BIOLOGY

BOOKS - MTG BIOLOGY (HINGLISH)

HUMAN REPRODUCTION

Human Reproduction

1. In most mammals, the testes are located in scrotal sac for

A. more space to viseral organs

B. spermatogensis

C. sex differentiation

D. independent functioning of kidney.

Answer: B

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2. Temperature of the scrotum which is necessary for the functioning of testis is always around _____ below body temperature.

A. $2^{\circ} C$

B. $4^{\circ} C$

C. $6^{\circ} C$

D. $8^{\circ} C$

Answer: A

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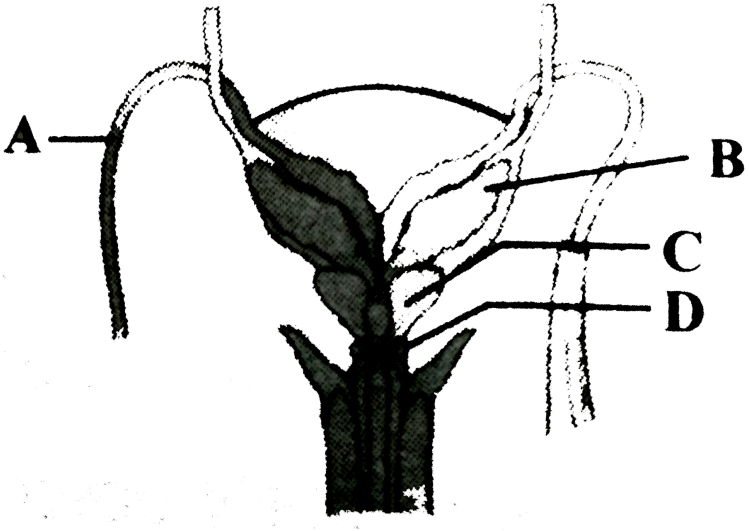
3. The given figure shows a diagrammatic sketch of a portion of human male resproductive system.



Identify the parts labelled as A, B, C and D and select the correct option.

A. A-Vas deferens, B-Seminal vesicle,

C-Prostate, D-Bulbourethral gland

B. A-Vas deferens, B-Seminal vesicle,

C-Bulbourethral gland, D-Prostate

C. A-Ureter, B-Seminal vesicle,

C-Prostate, D-Bulbourethral gland

D. A-Ureter, B-Prostate, C-Seminal vesicle,

D-Bulbourethral gland

Answer: A

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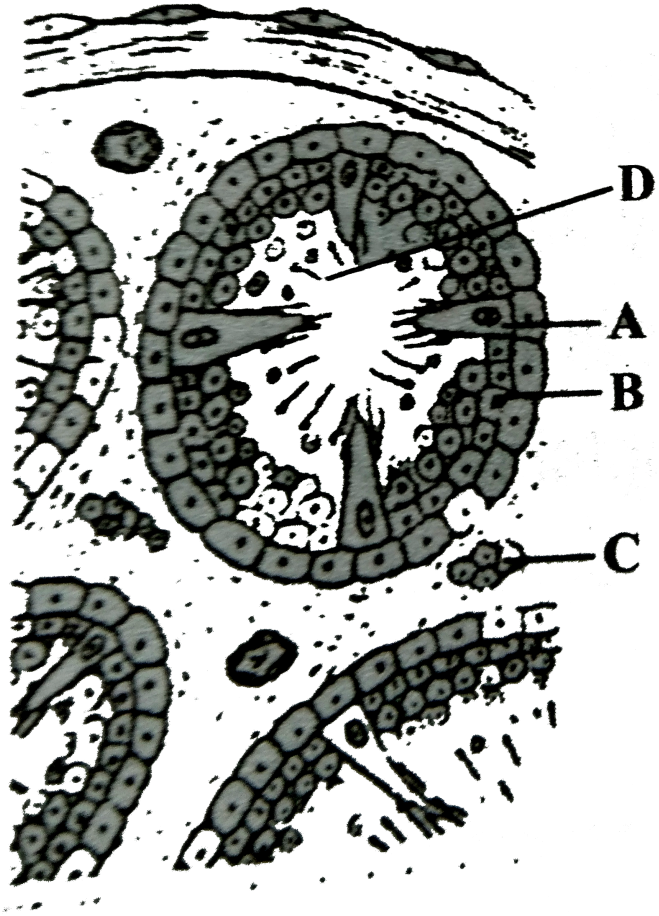
4. The given diagram refers to T.S. of testis showing sectional view of a few seminiferous tubules. Identify the parts labelled A-D and select the correct option.



A. A-Sertoli cell, B-Spermatozoa,

C-Interstitial cell, D-sperms

B. A-Sertoli cell, B-Secondary spermatocyte,

C-Interstitial cell, D-Sperms

C. A-Interstitial cell, B-Spermatogonia,

C-Sertoli cells, D-Sperms

D. A-Sertoli cells, B-Spermatogonia,

C-Interstitial cells, D-Sperms

Answer: D

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5. Which of the following is correct about mammalia testes ?

A. Graafian follicles, Sertoli cells, Leydig's cells

B. Graafian follicles, Sertoli cells, Seminiferous tubule

C. Sertoli cells, Seminiferous tubules, Leydig's cells

D. Graafian follicle, Leydig's cells, Seminiferous tubule

Answer: C

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6. The nutritive cells found in seminiferous tubules are

A. Leydig's cells

B. atretic follicular cells

C. Sertoli cells

D. chromaffin cells.

Answer: C

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7. Sertoli cells are regulated by the pituitary hormone know as

A. LH

B. FSH

C. GH

D. prolactin.

Answer: B

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8. If for some reason, the vasa efferentia in the human reproductive system get blocked, the gametes will not transported from

A. testes to epididymis

B. epididymis to vas deferens

C. ovary to uterus

D. vagina to uterus.

Answer: A

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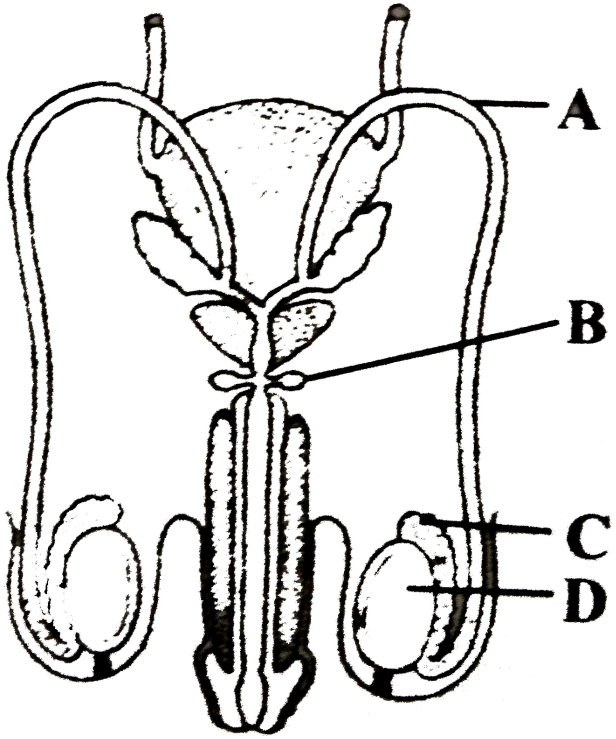
9. Read the following statements about the given diagram carefully and state which of them are correct ?



(i) A carries urine and sperms.

(ii) B secretes a fluid that helps in the lubrication of penis.

(iii) D produces testosterone but not sperms

(iv) C stores sperms.

A. (i) and (ii)

B. (ii) and (iii)

C. (ii) and (iv)

D. (i) and (iv)

Answer: C

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10. The head of the epididymis at the head of the testis is called

A. cauda epididymis

B. vas deferens

C. caput epididymis

D. gubernaculum.

Answer: C

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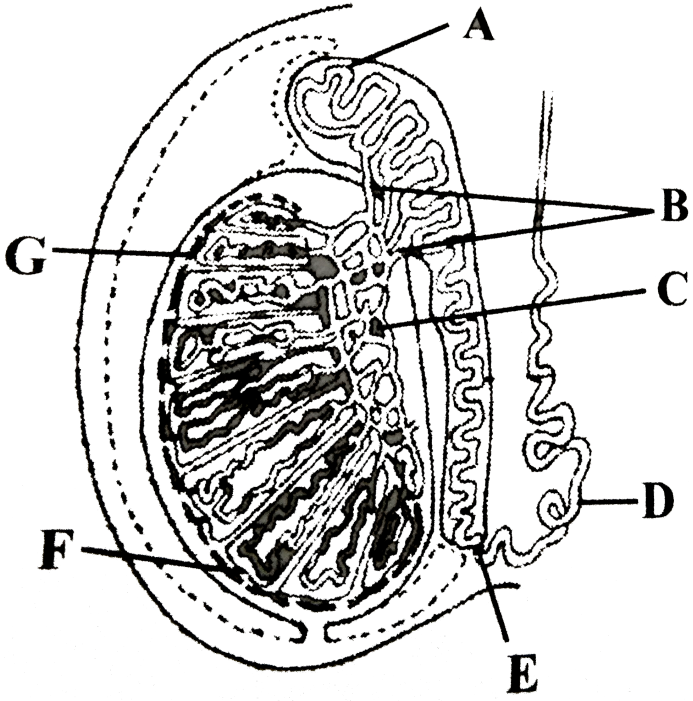
11. The given diagram shows L.S. of testis showing various parts. Identify the parts labelled (A to G) from the list given below.



(i)	Caput epididymis	(ii)	Cauda epididymis
(iii)	Vas deferens	(iv)	Vasa efferentia
(v)	Corpus epididymis	(vi)	Seminiferous tubulus
(vii)	Tunica vaginalis	$(viii)$	Tunica albuginea
(ix)	Tunica vasculosa	(x)	Rete testis

A.

$$A-(ii), B-(iii), C-(iv), D-(x), E-(vii), F-(i), G-(ix)$$

B.

$$A-(v), B-(iv), C-(iii), D-(vi), E-(i), F-(x), G-(vii)$$

C.

$$A-(i), B-(iv), C-(x), D-(iii), E-(ii), F-(vi), G-(viii)$$

D.

$$A-(i), B-(vi), C-(iv), D-(iii), E-(v), F-(x), G-(ix)$$

Answer: C

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12. Given below are the three statements each with two blanks. Select the option which correctly fills up the blanks in any two statements.

