extraembryonic mesoderm outside. This part is non-functional except it is the site of early blood formation. The most suitable word for the blank space is

- a) Allantois b) Chorion c) Amnion d) Yolk sac

362. The new membrane formed by follicular cells is called

- a) Zona granulosa
 b) Zona pellucida
 c) Plasma membrane
 d) Tertiary membrane

363. Arrange the events of menstrual cycle as they occur

- I. Secretion of FSH
 II. Growth of corpus luteum
 III. Growth of follicle and oogenesis
 IV. Ovulation
 V. Sudden increase in level of LH

- a) I, III, V, IV, II b) II, I, III, IV, V c) III, I, IV, V, II d) I, IV, III, V, II

364. Arrhenotoky is also called

- a) Diploid parthenogenesis
 b) Haploid parthenogenesis
 c) Incomplete parthenogenesis
 d) Complete parthenogenesis

365. Vasa deferentia together with seminal vesicle forms

- a) Caput epididymis b) Corpus epididymis c) Ejaculatory duct d) Cauda epididymis

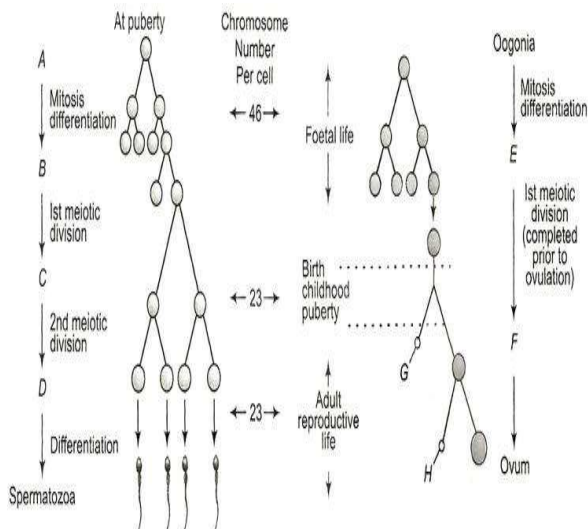
366. Which one of the following cells have haploid number of chromosome?

- a) 1° spermatocytes b) 2° spermatocytes c) Spermatid d) Both (b) and (c)

367. Acrosome present at the tip of sperm is made up of

- a) Golgi bodies b) Mitochondria c) Lysosome d) Ribosome

368. Sertoli cells are found in
 a) Heart
 b) Liver
 c) Germinal epithelium
 d) Seminiferous tubules
369. Gametogenesis is the formation of
 a) Gametes
 b) Ova
 c) Sperm
 d) Organs
370. Liver and pancreas are derivatives of
 a) Ectoderm
 b) Endoderm
 c) Ectoderm and mesoderm
 d) Both (a) and (b)
371. Which of the following is correct?
 a) Mesoderm – Brain
 b) Ectoderm –Liver
 c) Mesoderm – Skeleton
 d) Endodermis -Epidermis
372. Corpus luteum secretes
 a) LH
 b) Progesterone
 c) Oestrogen
 d) FSH
373. Interstitial cells are also called
 a) Leydig cells
 b) Rete testis
 c) Vasa efferentia
 d) Spermatocytes
374. Why menstrual cycle do not takes place regulary?
 a) High level of hormone in blood
 b) Fertilization of ovum
 c) Early release of ovum
 d) Psychological region
375. Which of the following is a role of Sertoli cells in spermatogenesis?
 a) They provide nutrition to the developing sperms
 b) They stimulate germinal epithelium
 c) They direct morphogenesis of sperm
 d) They provide nutrition to developing sperm; they direct morphogenesis of sperm
376. Development of animal embryo from egg without fertilization is called
 a) Parthenogenesis
 b) Parthenocaryp
 c) Apospory
 d) Apomixis
377. Cleavage is the rapid mitotic division. It occurs in
 a) Gametes
 b) Zygote
 c) Sperm
 d) Ova
378. Which one of the following statements about human sperm is correct?
 a) Acrosome has a conical pointed structure used for piercing and penetrating the egg, resulting in fertilization
 b) The sperm lysins in the acrosome dissolve the egg envelope facilitating fertilization
 c) Acrosome serves as a sensory structure leading the sperm towards the ovum
 d) Acrosome serves no particular function
379. Given diagram refers to spermatogenesis and oogenesis in humans. Identify *A* to *H* correctly.