(A) Each seminiferous tubule is lined on its inside by two types of cells called ____i____ and ____ii____.

(B) The seminiferous tubulus open into the ___i___ through ___ii___.

(C) The enlargeed end of penis called the ___i___ is covered by a loose fold of skin called the ___ii___.

A. (A)-(i) spermatogonia, (ii) follicular cells

(B)-(i) vas deferens, (ii) urethral meatus

B. (B)-(i) vasa effirentia, (ii) rate testis

(C)-(i) glans penis, (ii) foreskin

C. (A)-(i) spermatogonia, (ii) Sertoli cells

(C)-(i) urethral meatus, (ii) scrotum

D. (A)-(i) spermatocytes, (ii) oogonia

(B)-(i) rate testis, (ii) vasa efferentia

Answer: B

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13. Seminal plasma in humans is rich in

A. fructose and calcium but has no enzymes

B. glucose and certain enzymes but has no calcium

C. fructose and certain enzymes but poor in calcium

D. fructose, calcium and certain enzymes.

Answer: D

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14. A sex gland which contributes fluid containing sugar fructose that provides spermatozoa energy for swimming and hormone prostaglandins that stimulate contractions in the female reproductive tract to aid sperm-ovum interaction is

A. Cowper's gland

B. prostate gland

C. seminal vesicle

D. preputial gland.

Answer: C

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15. Prostate glands are located below

A. gubernaculum

B. seminal vesicles

C. epididymis

D. bulbourethral glands

Answer: B

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16. The funcation of the secretion of prostate glands is to

A. inhibit sperm activity

B. attract sperms

C. stimulate sperm activity

D. none of these.

Answer: C

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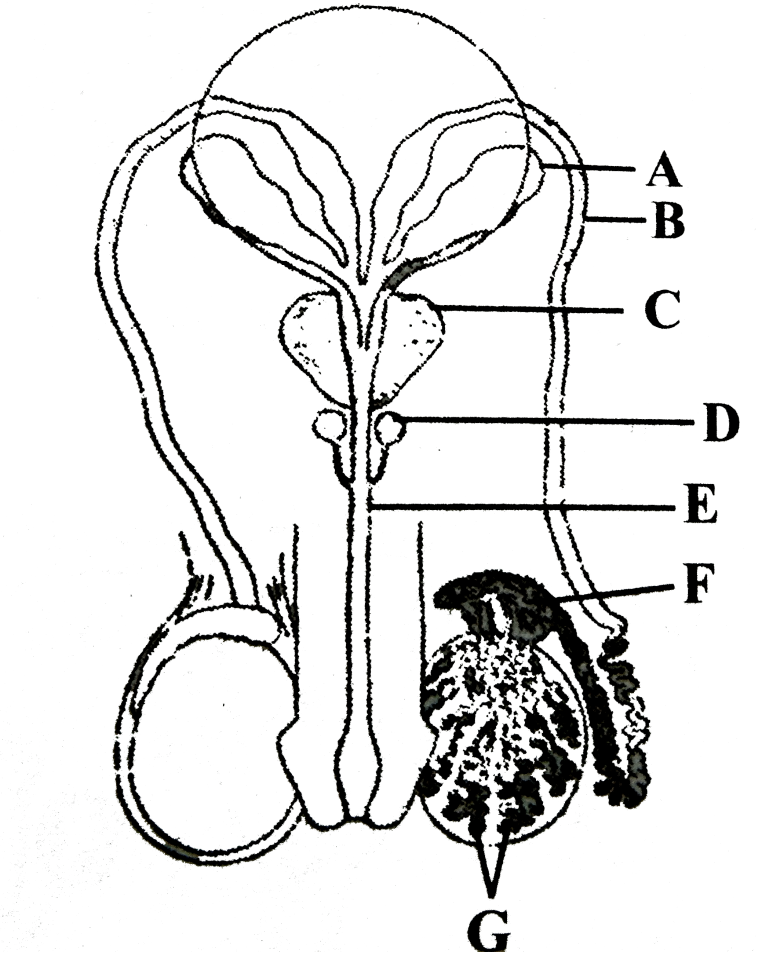
17. Match each function below with the associated part or parts of the human male reproductive system shown in the figure.



(i) Produces sperm

(ii) Conducts the sperm through the penis to the outside of the body

(iii) Produces seminal fluid

(iv) Connects the epididymis with the urethra

A. (i)-G, (ii)-E, (iii)-A, C, D, (iv)-B

B. $(i) - A, B$, (ii)$- E$, (iii)$- C, D$, (iv)`-G

C. (i)-G, (ii)-F, (iii)-A, B, C, (iv)-E

D. $(i) - F$, (ii)$- E$, (iii)$- A, B, D$, (iv)`-C

Answer: A

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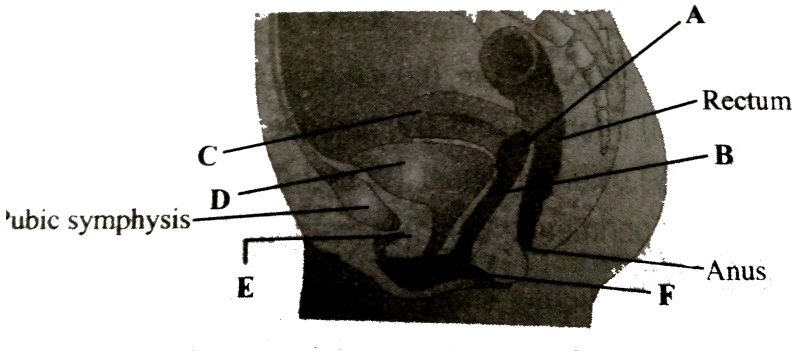
18. Identify the parts labelled as A to F from the given diagram of human female reproduce system and select the correct option.



A. A-Cervix, B-Vagina, C-Uterus,

D-Urinary bladder, E-Clitoris, F-Vaginal orifice

B. A-Vagina, B-Cervix, C-Urinary bladder,

D-Uterus, E-Vaginal orifice, F-Clitoris

C. A-Urethra, B-Vagina, C-Urinary bladder,

D-Cervix, E-Uterus, F-Clitoris

D. A-Vaginal orifice, B-Cervix, C-Uterus,

D-Urethra, E-Clitoris, F-Urinary bladder

Answer: A

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19. Fill up the blanks in the following paragraph by selecting the correct option.

$\underline{(i)}$ are the primary female sex organs that produce $\underline{(ii)}$ and $\underline{(iii)}$. Each primary sex organ is about $\underline{(iv)}$ in length and is connected to the pelvic wall and uterus by $\underline{(v)}$

A.

(i)	(ii)	(iii)	(iv)	(v)
Testes	sperms	hormones	4-5 cm	ligaments

B.

(i)	(ii)	(iii)	(iv)	(v)
Ovaries	oogonia	follicles	2-4 cm	muscles

C.

(i)	(ii)	(iii)	(iv)	(v)
Ovaries	ovum	hormones	2-4 cm	ligaments

D.

(i)	(ii)	(iii)	(iv)	(v)
Testes	sperms	testosterone	8-9 cm	muscles

Answer: C

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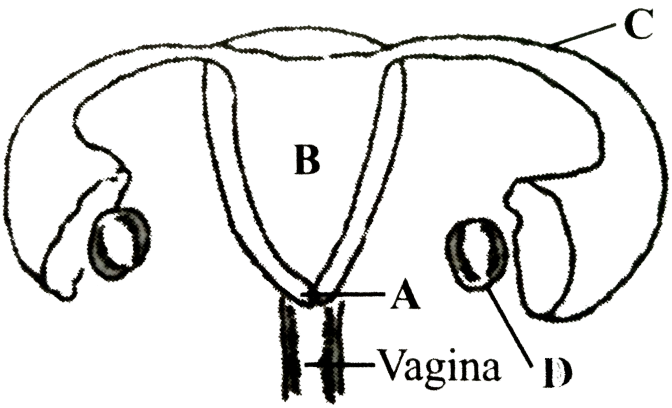
20. The given figure is of human female reproductive system.

Identify the parts labelled as A, B, C and D and select the correct option.



A. A-Oviduct, B-Uterus, C-Ovarian ligament, D-Ovary

B. A-Cervix, B-Uterus, C-Ovary, D-Tumour

C. A-Uterus, B-Uterine cavity, C-Oviducal funnel, D-Ovary

D. A-Cervix, B-Uterine cavity, C-Fallopian tube, D-Ovary

Answer: D

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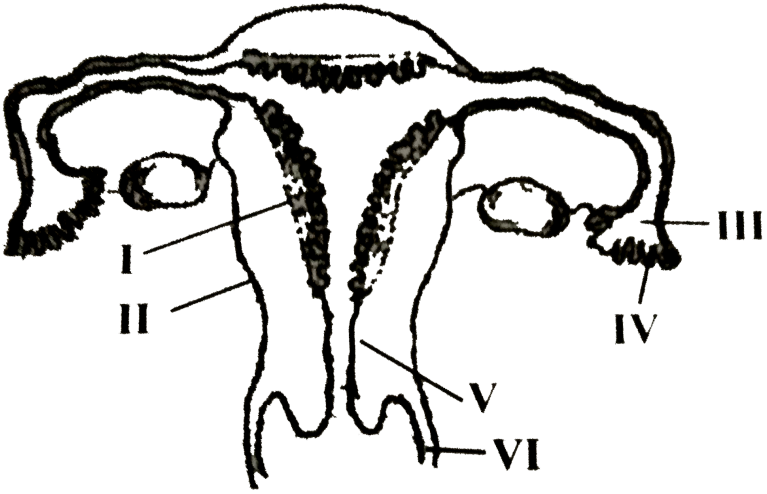
21. The given figure depicts a diagrammatic sectional view of the human female reproductive system. Which set of three parts out of $I - Vi$ have been correctly identified?



A. (II) endometrium, (III) infundibulum, (IV) fimbriae

B. (III) infundibulum, (IV) fimbriae, (V) cervix

C. (IV) oviducal funnel, (V)$uterus$, (VI)$cervix$

D. (I) perimetrium, (II) myometrium, (III) Fallopian tube

Answer: B

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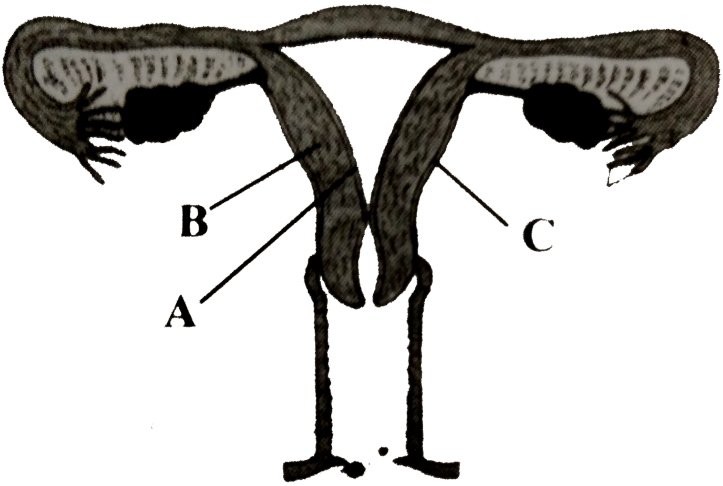
22. The given figure shows female reproductive system. Which wall of the uterus (A, B or C) sloughs off during menstruction?



A. A

B. B

C. C

D. All of these

Answer: A

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23. Lower narrow end of uterus is called

A. urethra

B. cervix

C. clitoris

D. vulva.

Answer: B

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24. The female external genitalia include

(i) ovary , (ii) mammary gland

(iii) mons pubis , (iv) clitoris

(v) labia majora

A. (i) and (ii)

B. (ii) and (iii)

C. (iii), (iv) and (v)

D. (ii), (iii) and (v).

Answer: C

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25. Bartholin's glands are situated

A. on the either side of vagina in humans

B. on either side of vas deferens in humans

C. on either side of penis in humans

D. on either side of Fallopian tube in humans.

Answer: A

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26. A sectional view of mammory gland shows

(i) nipple + areola

(ii) mammary lobe, alveolus and duct

(iii) antibodies + pectoralis major muscles + ribs

(iv) ampulla + lactiferous duct

A. (i), (ii) and (iv)

B. (i), (ii) and (iii)

C. (iii) and (iv)

D. (i), (ii), (iii) and (iv).

Answer: A

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27. Milk secreted from the cells of alveoli of mammary lobes reaches nipple through lactiferous duct (L), mammary duct (M), mammary tubule (T) and mammary ampulla (A) in the following order

A. TMAL

B. MTLA

C. MTAL

D. ATML.

Answer: A

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28. In humans, at the end of the first meiotic division, the male germ cells differentiate into the

A. spermatids

B. spermatogonia

C. primary spermatocytes

D. secondary spermatocytes.

Answer: D

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29. $2n = 16$ is in a primary spermatocyte which is in metaphase of first meiotic division. What shal be the total number of chromatids in each of the secondary spermatocyte?

A. 16

B. 24

C. 32

D. 8

Answer: A

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30. How many sperms are formed from a secondary spermatocyte?

A. 4

B. 8

C. 2

D. 1

Answer: C

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31. How many sperms are formed from 4 primary spermatocytes?

A. 4

B. 1

C. 16

D. 32

Answer: C

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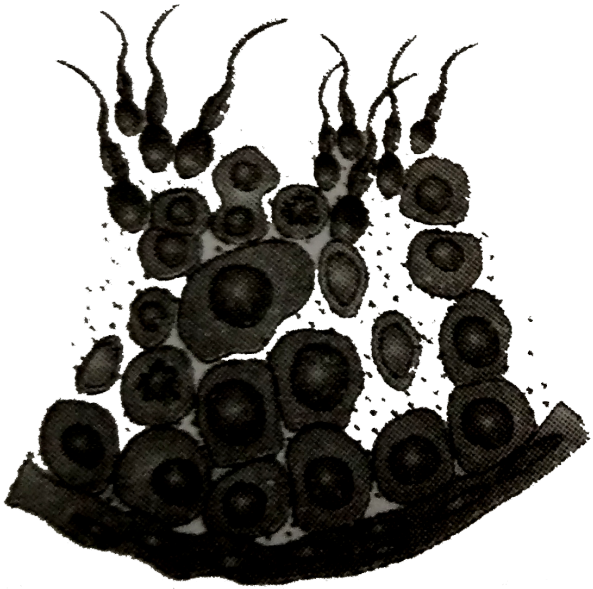
32. What does the given figure represent?



A. Sectional view of ovary

B. Sectional view of seminiferous tubule

C. L.S. of testis

D. Mature Graadian follicle

Answer: B

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33. In spermatogenesis, the phase of maturation involves

A. the growth of spermatogonia into primary spermatocyte

B. the formation of spermatogonia from gonocytes through mitosis

C. the formation of spermatids from primary spermatocytes meiosis

D. the formation of oogonia from the spermatocytes through meiosis.

Answer: C

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34. In spermatogenesis, reduction division of chromosome occurs during conversion of

A. spermatogonia to primary spermatocytes

B. primary spermatocytes to secondary spermatocytes

C. secondary spermatocytes to spermatids

D. spermatids to sperms.

Answer: B

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35. Which of the following is group of cells in the male gonad, represent haploid cells?

A. Spermatogonial cells

B. Germinal epithelial cells

C. Secondary spermatocytes

D. Primary spermatocytes

Answer: C

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36. Consider the following statements each with two blanks.

(A) Seminiferous tubules produce $\_\_(i)\_\_$ while Leydig's cells produce

$\_\_(ii)\_\_$.

(B) In females, urethra is small and conducts $\_\_(iii)\_\_$ while in males it conducts urine and $\_\_(vi)\_\_$.

(C) The process of formation of spermatozoa form spermatogonia is called $\_\_(v)\_\_$ and the process of maturation of spermatids into spermatozoa is called $\_\_(vi)\_\_$.

Which one of the following options, gives the correct fill ups for the respective blanks numbers from (i) to (vi) in the statements?

A. (i)-spermatozoa, (ii)-testosterone,

(v)-spermatogenesis, (vi)-spermiogensis

B. (i)-testosterone, (ii)- spermatozoa,

(iii)-urine, (iv)-semen

C. (i)-estrogen, (ii)-testosterone,

(v)-spermiogenesis, (vi)-spermatogenesis

D. (iii)-urine, (iv)-semen,

(v)-spermiogenesis, (vi)-spermatogenesis

Answer: A

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37. The process of release of spermatozoa from Sertoli cells into cavity of the seminiferous tubules is called

A. spermiogenesis

B. spermatogenesis

C. spermatocytogenesis

D. spermiation.

Answer: D

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38. The correct sequence of spermatogenetic stages leading to the formation of sperms in a mature human testis is

A. spermatogonia $\rightarrow$ spermatocyte $\rightarrow$ spermatid $\rightarrow$ sperms

B. spermatid $\rightarrow$ spermatocyte $\rightarrow$ spermatogonia $\rightarrow$ sperms

C. spermatogonia $\rightarrow$ spermatid $\rightarrow$ spermatocyte $\rightarrow$ sperms

D. spermatocyte $\rightarrow$ spematogonia $\rightarrow$ spermatid rarr sperms.

Answer: A

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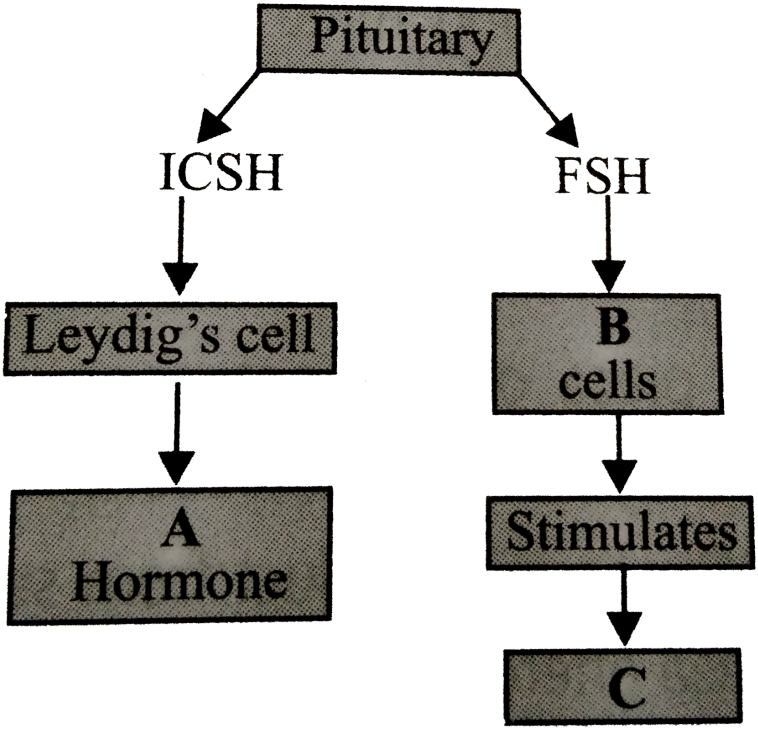
39. Given below is an incomplete flow chart showing influence of hormones on gametogensis in males. Observe the flow chart carefully and

identify A, B, and C



A. {:("A",B,C),("Progesterone","Follicular","Spermatogenesis"):}`

B. {:("A",B,C),("GnRH","Follicular","Spermiogenesis"):}`

C. {:("A",B,C),("GnRH","Sertoli","Spermatogenesis"):}`

D. {:("A",B,C),("Androgens","Sertoli","Spermatogenesis"):}`

Answer: D

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40. Spermatogenesis is induced by

A. FSH

B. ICSH

C. STH

D. ATH.

Answer: A

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41. The given table shows differences between spermato-genesis and spermiogenesis. Select the incorrect option.

A.

Spermatogenesis	Spermiogenesis
Process of formation of spermatozoa	Process of differentiation of spe

B.

Spermatogenesis	Sperm
It changes a haploid structure into another haploid structure	It invo

C.

Spermatogenesis	Spermiogenesis
Growth and divisions occur.	Divisions and growth are absent.

D.