- a) A-Spermatogonia, B-Secondary spermatocytes, C-Primary spermatocytes, D-Spermatids, E-Primary oocyte, F-Secondary oocyte, G-First polar body, H-Second polar body

- b) A-Spermatogonia, B- Primary spermatocytes, C- Secondary spermatocytes, D-Spermatids, E- Secondary oocyte, F-Secondary oocyte, G-First polar body, H-Second polar body
- c) A-Spermatogonia, B-Primary spermatocytes, C-Secondary spermatocytes, D-Spermatids, E-Primary oocyte, F-Secondary oocyte, G-First polar body, H-Second polar body
- d) A-Spermatogonia, B-Primary spermatocytes, C-Secondary spermatocytes, D-Spermatids, E-Primary oocyte, F-Secondary oocyte, G- Second polar body, H-First polar body

380. Which of them is not a correct match?

- a) Proliferative phase-Rapid regeneration of myometrium and maturation of Graafian follicle
- b) Secretory phase-Development of corpus luteum and increased secretion of progesterone
- c) Menstruation-Breakdown of myometrium and ovum is not fertilized
- d) Ovulation-LH and FSH attain last peak and sharp full in secretion of progesterone

381. Origin of nervous system occurs from

- a) Meso-endoderm b) Mesoderm c) Endoderm d) Ecroderm

382. The edges of infundibulum possess finger-like projection called ...A... which helps in the collection of ovum. The infundibulum leads to wider part of the oviduct called ...B... Last part of oviduct, ...C.... has narrow lumen and joins to uterus.

A, B and C in the above statement refers to

- a) A-fimbriae; B-ampulla; C-isthmus b) A-fimbriae; B-isthmus; C-ampulla
- c) A- isthmus; B- fimbriae; C-ampulla d) A- isthmus; B- ampulla; C- fimbriae

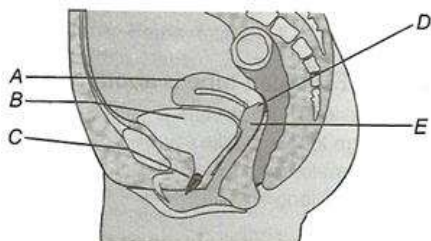
383. Bidder’s canal is found in

- a) Testis of frog b) Kidney of frog c) Kidney of mammal d) Ovary of mammal

384. Baby moving vigorously, responds to the touch and loud noises, swallowing amniotic fluid and urinating during of development

- a) 20 weeks b) 24 weeks c) 26 weeks d) 28 weeks

385. The following diagram refers to female reproductive system of human. Identify A to E



- a) A-Urethra, B-Urinary bladder, C-Uterus, D-Cervix, E-Vagina
- b) A-Urethra, B-Urinary bladder, C-Uterus, D- Vagina, E- Cervix
- c) A-Urethra, B-Urinary bladder, C-Uterus, D-Cervix, E-Vagina
- d) A- Uterus, B-Urinary bladder, C- Urethra, D-Cervix, E-Vagina

386. Mammalian egg has

- a) No yolk at all b) Small amount of yolk
- c) Large amount of yolk d) Yolk concentrated at one pole

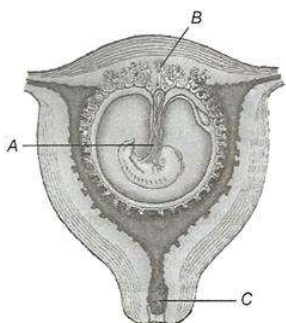
387. If a germ cell in a female gonad and a germ cell in a male gonad begin undergoing meiosis simultaneously, what will be the ratio of ova and sperm produced?

- a) 1:1 b) 1:2 c) 1:4 d) 2:1

388. The granules present beneath the plasma membrane of oocyte cells are called ...A... These granules fuses with the plasma membrane of oocyte and releases their content including ...B... between the ...C... and zona pellucida. This ensures the ...D... Here A, B, C and D refers to

- a) A-monospermy, B-plasma membrane, C-corticle enzyme, D-corticle granules
- b) A- corticle granule, B- corticle enzyme, C- plasma membrane, D- monospermy
- c) A- corticle enzyme, B- corticle granules, C- plasma membrane, D- monospermy
- d) A- corticle enzyme, B- corticle granules, C- monospermy, D- plasma membrane