Spermatogenesis	Spermiogenesis
A spermatogonium forms four spermatozoa	A spermatid forms a sin

Answer: B

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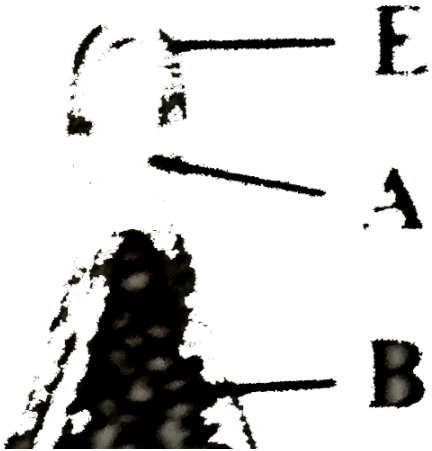
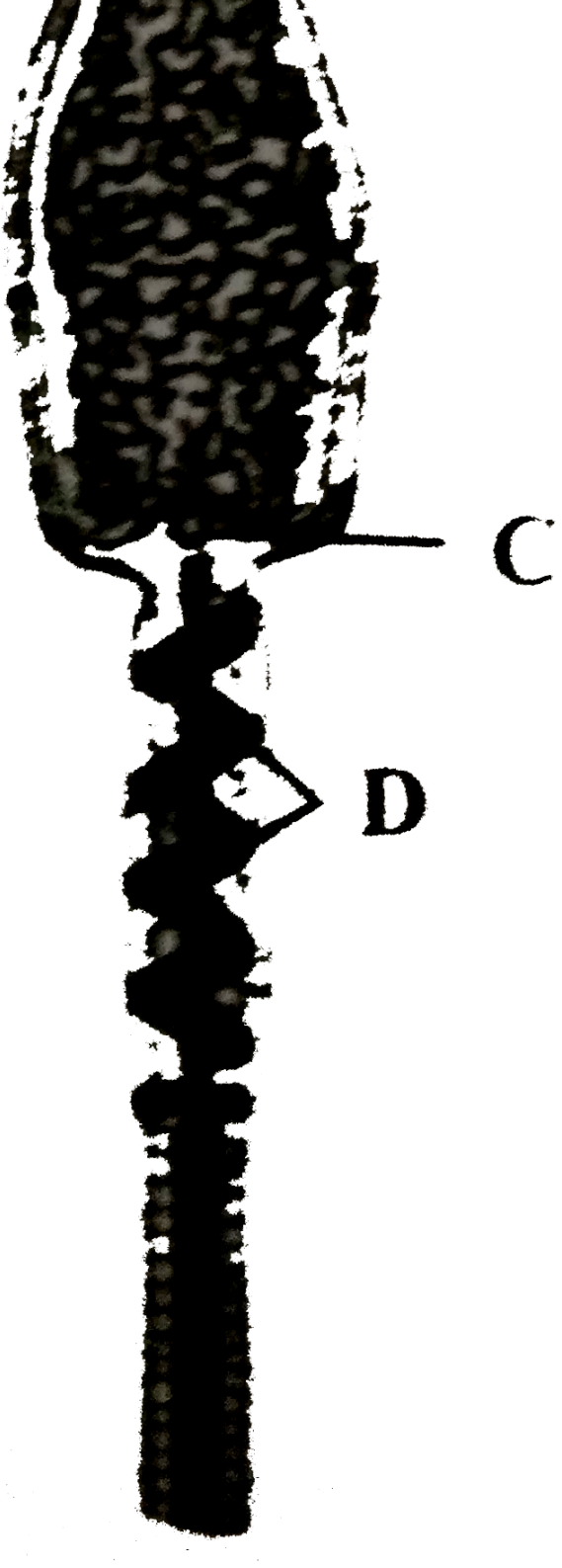
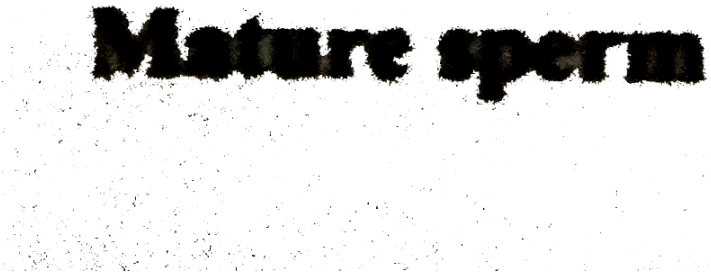
42. Identify the parts labelled as A, B, C, D and E in the given diagram of a human sperm and select the correct option.




C
D



A. A-Nucleus, B-Tail, C-Mitochondria,

D-Acrosome, E-Centriole

B. A-Acrosome, B-Nucleus,

C-Centriole, D-Mitochondria,

E-Plasma membrane

C. A-Nucleus, B-Mitochondria,

C-Plasma membrane,

D-Centriole, E-Neck

D. A-Acrosome, B-Centriole,

C-Mitochondria, D-Plasma membrane, E-Tail

Answer: B

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43. The middle piece of the sperm contains

A. proteins

B. mitochondria

C. centriole

D. nucleus.

Answer: B

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44. Consider the following three statements related to the human male reproductive system and select the correct option stating which ones are true (T) and which ones are false (F).

Middle piece of spermatozoon is also termed as power house of spermatozoon.

(ii) Vas deferens joins a duct from seminal vesicle and form vasa

efferentia.

(iii) Semen is a collection of secretions from the seminal vesicles, prostate gland and Cowper's glands and sperms from testes.

A. $\begin{matrix}(\mathrm{i}) & (ii) & (iii) \\ T & F & T\end{matrix}$

B. $\begin{matrix}(\mathrm{i}) & (ii) & (iii) \\ F & F & T\end{matrix}$

C. $\begin{matrix}(\mathrm{i}) & (ii) & (iii) \\ T & T & F\end{matrix}$

D. $\begin{matrix}(\mathrm{i}) & (ii) & (iii) \\ F & T & T\end{matrix}$

Answer: A

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45. The principal tail piece of human sperm shows the microtubular arrangement of

A. $7+2$

B. $9+2$

C. $11+2$

D. $13 + 2$

Answer: B

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46. 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.

Answer: C

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47. Acrosome is a type of

A. lysosome

B. flagellum

C. ribosome

D. basal body.

Answer: A

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48. Which of the following contains the actual genetic part of a sperm ?

A. Whole of it

B. Tail

C. Middle piece

D. Head

Answer: D

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49. The sperm undergo physiological maturation, acquiring inreased motility and fertilising capacity in

A. seminiferous tubulus

B. vasa efferentia

C. epididymis

D. vagina

Answer: C

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50. At what stage of life is oogenesis initiated in a human female?

A. At puberty

B. During menarche

C. During menopause

D. During embryonic development

Answer: D

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51. A human female is born with a million of eggs (primary oocyte) at the time of birth but only some 500 eggs get a chance of maturiy. What is the destiny of rest of the eggs?

A. Rest of the eggs differrentiate back to thecal and granulosa cells.

B. Rest of the eggs nurture the dominant follicular cell.

C. Rest of the eggs move out of the ovary and are destroyed by leucocytes.

D. Rest of the eggs break down and are abosorbed i.e., degenerative follicular atresia.

Answer: D

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52. 1^{st} polar body is formed at which stage of oogenesis?

A. 1^{st} meiosis

B. 2^{nd} mitosis

C. 1^{st} mitosis

D. Differentiation

Answer: A

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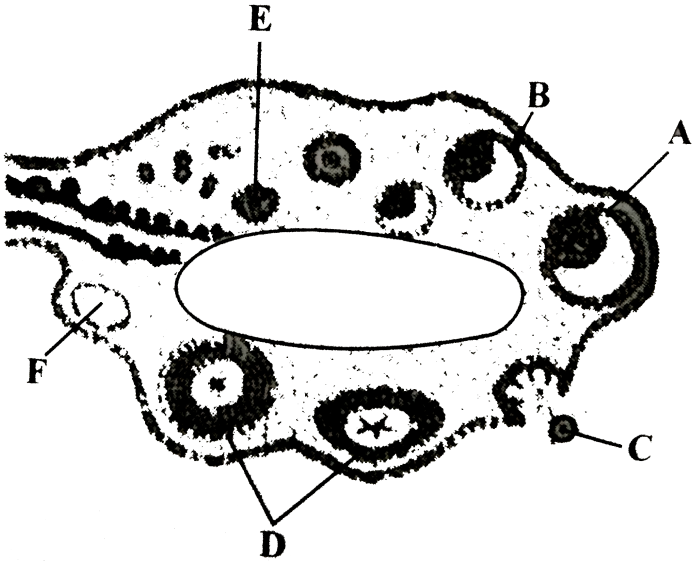
53. In the given T.S. of human ovary identify A to F and select the correct option.



A. A-secondary follicle, B-Tertiary follicle with antrum, C-Ovum, D-Corpus luteum, E-Primary follicle, F-Corpus albicans

B. A-Graafian follicle, B-Tertiary follicle with antrum, C-Ovum, D-Corpus spongiosum, E-Primary follicle, F-Corpus albicans

C. A-Graafian follicle, B-Tertiary follicle with antrum, C-Ovum, D-Corpus albicans, E-Primary follicle, F-Corpus luteum

D. A-Graafian follicle, B-Tertiary follicle with antrum, C-Ovum, D-Corpus luteum, E-Primary follicle F-Corpus albicans

Answer: D

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54. In overy we can find

(i) primary follicle , (ii) Graafian follicle

(iiii) blood vessel , (iv) corpus luteum

A. (i) and (ii)

B. (ii), (iii) and (iv)

C. (iii) and (iv)

D. (i), (ii), (iii) and (iv).

Answer: D

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55. Which one is released from the ovary?

A. Primary oocyte

B. Secondary oocyte

C. Graafian follicle

D. Oogonium

Answer: B

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56. In oogenesis, a diploid cell produce _____ ovum/ova.

A. 1

B. 2

C. 3

D. 4

Answer: A

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57. During oogenesis, each diploid cell produces

A. four functional eggs

B. two functional eggs and two polar bodies

C. one functional egg and three polar bodies

D. four functional polar bodies.

Answer: C

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58. In oogensis, egg is fertilised by sperm at which stage?

A. Primary oocyte

B. Secondary oocyte

C. Oogonium

D. Ovum

Answer: B

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59. Statememt 1 : In a Graafian follicle, the primary cell, the and the follicle cells may be regarded sibling cells.

Statememt 2 : Both aride from the same parent cell, the oogonium, by mitotic divisions.

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60. 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.

Answer: A

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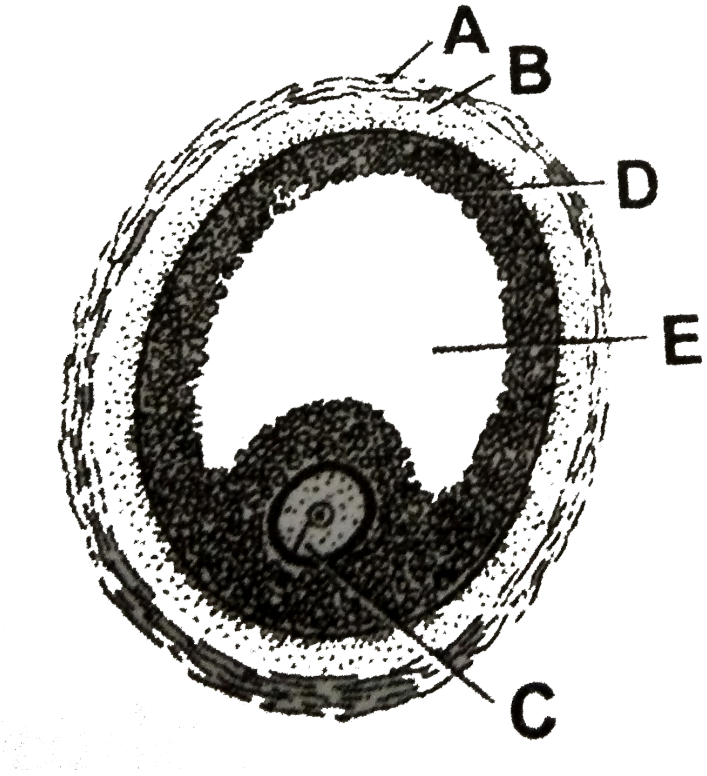
61. Given here is the figure of a section of Grafian follcle, identify the labelled parts A to E and select the correct option.



A. A-Theca externa, B-Theca interna,

C-Ovum, D-Antrum, E-Membrana granulosa

B. A-Membrana granulosa, B-Theca externa,

C-Ovum, D-Antrum, E-Theca interna

C. A-Membrana granulosa, B-Theca interna,

C-Ovum, D-Antrum, E-Theca externa

D. A-Theca externa, B-Theca interna,

C-Ovum, D-Membrane granulosa, E-Antrum

Answer: D

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62. Which part of ovary in mammals acts as an endocrine gland after ovulation?

A. Stroma

B. Germinal epithelium

C. Vitelline membrane

D. Graafian follicle

Answer: D

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63. Pick the odd one out from each series given below and select the correct option.

(i) Scrotum, rate testis, Fallopian tube, vas deferens

(ii) Ovary, uterus, vagina, ejaculatory duct

(iii) Acrosome, Graafian follicle, corpuse luterum, cervix

(iv) Prostate, tesite seminal vesicles, Cowper's gland

A. `{:("(i)",(ii),(iii),(iv)),("Vas deferens","Vagina","Cervix","Cowper's gland"):}

B. `{:("(i)",(ii),(iii),(iv)),("Rate testis","Ovary","Graadian follicle","Prostate"):}

C. `{:("(i)",(ii),(iii),(iv)),("Scrotum","Uterus","Corpus luteum","Seminal vesicles"):}

D.

(i)	(ii)	(iii)	(iv)
Follopian tube	Ejaculatory duct	Acrosome	Testis

Answer: D

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64. Mark the odd item in each series and select the correct option.

(i) Spermatocyte, polar body, spermatid, spermato-gonium

(ii) Endometrium, corpus luteum, acrosome, Graafian follicle

(iii) Vas deferens, Fallopian tube, epididumis, Cowper's gland

(iv) Testes, prostate, seminal veriscles, Cowper's gland

A. `{:("(i)",(ii),(iii),(iv)),
("spermatid","Endometrium","Epididymis","Prostate"):}

B. `{:("(i)",(ii),(iii),(iv)),("Polar body","Acrosome","Fallopian tube","Testes"):}

C. `{:("(i)",(ii),(iii),(iv)),("Spermatocyte","Corpus luteum","Vas deferens","Cowper's gland"):}

D.

(i)	(ii)	(iii)	(iv)
Spermatogo-nium	Graafian follicle	Cowper's gland	Seminal vesic

Answer: B

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65. Match column I with column II and select the correct option from the codes given below.

	Column I		Column II
$A.$	Acrosome	(i)	Rudimentary erectile tissue
$B.$	Endometrium	(ii)	Uterus
$C.$	Polar body	(iii)	Oogenesis
$D.$	Clitoris	(iv)	Spermatozoon

A. $A-(ii), B-(i), C-(iv), D-(iii)$

B. $A-(iv), B-(ii), C-(iii), D-(i)$

C. $A-(iv), B-(iii), C-(ii), D-(i)$

D. A-(iv), B-(iii), C-(i), D-(ii)`

Answer: B

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66. Which of the followin options is correct?

A.	Haploid	Diploid
	secondary oocyte	Primary spermatocyte

B. Haploid secondary spermatocyte | Diploid secondary oocyte

C. Haploid Primary oocyte | Diploid secondary spermatocyte

D. Haploid Ovum | Diploid Spermatid

Answer: A

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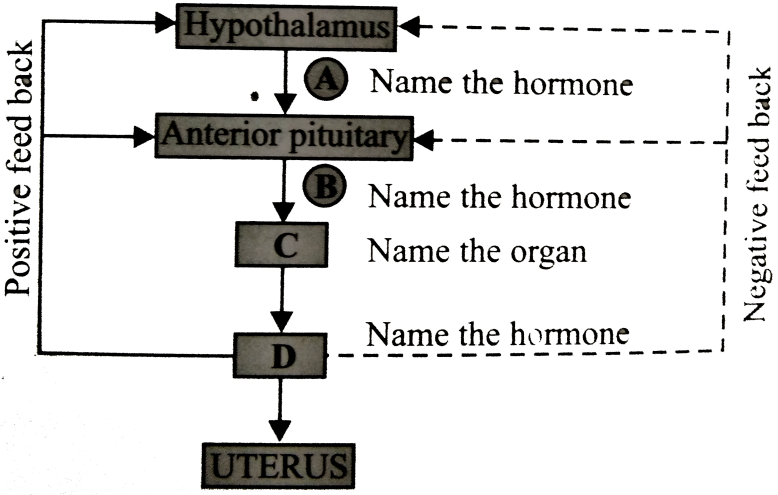
67. Given below is an incomplete flow chart showing influence of hormones on gametogensis in females. Study it carefully and identify A, B, C and D.



A. A B C D
FSH LH Ovary Progesterone

B. A B C D
GnRH FSH and LH Ovary Estrogen and progensterone

C. A B C D
GnRH FSH Testis Testosterone

D. A B C D
LH FSH Testis Testosterone

Answer: B

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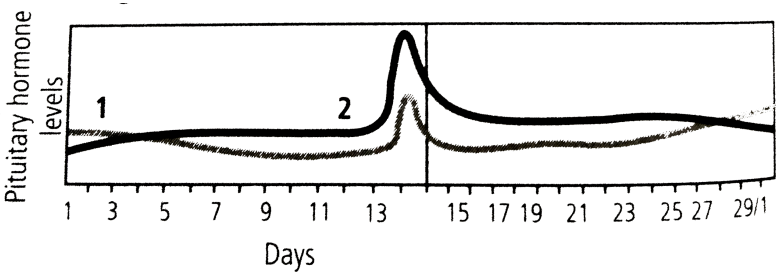

68.

The following graph shows the levels of pituitary hormones during a menstrual cycle. What do 1 and 2 represent?

A. 1 2
LH FSH

B. 1 2
Estrogen Progesterone

C. 1 FSH 2 LH

D. 1 Progesterone 2 Estrogen

Answer: C

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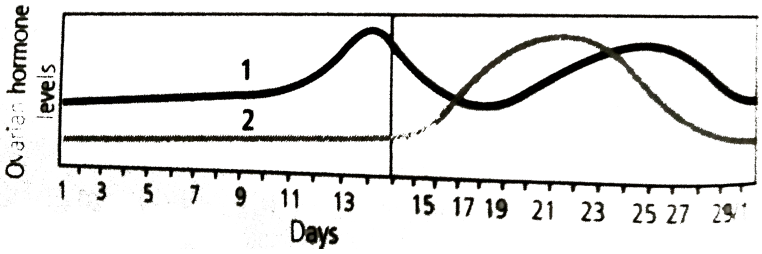
69.



The following graph shows the levels of ovarian hormones during a menstrual cycle. What do 1 and 2 represent?

A. 1 Progesterone 2 Estrogen

B. 1 FSH 2 LH

C. 1 LH 2 FSH

D. 1 Estrogen 2 Progesterone

Answer: D

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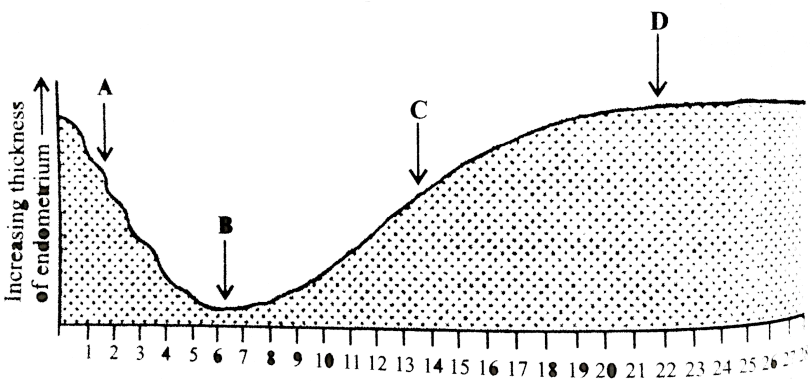

70.

The accompanying diagram shows the changes that take place in the endometrium during a normal menstrual cycle. Identify the changes and select the correct option.