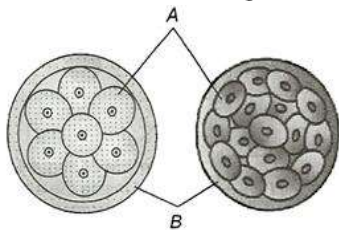
389. What do you mean by the term spermateleosis?
 a) Conversion of spermatids to sperm
 b) Conversion of spermatogonium to spermatid
 c) Conversion of spermatid to spermatogonium
 d) Conversion of primary spermatocyte to secondary spermatocyte
390. Regeneration of tail in lizards is an example of
 a) Epimorphosis b) Morphallaxis c) Heteromorphosis d) parthenogenesis
391. Which area experiences the greatest change during the menstrual cycle?
 a) Vagina b) Perimetrium c) Cervix d) Endometrium
392. In humans, at the end of the first meiotic division, the male germ cells differentiate into the
 a) Primary spermatocytes b) Secondary spermatocytes
 c) Spermatids d) Spermatogonia
393. A Change in the amount of yolk and its distribution in the egg will affect
 a) Formation of zygote
 b) Pattern of cleavage
 c) Number of blastomeres produced
 d) Fertilization
394. Which one of the following is the correct matching of the events occurring during menstrual cycle?
 a) Ovulation – LH and FSH attain peak level and sharp fall in the secretion of progesterone
 b) Proliferative phase – Rapid regeneration of myometrium and maturation of Graafian follicle
 c) Development of corpus luteum – Secretory phase and increased secretion of progesterone
 d) Menstruation – Breakdown of myometrium and ovum not fertilized
395. 'XX' is a thick structure of male reproductive system which arises from cauda epididymis. 'XX' are 2 in number and its lining has many stereocilia. Identify 'XX'
 a) Vasa efferentia b) Vasa deferentia c) Penis d) Scrotum
396. The largest component of the uterus by weight is the
 a) Broad ligament b) Myometrium c) Round ligament d) Endometrium
397. Head region of the sperm contains
 a) Nucleus and acrosome b) Middle piece and neck region
 c) Nucleus and tail d) Middle piece and nucleus
398. The embryonic membrane involved in the formation of placenta in human is
 a) Yolk sac b) Allantois c) Amnion d) Chorion
399. Hormone, which is responsible for contraction of uterus is
 a) Vasopressin b) Oxytocin c) Thyrotropin d) Gonadotropin
400. Labium majora of a female mammal is homologous to
 a) Penis b) Prostate gland c) Epididymis d) Scrotal sac
401. Spermiogenesis or spermatiliosis is
 a) Changing of spermatid to spermatozoa
 b) Changing of spermatid to sperm
 c) Both (a) and (b)
 d) Changing of spermatid to secondary spermatocytes
402. Which extra-embryonic membrane in humans prevents desiccation of the embryo inside the uterus?
 a) Chorion b) Allantois c) Yolk sac d) Amnion
403. Give the name A, B and C in the previous question
 a) A-Secondary spermatocytes, B-Primary spermatocytes, C-Spermatozoa
 b) A- Spermatozoa, B-spermatocytes, C- Primary spermatocytes, Secondary spermatocytes
 c) A- Primary spermatocytes, B- Secondary spermatocytes, C-Spermatozoa
 d) A- Spermatozoa, B-Secondary spermatocytes, C- Primary spermatocytes
404. In the given diagram find out, A, B and C



- a) A-Plug of mucous in cervix, B-Placement villi, C- Umbilical cord b) A-Umbilical cord, B-Placement villi, C- Plug of mucous in cervix
- c) A-Umbilical cord, B- Plug of mucous in cervix, C- Placement villi d) A-Placement villi, B- Plug of mucous in cervix, C- Umbilical cord
405. The type of connective tissue that is associated with the umbilical cord is
 a) Areolar connective tissue b) Jelly-like connective tissue
 c) adipose connective tissue d) Reticular connective tissue
406. The uterus opens into the vagina by a canal called
 a) Cervical canal b) Fundus c) Ampulla d) Oviducts
407. Within the female ovary, primordial follicles start to develop
 a) At puberty b) Around age 5
 c) At birth d) During prenatal development
408. Binding of sperm to secondary oocyte cause ...A... which ensuresB... . The words suitable to fill the blanks are
 a) A-polyspermy; B-polarisation b) A-polarisation; B-polyspermy
 c) A-depolarisation; B-monospermy d) A- monospermy; B- depolarisation
409. The correct sequence of spermatogenetic stages leading to the formation of sperms in a mature human testis is
 a) Spermatocyte-spermatogonia-spermatid-sperm
 b) Spermatogonia - Spermatocyte-spermatid-sperm
 c) Spermatid - Spermatocyte-spermatogonia- sperm
 d) spermatogonia-spermatid- Spermatocyte- sperm
410. Mixing up of chromosome of male and female nucleus is called
 a) Karyogamy b) Amphimixis c) Both (a) or (b) d) None of the above
411. Body covered with fine hair, eyelid separates and eye lashes are formed during of development
 a) 3rd month b) 4th month c) 5th month d) 6th month
412. Which of the following hormones does not play any role is menstruation?
 a) GH b) FSH c) LH d) None of these
413. Withdrawl of which hormone cause desintegration of corpus luteum?
 a) Progesterone b) LH c) Both (a) and (b) d) None of these
414. Hormone ...A... secretes by the anterior lobe of pituitary, which stimulates the ovarian follicle and follicle secretes the ...B... hormone. Here A and B refers to
 a) A-FSH; B-progesterone b) A-FSH; B-inhibin
 c) A-Inhibin; B-FSH d) A-FSH; B-oestrogen
415. Egg secretes a chemical called ...A... which is made up of ...B... and sperm secretes a chemical called ...C... made up of ...D... The adhesion of sperm to the egg of same species through chemical recognition is called ...E... . Here A to E refers to
 a) A-fertilisin, B-glycoprotein, C-antifertilisin, D-protein, E-agglutination
 b) A-fertilisin, B-glucose, C-antifertilisin, D- glucose, E-agglutination
 c) A-fertilisin, B-fructose, C-antifertilisin, D- fructose, E-agglutination