A. Ovulation A Menstruation B

B. Ovulation A Menstruation C

C. Ovulation C Menstruation A

D. Ovulation B Menstruation D

Answer: C

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71. The phase of menstrual cycle in humans that last for 7-8 days, is

A. foliicular phase

B. ovulatory phase

C. luteal phase

D. menstruation.

Answer: A

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72. During proliferative phase, uterine wall undergoes certain changes, these are

A. myometrium wall is sloughed off

B. endometrium wall is sloughed off

C. blood vessels in endometrium become long and coiled

D. proliferation of myometrial epithelial lining.

Answer: C

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73. Repair of endometrium is undertaken by

A. LH

B. FSH

C. estrogen

D. prolactin.

Answer: C

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74. In the 28 days human ovarian cycle, the ovulation takes place typically on

A. day 1 of the cycle

B. day 14 of the cycle

C. day 5 of the cyle

D. day 28 of the cycle.

Answer: B

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75. The time of optimum chances of conception in a woman is_____starting from the day of menstruation

A. 1st day

B. 4th day

C. 14th day

D. 26th day

Answer: C

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76. Ovulation in the human female normally takes place during the menstrual cycle

A. at the mid scretory 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.

Answer: D

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77. After ovulation graafian follicle regresses into

A. corpus atresia

B. corpus callosum

C. corpus luteum

D. corpus albicans.

Answer: C

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78. Immediately after ovulation, the mammalian egg is covered by a membrane known as

A. chorion

B. zona pellucida

C. corona radiata

D. vitelline membrane

Answer: C

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79. Below is given the unorganised list of some important events in the human female reproductive cycle. Identify the correct sequence of these events and select the correct option.

(i). Secretion of FSH

(ii). Growth of corpus luteum

(iii). Growth of the follicle

(iv). Ovulation

(v) Sudden increase in the levels of LH

A. (i) $\rightarrow$ (ii) $\rightarrow$ (iii) $\rightarrow$ (v) (ii)

B. $(ii) \rightarrow (i) \rightarrow (iii) \rightarrow (iv) \rightarrow (v)$

C. $(iii) \rightarrow (i) \rightarrow (iv) \rightarrow (ii) \rightarrow (v)$

D. $(i) \rightarrow (iii) \rightarrow (v) \rightarrow (iv) \rightarrow (ii)$

Answer: D

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80. Which one of the following is the correct matching of the events occurring during mentrual cycle?

A. Proliferative phase: Rapid regeneration of myometrium and maturaton of Graafian follicle

B. Secretory phase: Development of corpus luteum and increased secretion of progesterone

C. Menstruation: Breakdown of myometrium and ovum not fertilised

D. Ovulation: LH and FSH attain peak level and sharp fall in the secretion of progesterone

Answer: B

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

A. Release of egg 5th day

B. Endometrium regenerates 5-10 days

C. Endometrium secretes nutrients for implantation 11-18 days

D. Rise in progesterone level 1-15 days

Answer: B

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82. A regular cycling woman is not menstruating which one of the following is the most likely root cause of this?

A. Maintenance of the hypertrophical endometrial lining

B. Maintenance of high concentration of sex-hormones in the blood stream

C. Retension of well-developed corpus luteum

D. fertilisation fo the ovum

Answer: D

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83. Read the following statements about menstrual cycle and select two correct statements:

(i). Lack of menstruation may be indicative of pregnance

(ii). The changews in the ovary and the uterus are induced by changes in the lveles of ovarian hormones only

(iii). LH suge induces ovulation

(iv). If fertilisation occurs, corpus luteum degenerates immediately

A. (i) and (ii)

B. (ii) and (iii)

C. (i) and (iii)

D. (ii) and (iv)

Answer: C

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84. If mammalian ovum fails to get fertilised, which one of the following is unlikely?

A. Corpus luteum will disintegrate

B. progestrone secretion rapidly declines

C. estrogen secretion increases

D. primary follicle starts developing

Answer: C

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85. During bleeding phase of menstrual cycle unfertilised secondary oocyte undergoes autolysis. The interplay of hormones then is

A. progesterone and estrogen continue the hypertrophy of endometrial lining

B. prolactin and progesterone reduced LH level causing regression of corpus luteum

C. progesterone inhibits the release of LH from putuitary causing regression of corpus luteum

D. prolactin and estrogen inhibits progesterone secretion leading to sloughing off uterine lining.

Answer: C

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86. A human female reaches menopause around the age of

A. 50 years

B. 15 years

C. 70 years

D. 25 years

Answer: A

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87. Cessation fo menstrual cycle in a woman is called

A. lactation

B. ovulation

C. menopause

D. parturition.

Answer: C

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88. Name of hormone that has no role in menstruation.

A. LH

B. FSH

C. estradiol

D. TSH

Answer: D

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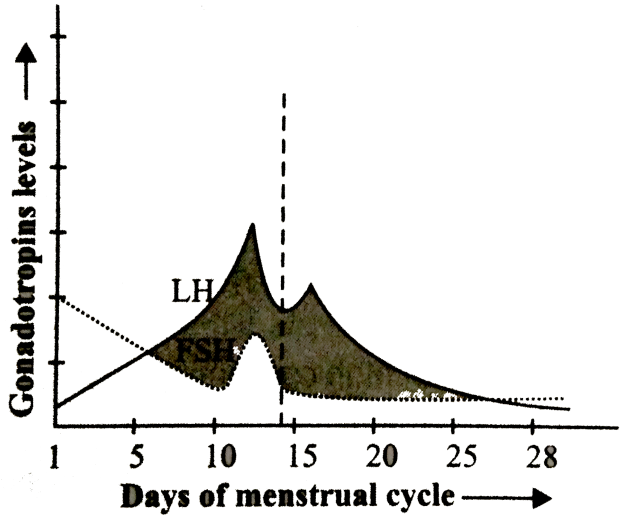
89. 

Study the garaph carefully and correlate the hormone levels on

(i) 1-5 days

(ii). 12-14 days

(iii). 25-28 days (if the ovum is not fertilised)

A. (i) LH decreases and FSH increases

(ii). LH increases and FSH decreases

(iii). LH level maintained and FSH level increases

B. (i). LH increases and FSH decreases

(ii). LH decreases and FSH increases

(iii). LH level increases and FSH level maintained

C. (i). LH increases and FSH decreases

(ii). LH peaks and FSH peaks

(iii). LH level decreases and FSH level maintained

D. (i). LH peaks and FSH peaks

(ii). LH increases and FSH decreases

(iii). LF level decreases and FSH level maintained.

Answer: C

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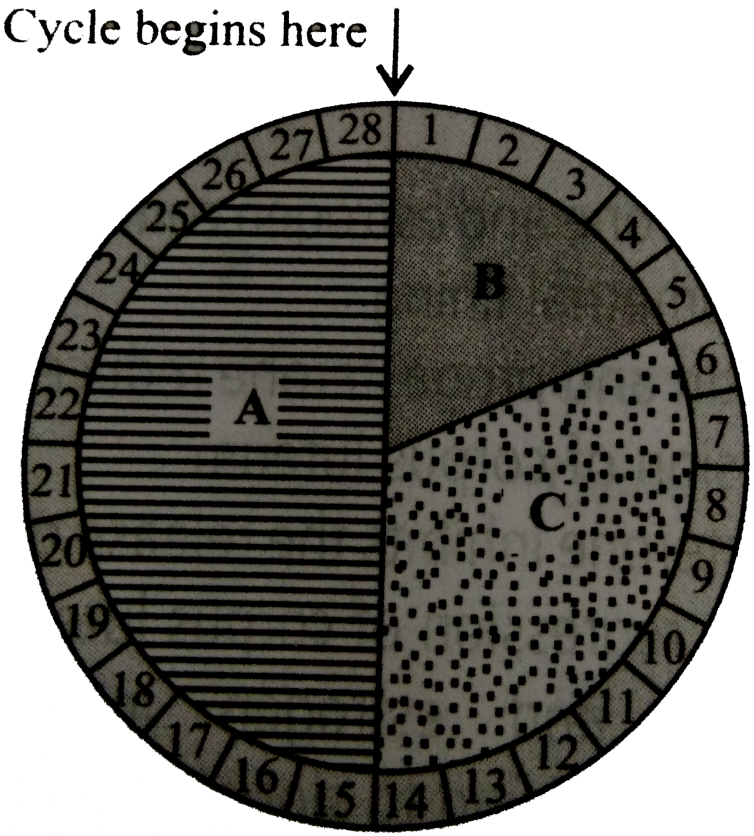

90.

The given figure shows schematic representatio of a menstrual cycle in human female. Identify the three phases (A, B and C0 of menstrual cycle.

A. A Proliferative phase B Menstrual phase C secretory phase

B. A Menstrual phase B Proliferative phase C secretory phase

C. A secretory phase B Menstrual phase C Proliferative phase

D. A Menstrual phase B secretory phase C Proliferative phase

Answer: C

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91. some important events that occur during the menstrual cycle are given below. Arrange the events in a proper sequence and select the corrrect option.

(i). Proliferation of endometrial wall

(ii). LH surge

(iii). Secretion of estrogen

(iv). Secretion of progesterone

(v). Ovulation

(vi). Growth of corpus luteum

(vii). Degeneration of corpus luteum

(viii). menstruation

A. $(ii) \rightarrow (iv) \rightarrow (iii) \rightarrow (i) \rightarrow (vii) \rightarrow (v) \rightarrow (viii) \rightarrow (vi)$

B. $(iii) \rightarrow (i) \rightarrow (ii) \rightarrow (v) \rightarrow (vi) \rightarrow (iv) \rightarrow (vii) \rightarrow (viii)$

C. `(v)to(i)to(vi)to(viii)to(iii)to(iv)to(vii)to(ii)

D. $(ii) \rightarrow (v) \rightarrow (vi) \rightarrow (i) \rightarrow (viii) \rightarrow (vii) \rightarrow (iii) \rightarrow (iv)$

Answer: B

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92. Withdrawal of which of the following hormones is the immediate cause of menstruation?

A. progesterone and estrogen continue the hypertrophy of endometrial lining

B. Estrogen

C. FSH

D. FSH-RH

Answer: A

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93. For human female which of the following is incorrect?

A. Menstrual cycle takes 28 days on an average

B. Menopause occurs at 45-55 years of age.

C. The eggs released during pregnancy die.

D. Menstruation takes 4 days on an average.

Answer: C

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94. At menopause there is rise in urinary exretion of

A. FSH

B. STH

C. MSH

D. none of these.

Answer: A

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95. Which of the following statements concerning menopause is correct?

A. Menopause occurs because all of the female's follicles become hormone-producing corpus luteum at once.

B. Menopausal symptoms are a result of decrease in the production of FSH and LH.

C. The onset of menopause is primarly due to follicle atresia.

D. All of these

Answer: C

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96. Fertilization is defined as the process by which

A. a diploid spermatozoon unites with a haploid ovum to form a triploid zygote

B. a haploid spermatozoon unites with a haploid ovum to form a diploid zygote

C. a diploid spermatozoon unites with a diploid ovum to form a diploid zygote

D. a diploid spermatozoon unites with a haploid ovum

Answer: B

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97. A reaction fo granules content which harden the zona pellucida and ensures sure block to polyspermy is

A. acrosomal reaction

B. cortical reaction

C. acrosin reaction

D. binding reaction

Answer: B

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98. Fill up the blanks in the following paragraph by selecting the correct option.

During copulation (coitus) semen is released by the penis into the vagina and is called (i).____.the ovum released by the ovary is transported to the (ii).____where (iii)._____takes place during fertilisation, a sperm comes in contact with the zona pellucida layer of the ovum and induces changes in the membrane that block the entry of (iv).____The secretions of the (v).____help the sperm enter into the cytoplasm of the ovum.

A.

(i)	(ii)	(iii)	(iv)	(v)
Fertilisation	Fimbriae	insemination	eggs	middle piece

B.

(i)	(ii)	(iii)	(iv)
insemination	ampullary isthmic junction	fertilisation	additional

C.

(i)	(ii)	(iii)	(iv)	(v)
ovulation	ampulla	fertilisation	additional sperms	tail

D.

(i)	(ii)	(iii)	(iv)	(v)
parturition	isthmus	insemination	eggs	acrosome

Answer: B

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99. Which part of the sperm plays an important role in penetrating the egg membrane?

A. allosome

B. tail

C. autosome

D. acrosome

Answer: D

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100. 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 divison.

Answer: B

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101. In oocyte secodary maturation occurs in

A. ovary

B. abdominal cavity

C. fallopian tube

D. uterus.

Answer: C

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102. Besides activating the egg, another role of a sperm is to carry to egg

A. RNA

B. mitochondria

C. DNA

D. ribosomes.

Answer: C

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103. The sperm and the egg make different contributions to zygote which of the following statements about their contributions are true?

(i). Sperm contributes most of the mitochondria.

(ii). Egg contributes most of the cytoplasm.

(iii). Both sperm and egg contribute halpoid nucleus.

(iv). Both sperm and egg contribute centrioles.

A. (i) and (ii)

B. (ii) and (iii)

C. (iii) and (iv)

D. (i),(ii),(iii) and (iv)

Answer: B

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104. Some important events that take place during fertilisation are given below. Arrange the events in a proper sequence and select the correct option.

(i). Cortical reaction

(ii). Sperm entry

(iii). Karyogamy

(iv). Acrosomal reaction

A. $(iv) \rightarrow (i) \rightarrow (ii) \rightarrow (iii)$

B. $(i) \rightarrow (ii) \rightarrow (iii) \rightarrow (iv)$

C. $(iv) \rightarrow (ii) \rightarrow (i) \rightarrow (iii)$

D. $(ii) \rightarrow (i) \rightarrow (iii) \rightarrow (iv)$

Answer: A

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105. Preparation of sperm before penetration of ovum is

A. spermiation

B. cortical reaction

C. spermiogenesis

D. capacitation.

Answer: D

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106. The sex of the fetus will be decided at

A. fertilisation by male gamete

B. implantation

C. fertilisation by female gamete

D. the start of cleavage

Answer: A

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107. What is true aobut cleavage in the fertilised egg in humans?

A. it starts while the egg is I fallopian tube

B. it starts when the egg reaches uterus

C. it is meroblastic

D. it is identical to the normal mitosis.

Answer: A

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108. Cleavage differes from mitosis in lacking

A. synthetic phse

B. growth phase

C. both a and b

D. none of these.

Answer: B

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109. The solid mass of 8-16 cells formed from zygote after successive mitotic divisions is called

A. blastula

B. gastrula

C. morula

D. none of these

Answer: C

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110. given below are four statements (i)-(iv) reagarding embryonic development in humans.

(i). Cleavage divisions about considerable increase I the mass of protoplasm

(ii). With more cleavage divisions, the resultant blatomeres become smaller and smaller.

(iii). the blastomeres in the blastocyst are arranged into two layers, trophoblast and endometrium.

(iv). Cleavage divisions result in a solid ball of cells called morula.

Which of the above two statemetns are correct?

A. (i) and (iii)

B. (ii) and (iv)

C. (i) and (ii)

D. (iii) and (iv)

Answer: B

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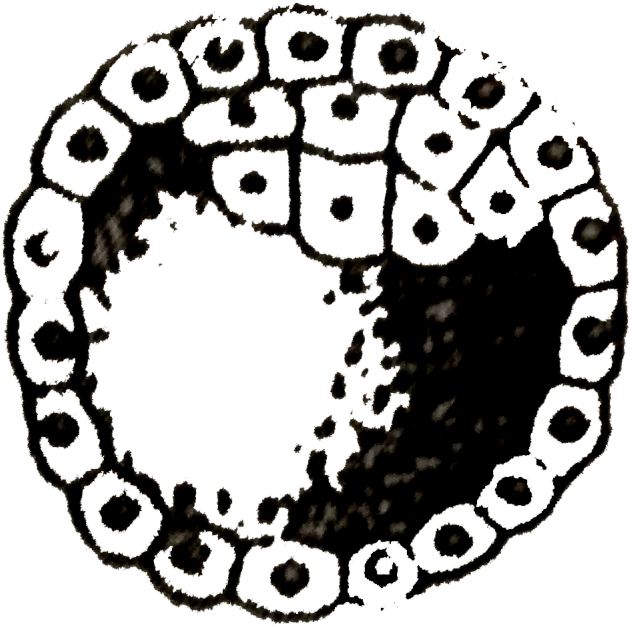

111.

Identify the human developmental stage shown as well as the related right place of its occurrence in a normal pregnant woman and select the right options for the two, together.

A.	Developmental stage Late morula	Site of occurrence Middle part of fallopian tube
B.	Developmental stage Blastula	Site of occurrence End part of Fallpian tube
C.	Developmental stage Blastocyst	Site of occurrence Uterine wall
D.	Developmental stage 8-celled morula	Site of occurrence Starting point of Fallopian tube

Answer: C

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112. Statement-1: Upto morula stage, the cells divide without any increase in size.

Statement-2: Zona perllucida remains intact till cleavage is complete.

A. Both statement 1 and 2 are correct.

B. Statement 1 is correct but statement 2 is incorrect

C. statement 1 and incorrect but statement 2 is correct.

D. Both statement 1 and 2 are incorrect.

Answer: A

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113. Match column I with column II and select the correct option from the codes given below.

Column I	Column II
$A.$ Cleavage	$(i).$ Fertilisation
$B.$ Morula	$(ii).$ Mitotic divisions
$C.$ Polyspermy	$(iii).$ Endometrial
$D.$ Implantation	$(iv).$ Little mulberry

A. A-(ii),B-(iv),C-(i),D-(iii)

B. A-(i),B-(iv),C-(ii),D-(iii)

C. A-(iv),B-(ii),C-(i),D-(iii)

D. A-(ii),B-(iv),C-(iii),D-(i)

Answer: A

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114. Implantation takes place after _____of fertilisation.

A. 5 days

B. 6 days

C. 7 days

D. 8 days

Answer: C

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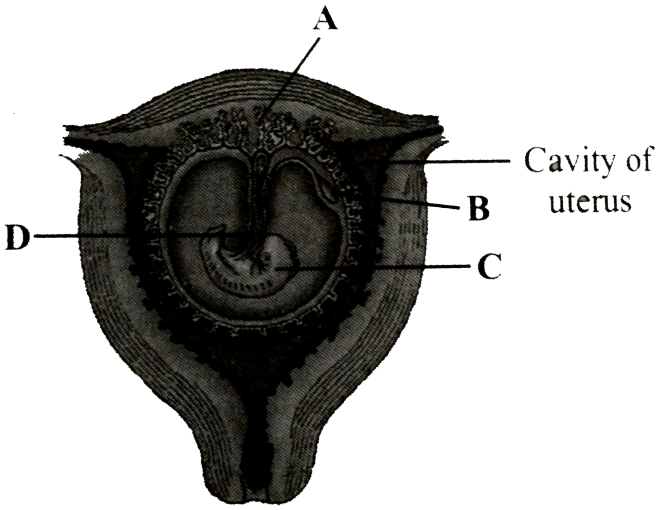

115.

identify the labelled parts A-D in the given figure of human foetus within the uterus.

A.

A	B	C	D
Umbilical cord	Placental villi	Yolk sac	Embryo

B.

A	B	C	D
Yolk sac	Umbilical cord	Embryo	Placental villi

C.

A	B	C	D
Placental villi	Yolk sac	Embryo	Umbilical cord

D.

A	B	C	D
Placental villi	Embryo	Yolk sac	Umbilical cord

Answer: C

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116. Structure connecting the fetus to placenta is

A. umbilical cord

B. amnion

C. yolk sac

D. chorion.

Answer: A

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117. The main function of trophoectodrm

A. formation of the body of developing embryo

B. formation of future ectoderm

C. formation of placenta.

D.

Answer: D

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118. Why cannot a woman get pregnant again during pregnancy?

A. A woman ovulates during pregnancy, but the oviducts are plugged with protective mucus to prevent sperm from entering

B. High level of hCG in woman's bodies kill sperm.

C. A woman cannot have intercourse during pregnancy due to the presence of a protective mucus plug that develops in the cervix.

D. High levels of estrogen and progesterone, secreted by the corpus luteum or placenta during pregnancy. Inhibit the secretion of gonadotropins and prevent ovulation.