- d) A-fertilisin, B- protein, C-antifertilisin, D- glycoprotein, E-agglutination
416. The clitoris in females is
 a) Analogous to penis
 b) Homologous to penis
 c) Functional penis in female
 d) Non-functional penis in male
417. Facial bones in humans are derived from
 a) Ectoderm
 b) Endoderm
 c) Mesoderm
 d) Trophoblast cells
418. Regeneration of liver is
 a) Metamorphosis
 b) Reparative regeneration
 c) Epimorphosis
 d) Morphogenesis
419. Embryologist can draw the fate maps of future organ of embryo in
 a) Blastula
 b) Morula
 c) Early gastrula
 d) Late gastrula
420. Pseudocoelom developed from
 a) Embryonic mesoderm
 b) Archenteron
 c) Blastocoel
 d) Blastopore lip
421. In human beings, normally in which one of the following parts, does the sperm fertilize the ovum?
 a) Cervix
 b) Fallopian tube
 c) lower part of uterus
 d) Upper part of uterus
422. Function of bulbourethral gland is to
 a) Lubricate the penis
 b) Increase the motility of sperm
 c) Enhance the sperm count
 d) All of the above
423. Fluid filled cavity called ...A... is present in ...B... follicle called ...C.... Here A, B and C are
 a) A-secondary follicle, B-primary follicle, C-tertiary follicle
 b) A- primary follicle, B-antrum, C- secondary follicle
 c) A- tertiary follicle, B- secondary follicle, C- antrum
 d) A- antrum, B- secondary follicle, C-tertiary follicle
424. Spermatids are transformed into spermatozoa by
 a) Spermiation
 b) Spermatogenesis
 c) Meiosis
 d) spermiogenesis
425. Length and width of testis is
 a) 4-5 cm and 2-3 cm
 b) 5-6 cm and 3-4 cm
 c) 6-7 cm and 4-5 cm
 d) 7-8 cm and 8-9 cm
426. Which cell organelle is absent in human sperm?
 a) ER
 b) Mitochondria
 c) Nucleus
 d) Centrioles
427. Largest egg is of
 a) PPLO
 b) Ostrich
 c) Hydra
 d) *Periplaneta Americana*
428. The endometrium is the lining of
 a) Bladder
 b) Vagina
 c) Uterus
 d) Oviduct
429. Acrosome is a type of
 a) Lysosome
 b) Flagellum
 c) Ribosome
 d) Basal body
430. Which gland in female is a counterpart of Cowper's gland in male?
 a) Bartholin's gland
 b) Clitoris
 c) Perineal gland
 d) None of these
431. Embryo at 8 to 16 cell stage is called
 a) Blastula
 b) Morula
 c) Trophoblast
 d) All of these
432. Neoteny refers to
 a) Development of gonads
 b) Pre-adult animal
 c) Metamorphosis
 d) Retention of larval or embryonic trait in the adult body
433. Implantation is
 a) Attachment of blastocyst to uterine wall
 b) Division of blastocyst

- c) Formation of organs
d) An IVF technique
434. When released from ovary, human egg contains
a) One Y-chromosome
b) Two X-chromosomes
c) One X-chromosome
d) XY-chromosomes
435. Acrosome is a part of
a) Foetus
b) Graafian follicle
c) Human ovum
d) Human sperm
436. Eunuchoidism is due to the failure of production of
a) FSH
b) Testosterone
c) ICSH
d) Oestrogen
437. Which part of the sperm contains hydrolytic enzymes?
a) Head region
b) Neck region
c) Cap region
d) Tail region
438. Which of the following takes part in the formation of placenta?
a) Only trophoblast
b) Only allantois
c) Trophoblast and mesoderm
d) Both (b) and (c)
439. Which one of the following statements about morula in humans is correct
a) It has almost equal quantity of cytoplasm as an uncleaved zygote but much more DNA
b) It has far less cytoplasm as well as less DNA than in an uncleaved zygote
c) It has more or less equal quantity of cytoplasm and DNA as in uncleaved zygote
d) It has more cytoplasm and more DNA than an uncleaved zygote
440. Embryonic period is also called
a) Prenatal period
b) Development period
c) Postnatal period
d) None of the above
441. Function of scrotum is to maintain the
a) Temperature of testis
b) Body temperature
c) Level of growth hormone
d) Level of male hormone
442. Sperm enters from which part of egg?
a) Anywhere in fertilized egg from animal pole
b) From animal pole in unfertilized egg
c) In unfertilized egg from vegetal pole
d) None of the above
443. Which of the following hormones is secreted by implanted blastocyst, that acts on the corpus luteum in the ovary, stimulating the body to produce oestrogens and progesterone to maintain the uterine lining?
a) Oestrogen
b) HCG
c) Progesterone
d) Oxytocin
444. Find A and B in the figure



- a) A-Blastocyst; B-Blastomere
b) A-Blastula; B-Plasma membrane
c) A-Blastomere; B-Zona pellucida
d) A-Zona pellucids; B-Blastomere
445. Which of the following organs is devoid of glands?
a) Uterus
b) Vagins
c) Vulva
d) Oviduct
446. Match the following cell types with the corresponding chromosome complement, that is, whether the cell is haploid or diploid? (*Note* If the cell is haploid use 'A', if diploid use 'B')
- I. Spermatozoan
II. Secondary spermatocyte
III. Spermatogonium
IV. Spermatid

- V. Primary spermatocyte
- VI. Secondary oocyte
- VII. Second polar body
- VIII. First polar body
- IX. Primary oocyte
- a) I-A, II-A, III-B, IV-A, V-B, VI-A, VII-A, VIII-A, IX-B
- b) I-A, II-A, III-B, IV-B, V-B, VI-A, VII-A, VIII-A, IX-A
- c) I-A, II-A, III-A, IV-A, V-A, VI-A, VII-A, VIII-B, IX-B
- d) I-B, II-B, III-B, IV-B, V-B, VI-B, VII-B, VIII-A, IX-B

447. Which part of the sperm assist first mitotic division?

- a) Acrosome
- b) Neck
- c) Middle part
- d) Tail part

448. Sperm entry takes place in the secondary oocyte by

- a) Cone of rejection
- b) Cone of reception
- c) Fertilisation cone
- d) Both (b) and (c)

449. Sperm lysin is found in

- a) Neck region of sperm
- b) Middle region of sperm
- c) Head region of sperm
- d) Tail region of sperm

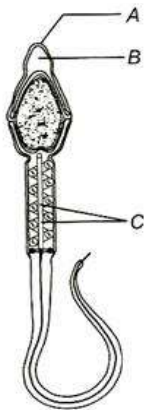
450. Compartments in mammalian testes are called

- a) Testicular lobules
- b) Seminiferous tubules
- c) Sertoli cells
- d) Interstitial cells

451. Human Fallopian tube is about

- a) 8-9 cm long
- b) 9-10 cm long
- c) 10-12 cm long
- d) 12-17 cm long

452. Identify A, B and C in the given human sperm diagram



- a) A-Acrosome, B-Plasma membrane, C-Mitochondria
- b) A- Plasma membrane, B- Acrosome, C-Mitochondria
- c) A- Mitochondria, B- Acrosome, C- Plasma membrane
- d) A- Mitochondria, B-Plasma membrane, C- Acrosome

453. Prostate gland surrounds the ...A... . It produces milky, slightly alkaline solution which forms ...B... volume of the semen. The secretion contains ...C... acid; enzymes (acid phosphates, amylase pepsinogen and prostaglandins).

A, B and C in the above statement is

- a) A-prostate gland, B-35%, C-carboxylic
- b) A-penis, B-40%, C-carboxylic
- c) A-ureter, B-25%, C-citric
- d) A-ureter, B-50%, C-citric

454. Corpus luteum produces

- a) Progesterone
- b) Oestrogen
- c) Luteotropin hormone
- d) Luteinzing hormone

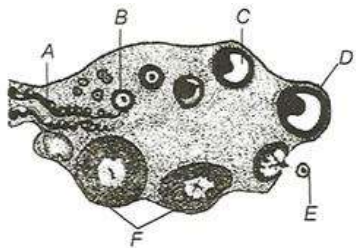
455. In gastrulation, which of the forewing germ layer is /are formed?

- a) Endoderm
- b) Mesoderm
- c) Ectoderm, endoderm
- d) All of the above

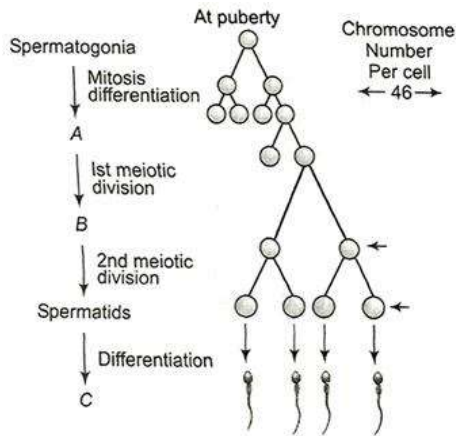
456. The permissible use of the technique amniocentesis is for
 a) Detecting sex of the unborn foetus
 b) Artificial insemination
 c) Transfer of embryo into the uterus of a surrogate mother
 d) Detecting any genetic abnormality
457. Identify the correctly matched pairs of the germ layers and their derivatives.
 I.Ectoderm – Epidermis
 II.Endoderm – Dermis
 III.Mesoderm – Muscles
 IV.Mesoderm – Notochord
 V.Endoderm – Enamel of teeth
 a) I, III and IV only b) I, II, III and V only c) I and IV only d) I and II only
458. Follicular phase lasts for
 a) 6-13 days b) 6-24 days c) 6-10 days d) 6-8 days
459. Fertilization of ovum by the sperm takes place in
 a) Ampulla of oviduct b) Isthmus of oviduct c) Fimbriae of oviduct d) None of the above
460. Bartholin glands are situated
 a) On the sides of head
 b) At the reduced tail end of birds
 c) On either sides of vas deferens in human
 d) On either sides of vagina in human
461. The organ which produces gametes are called ...A... and which neither produces gametes nor hormones are called ...B.... Here A and B represent
 a) A-primary sex organs; B-secondary sex organs
 b) A- secondary sex organs; B- primary sex organs
 c) A-tertiary sex organs; B-secondary sex organs
 d) A- secondary sex organs; B- tertiary sex organs
462. Sertoli's cells are found in
 a) Pancreas b) Testes c) ovary d) Livery
463. In males LH is called
 a) Androgen binding protein b) Inhibin
 c) ICSH (Interstitial Cell Stimulating Hormones) d) FSH
464. Sertoli's cells found in testis. These cells are
 a) Nurse cells b) Reproductive cells c) Receptor cells d) None of the above
465. Mainly which type of hormones control the menstrual cycle in human beings?
 a) FSH b) LH c) FSH, LH, Oestrogen d) Progesterone
466. Parturition is the process of
 a) Child birth b) Fusion of gametes
 c) Both (a) and (b) d) Releasing of gametes
467. Placenta is a connection between
 a) Foetus and vaginal wall b) Foetus and Fallopian tube
 c) Foetus and uterine wall d) Embryo and scrotum
468. The hormone that prepares and maintains the uterus during pregnancy is secreted by
 a) Corpora cardiaca b) Corpus luteum c) Corpora albicans d) Graafian follicle
469. The early stage human embryo distinctly possesses
 a) Gills b) Gil slits c) External ear (pinna) d) Eyebrows
470. In human lining of gastrointestinal tract, lining of lungs, thymus thyroid, tonsils, kidney duct and bladder are derived from
 a) Ectoderm b) Mesoderm c) Endoderm d) Both (b) and (c)

471. Which of these is used to control human population?
 a) Oestrogen and progesterone
 b) IUCD and MTP
 c) Tubectomy and vasectomy
 d) All of the above

472. Give the name of C and D in the diagram



- a) Secondary spermatocyte and primary spermatocytes
 b) Spermatid and ootid
 c) Primary spermatocyte and secondary spermatocytes
 d) All of the above
473. The first menstruation begins at puberty is called
 a) Menopause
 b) Ovulation
 c) Gametogenesis
 d) Menarch
474. An antrum is the characteristic offollicles
 a) Secondary
 b) Graafian
 c) Primary
 d) Secondary or Graafian
475. The blastomeres in the blastocyst are arranged into an outer layer called and an inner group of cells attached to trophoblast called the mass.
 The trophoblast layer gets attached to the and the differentiated as the embryo. As a result the becomes embedded in the endometrium of the uterus. This is called and it leads to pregnancy.
 Blanks given in the above paragraph are filled in chronological order as
 a) Inner cell, trophoblast, endometrium, inner mass
 b) Trophoblast, inner cell, endometrium, inner mass
 c) Trophoblast, inner cell, endometrium, inner mass
 d) Trophoblast, inner cell, inner cell mass, endometrium, implantation, blastocyst
476. Inner portion of the seminiferous tubules contain
 a) Male germ cell
 b) Sertoli cells
 c) Both (a) and (b)
 d) Interstitial or Leydig cell
477. The epididymis leads to ...A... that ascends to abdomen and loops over the ...B.... Here A and B refers to
 a) A-epididymis; B-vas deferens
 b) A-vas deferens; B-epididymis
 c) A-vas deferens; B-urinary bladder
 d) A-urinary bladder; B-vas deferens
478. Chorion is made up of
 a) Trophoblast outer and somatopleuronic inside
 b) Somatopleuronic outside and trophoblastic inside
 c) Both (a) and (b)
 d) None of the above
479. Endocrine portion of testis is
 a) Seminiferous tubules
 b) Interstitial cells
 c) Leydig cell
 d) Both (b) and (c)
480. Find out the chromosome number in the structures A, B and C



- a) 46, 23, 46
- b) 23, 46, 46
- c) 46, 23, 23
- d) 23, 23, 46

481. Genes in the somatic cells of the body undergoes mutation with the passages of time. Such mutations cause senescence. It is related with

- a) Hormonal theory
- b) Programmed senescence theory
- c) Error and damages theories
- d) Immunological theories

482. Identify I, J, K and L in the diagram of Q, 35

- a) I-Rete-testis, J-Vasa efferentia, K-Epididymis, L-Testicular lobules
- b) I-Vasa efferentia, J-Rete-testis, K-Testicular lobules, L-Epididymis
- c) I-Epididymis, J-Vasa efferentia, K-Rete-testis, L-Testicular lobules
- d) I-Testicular lobules, J-Rete-testis, K-Vasa efferentia, L-Epididymis

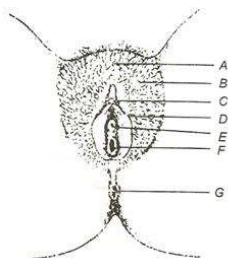
483. The first movements of the foetus and appearance of hair on its head are usually observed during which month of pregnancy?

- a) Fourth month
- b) Fifth month
- c) Sixth month
- d) Third month

484. Which is immortal?

- a) Plasma cell
- b) Germ cell
- c) Brain cell
- d) Kidney cell

485. Match A to G with I to VII given below



- I. Anus
- II. Glans (clitoris)
- III. Labia majora
- IV Labia manora
- V. Mons pubis
- VI. Urethra
- VII. Vagina

- a) A-V, B-IV, C-III, D-II, E-VI, F-VII, G-I
- b) A-V, B-III, C-II, D-IV, E-VI, F-VII, G-I
- c) A-II, B-III, C-V, D-IV, E-VI, F-VII, G-I
- d) A-V, B-VI, C-VII, D-IV, E-II, F-III, G-I

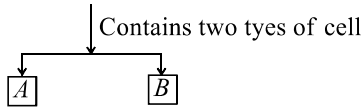
486. How many sperm cells are present in an average (3cc) ejaculation?

- a) 200 million
- b) 300 million
- c) 400 million
- d) 500 million

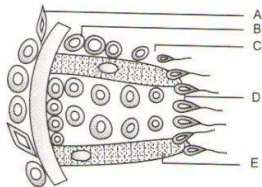
487. First milk produced after child birth is called

- a) Sebum b) Cerumen c) True milk d) Colostrum
488. Sperm's acrosome has
 a) Hyaluronic acid and proacrosin b) Hyaluronic acid and Fertilizin
 c) Hyaluronidase and proacrosin d) Fertilizin and proacrosin

489. Blastocyst

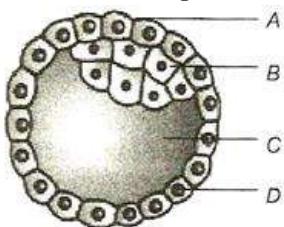


- a) A-Trophoblast; B-Inner mass of cell b) A-Trophoderm; B-Embroyblast
 c) Either (a) or (b) d) Both (a) and (b)
490. Ageing is retarded by
 a) ABA b) CKN c) GA d) C₂H₄
491. The colour of bone marrow in foetus is
 a) Red b) Yellow c) Brown d) None of these
492. In rabbit, head of epididymis present at the head of the testis is called
 a) Vas deferens b) Cauda epididymis c) Gubernaculum d) Caput epididymis
493. The main tissue present in breast is tissue
 a) Glandular b) Sequamous c) Ciliated d) Epithelium
494. Placenta faciliate
 a) Supply of oxygen b) Nutrient supply
 c) Removal of excretory material d) All of the above
495. Which of the following undergoes spermiogenesis?
 a) Spermatids b) Spermatogonia
 c) Primary spermatocytes d) Secondary spermatocytes
496. Cleavage found in mesolecithal egg is
 a) Holoblastic and equal b) Holoblastic and unequal
 c) Meroblastic d) Discoidal
497. Choose the correct combination of labeling of seminiferous tubules of testis.



- a) A - Sertoli's cells B - Spermatogonium C b) A - Interstitial cell B - Spermatid C -
 - Spermamid Spermatogonium
 D - Interstitial cell E - Spermatozoa D - Spermatozoa E - Sertoli's cells
 c) A - Interstitial cell B - Spermatid C - d) A - Interstitial cell B - Spermatogonium C
 Spermatozoa - Spermamid
 D - Spermatogonium E - Sertoli's cells D - Spermatozoa E - Sertoli's cells
498. In human, the unpaired male reproductive structure is
 a) Seminal vesicle b) Prostate c) Bulbourethral gland d) Testes
499. The main function of the fimbriae of the fallopian tube in females is to
 a) Release to ovum from the graafian follicle
 b) Make necessary changes in the endometrium for implantation
 c) Help in the development of corpus luteum
 d) Help in the collection of the ovum after ovulation
500. Name the parts and organelles of the sperms which are important in zygotes first cleavage, after syngamy
 a) Neck and mitochondria b) Neck and tail
 c) Neck and centriole d) Neck and head

501. The signals for parturition originates from the fully developed foetus and followed by placenta causing the mild contractions called
- a) Foetal ejection reflex b) Embryo ejection reflex
c) Blastocoel ejaculation reflex d) Still birth
502. Find out corpus luteum and ovum in the previous question figure
- a) A and B b) B and C c) C and D d) F and E
503. Corpus luteum is developed from
- a) Oocyte b) Nephrostome c) Graafian follicle d) None of these
504. Milk secretion in mammals is associated with
- a) Vasopressin b) Progesterone c) Prolactin d) Oxytocin
505. Which layer develops first during embryonic development?
- a) Ectoderm b) Mesoderm c) Endoderm d) Both (b) and (c)
506. The reproductive cycle in the female primate monkeys, apes and human beings is called
- a) Menstrual cycle b) Menarche c) Menopause d) ovulation
507. Which of the following are secretions produced by the spermatozoa at the time of fertilization?
- a) Fertilizin and anti-fertilizin b) Anti-fertilizin and sperm lysin
c) Fertilizin and sperm lysin d) Only sperm lysin
508. Males have numbers 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
509. Which of the following structures is ectodermal in origin?
- a) Notochord b) Kidney c) Brain d) Liver
510. Tablets to prevent contraception contain
- a) Progesterone b) FSH c) LH d) Both (b) and (c)
511. The living organisms can be unexceptionally distinguished from the non-livings on the basis of their ability for
- a) Responsiveness to touch
b) Interaction with the environment and progressive evolution
c) Reproduction
d) Growth and movement
512. Inner mass of cell or embryoblast give rise to
- a) Foetal part b) Embryo c) Notochord d) Nourishment cell
513. Most of the organs are formed during of development
- a) 1st month b) 2nd month c) 3rd month d) 4th month
514. How many compartments (approx.) are there in each human testis?
- a) 250 b) 300 c) 350 d) 400
515. The lytic enzyme present in semen is
- a) Ligase b) Oestrogenase c) Androgenase d) Hyaluronidase
516. In which of the following, the dead space is highest?
- a) Old man b) Old woman c) Young man d) Young woman
517. Find *A* to *D* in figure



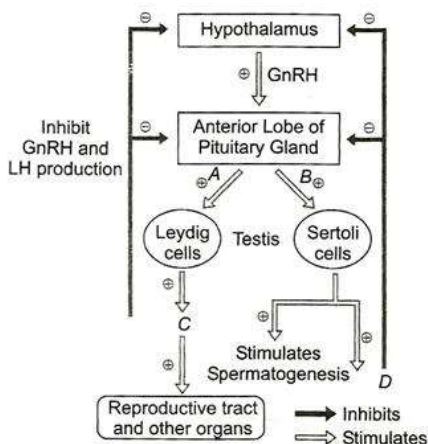
- a) A-Breaking zona pellucida, B-Inner cell mass, C-Blastocoel, D-Trophoblast
b) A-Breaking zona pellucida, B-Inner cell mass, C- Trophoblast, D- Blastocoel

- c) A-Breaking zona pellucida, B- Blastocoel, C-Inner cell mass, D-Trophoblast
 d) A-Breaking zona pellucida, B- Trophoblast, C- Inner cell mass, D- Blastocoel

518. In menstrual cycle, the menstrual phase last for

- a) 3-5 days b) 5-6 days c) 1-3 days d) 2-3 days

519. Give the name of *A, B, C* and *D* hormone in the following diagram



- a) A-Inhibin, B-FSH, C-Testosterone, D-LH
 b) A-Testosterone, B-Inhibin, C- LH, D-FSH
 c) A-FSH, B- LH, C-Inhibin, D-Testosterone
 d) A-LH, B-FSH, C-Testosterone, D-Inhibin

520. Cryptorchidism is a condition in which

- a) Testis does not descend into scrotal sac b) Sperm is not found
 c) Male hormones are not reactive d) Ovaries are removed

521. At which phase, both LH and FSH attain a peak level?

- a) Menstrual phase b) Follicular phase c) Ovulatory phase d) Luteal phase

522. Find out the chromosome number, in *A, B, C* of previous question

- a) 46, 23, 23 b) 46, 46, 23 c) 46, 46, 46 d) 46, 23, 46

523. Synthesis of testosterone by Leydig cells is stimulated by

- a) LTH b) TSH c) FSH d) ICSH

524. Select human development stages and its place at occurrence in normal pregnant woman

- a) Late morula – Middle part of Fallopian tube
 b) Blastula – End part of Fallopian tube
 c) Blastocyst – Uterine wall
 d) 8-celled morula – Starting point of Fallopian tube

525. Region outside the seminiferous tubules is called

- a) Inter digital space b) Inter space c) Interstitial space d) Blind space

526. Hormone which stimulates the 'let down' release of milk from mother's breast when the baby is suckling, is

- a) Prolactin b) Progesterone c) Oxytocin d) Relaxin

527. Corpus spongiosum is found in

- a) Ovary b) Penis c) Testis d) Uterine wall

528. Primary spermatocyte differs form spermatogonium in

- a) Number of chromosomes b) Size and volume
 c) DNA content d) Size of chromosomes

529. During ovulation all of the following occur except

- a) Rupture of the Graafian follicle b) Low oestrogen production
 c) High FSH and LH production d) Formation of the corpus luteum

530. In human all the three germ layers are originated from

- a) Trophoblast cells
- b) Inner cell mass
- c) Both (a) and (b)
- d) They have special lineage

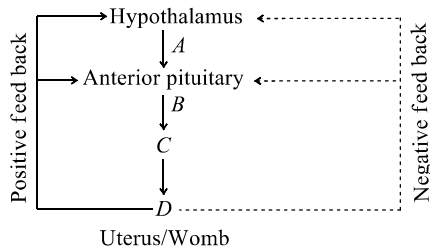
531. How many sperms are formed by four primary spermatocytes?

- a) 1
- b) 4
- c) 16
- d) 32

532. Stem cell can give rise to/the

- a) Any types of cells
- b) Heart cells
- c) Special tissue
- d) Special organs only

533. Given below is an incomplete flow chart showing influence of hormones of gametogenesis in human females. A, B, C and D in the chart refers to



- A-GnRH, (Gonadotropin Releasing Hormone), B- Oestrogen and progesterone, C-Ovary, D-FSH and LH
- A-GnRH, (Gonadotropin Releasing Hormone), B- Progesterone and LH, C-Ovary, D- Oestrogen and FSH
- A-GnRH, (Gonadotropin Releasing Hormone), B- FSH and Oestrogen, C-Ovary, D-LH and Progesterone
- A-GnRH, (Gonadotropin Releasing Hormone), B- FSH and LH, C-Ovary, D- Oestrogen and Progesterone