Answer: D

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119. Fetus gets nourishment and oxygen through

A. allantois

B. placenta

C. yolk sac

D. chorion.

Answer: B

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120. hCG, hPL and relaxin are produced in women

A. at the time of puberty

B. only during pregnancy

C. at the time of menopause

D. during menstruation.

Answer: B

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121. Which of the following hormones is not a secretory product of human placenta?

A. Huma chorionic honadotropin

B. prolacting

C. estrogen

D. progesterone

Answer: B

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122. Urine test during pregnancy determines the presence of

A. human chorionic gonadotropin hormone

B. estrogen

C. progesterone inhibits the release of LH from putuitary causing regression of corpus luteum

D. luteinising hormone.

Answer: A

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123. In a normal pregnant woman, the amount of total gonadotropin activity was assessed. The result expected was

A. high level of circulating FSH and LH in the uterus to stimulate implantation of the embryo

B. High level of circulating hCG to stimulate endometrial thickening

C. high levels of FSH and LH in uterus to stimulate endometrial thickening

D. high level of circulating hCG to stimulate estrogen and progesterone synthesis.

Answer: D

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124. In the event of pregnancy, the corpus luteum persists under the influence of

A. LH

B. FSH

C. chorionic gonadotropin

D. progesterone.

Answer: C

Watch Video Solution

125. During the development of embryo, which of the following occurs first?

A. Differentiation of organ

B. Differentiation of tissue

C. differentiation of organ system

D. Differentiation of cells

Answer: D

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126. Given below are four statements each with one or two blanks. Select the option which correctly fills up the blanks in any two statements.

(A). The embryo with 8 to 16 blastomeres is called a (i).____

(B). Embedding of the (i).____ in the endometrium of the uterus is called implantation and it leads to (ii). _____

(C). After implantation finger like projections appear on the trophoblast called (i).____ which are surrounded by the (ii).____ abnd maternal blood.

(D). Inner cell mass contains certain cells called (i).____ cells which have the potency to give rise to all the tissues and organs.

A. (A)-(i) blastula, (C)-(i) chorionic villi, (ii)-uterine tissue

B. (B)-(i) blastocyst, (ii) pregnancy, (D)-(i) stem

C. (A)-(i) morula, (D)-(i) sertli

D. (B)-(i) morula, (ii) parturition, (C)-(i) fimbriae, (ii)-embryonic tissue

Answer: B

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127. Identify the correctly matched pair/pairs of the germ layers and their derivatives.

A. Ectoderm-Epidermis

B. Endoderm-Dermis

C.Mesoderm-Muscles

D.Mesoderm-Notochord

E. Endoderm-Enamel of teeth

A. A and D

B. A and B

C. A, C and D

D. A, B, C and E

Answer: C

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128. Fill the blanks in the given statements and select the correct option

A. The developmetnal stage of an animal passed in the mother's womb is called (i).___

(ii). The outer layer of blastula is called (ii). ____. It does nt take part in the formation of (iii). _____

C. (iv).____ is the first germ layer formed from the inner cell mass by differentiation.

A. (ii)-mesoderm, (iii)-embryo proper (iv)-ectoderm

B. (i)-embryo, (ii)-trophoblast, (iii)-embryo proper

C. (i)-egg, (iv)-endoderm

D. (i)-embyo- (iv)- ectoderm

Answer: B

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129. The structures derived from extoderm are

(i). Pituitary gland

(ii). Comea

(iii). Kidneys

(iv). Notochord

A. (i) and (iii)

B. (ii) and (iii)

C. (i) and (ii)

D. (ii) and (iv)

Answer: C

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130. Gastrula is the embryonic stage in which

A. cleavage occurs

B. blatocoel form

C. germinal layers

D. villiform.

Answer: C

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131. In the development of the human body, the ectoderm is responsible for the formation of

A. lens of the eye

B. nervous system

C. sweat glands

D. all of these

Answer: D

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132. Slect the option that correctly fills up the blanks in the given paragraphs After one month of pregnancy the embryo's (i).____is formed By the end of the (ii).____month of pregnancy the fetus develops limbs and digits. By the end of (iii).____most of the major organ systems are formed, for example, the limb and external genital organs are well-developed by the end of (iv).____the body is covered with fine hair, eye-lids separate, and eyelashed are formed

A. (i)- heart, (ii)- second

(iii)- first trimester, (iv)- second trimester.

B. (i)-heart, (ii)-second

(iii)-first month, (iv)-second month

C. (i)-heart, (ii)- second,

(iii) first week, (iv)- second week

D. (i)-heart, (ii)-fourth

(iii). First trimester, (iv)- second trimester

Answer: A

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133. The first movements of the fetus 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

Answer: B

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134. The early stage human embryo distinctly possesses

A. gills

B. gill silts

C. external ear (pinna)

D. eyebrows

Answer: B

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135. Deliver of developed fetus is scientifically called

A. parturition

B. oviposition

C. abortion

D. ovulation.

Answer: A

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136. Match column I with column II and select the correct option from the codes given below.

Column I	Column II
Fertilisation	(i)Isthmus of oviduct
Cleavage	(ii)Later part of oviduct
Morula	(iii)Cervix
Blastocyst	(iv)Ampulla of oviduct
Parturition	(v)Uterine wall

A. iv,I,ii,iii,v

B. ii,I,iv,iii,v

C. ii,I,v,iv,iii

D. iv,I,ii,v,iii

Answer: D

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137. In human adult females, oxytocin

A. stimulates pituitary to secrete vasopressin

B. causes strong uterine contractions during parturition

C. is secreted by anterior pituitary

D. stimulates growth of mammary glands.

Answer: B

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138. Match column I (terms) with column II (definitions) and select the correct option from the codes given below.

	Column I		Column II
(A)	Parturition	(i)	Attachment of embryo to endometrium
(B)	Gestation	(ii)	Release of egg from Graafian follicle
(C)	Ovulation	(iii)	Delivery of baby from uterus
(D)	Implantation	(iv)	Duration between pregnancy and birth
(E)	Conception	(v)	Formation of zygote by fusion of the egg and sp
			Stoppage of ovulation and menstruation

A. ii,iv,I,v,vi

B. iv,iii,I,v,ii

C. v,vi,ii,iii,iv

D. iii,iv,ii,I,v

Answer: D

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139. Mathc column I with column II and select the correct option from the codes given below.

Column I	Column II
Hypothalamus	(i)Sperm lysins
Acrosome	(ii)Estrogen
Graafian foolicle	(iii)Relaxin
Parturiton	(iv)Testosterone

A. iv,I,ii,iii,v

B. ii,iiv,iii,v

C. ii,I,v,iv,iii

D. iv,I,ii,v,iii

Answer: D

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140. Consider the following four statements and select the correct option stating which ones are true (T) and which ones are false (F).

(i) The scrotum acts as a thermoregulator, maintaining the testes at a temperature 2° lower than that of the body

(ii) Corona radiate layer of the ovum prevents polyspermy.

(iii) Middle part of ear is derived from the endoderms layer.

(iv) The hormone, human chorionic gonadotropin facilitates parturition by softening the connective tissue of the public symphysis.

A. $\begin{matrix}(\mathrm{i}) & (\mathrm{ii}) & (\mathrm{iii}) & (\mathrm{iv}) \\ T & T & F & F\end{matrix}$

B. $\begin{matrix}(\mathrm{i}) & (\mathrm{ii}) & (\mathrm{iii}) & (\mathrm{iv}) \\ F & T & F & T\end{matrix}$

C. $\begin{matrix}(\mathrm{i}) & (\mathrm{ii}) & (\mathrm{iii}) & (\mathrm{iv}) \\ T & F & T & F\end{matrix}$

D. $\begin{matrix}(\mathrm{i}) & (\mathrm{ii}) & (\mathrm{iii}) & (\mathrm{iv}) \\ F & F & T & T\end{matrix}$

Answer: C

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141. Read the following statements carefully and select the correct statements.

(i) hPL plays a major role in parturition.

(ii) Fetus shows movements first time in the 7^{th} months of pregenancy.

(iii) Signal for parturition comes from fully developed fetus and placenta.

(iv) Embryo's hearth is formed by the 3^{rd} month of pregency.

A. ii and iii

B. iii only

C. ii and iv

D. I and iv

Answer: B

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142. The third stage of parturition is called " after-birth". In this stage

A. excessive bleeding occurs

B. fetus is born and cervix and vagina contraction to normal condition happens

C. fetus is born and contraction of uterine wall prevents excessive bleeding

D. placenta is expelled out.

Answer: D

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143. Given below are three statements each with one or two balnks select the option which correctly fills up the balnks in any two statements.

(A) In human beings, menstrual cycle ceases around 50 years of age: this is termed as (i).

(B) The milk produced during the initial few days of lactation is called (i) which contains several (ii) absolutely essential to develop resistance for the new-born babies.

(C) At the completion of the (i) divison, the primary oocyte divides into secondary oocyte and (ii).

A. i- menarche, i-lactation, ii minerals

B. i colostrum, ii antibodies, i first meiotic, ii first polar body

C. i menopause, i second meiotic, ii second polar body

D. i menopause, i corpus luteum, ii antiobodies.

Answer: B

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144. Mathc column I with column II and select the correct option from the codes given below.

Column I	Column II
Hyaluronidase	(i)Acrosomal reaction
corpus luteum	(ii)Morphogenetic
Gastrulation	(Progesterone
Capacitation	(iv)Mammary gland
Colostrum	(v)Sperm activation

A. v,ii,iv,i,iii

B. i,iii,ii,v,iv

C. iii,ii,v,iv,i

D. i,ii,iii,iv,v

Answer: B

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145. After birth, colostrum is released from mammary glands which is rich in

A. fat and low in proteins

B. proteins and low in fat

C. proteins, antibodies and low in fat

D. proteins, fat and low in antibodies.

Answer: C

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146. In an experiment, sperms removed from epiddymis of a man were added in a dish containing appropriate media and oocyte. No fertilisation was seen. However, when sperms from epiddymis were directly placed in uterus of an ovulated woman, she became pregnant. These observations suggest that

A. the sperms need to travel some distance to attain fertilising ability

B. the oocyte secretes some biochemicals or factors which help sperms to fertilise

C. the hormones in the female body help sperms to attain fertilising ability

D. the contents of female reproductivity tract interact with sperms and activate them for fertilisation.

Answer: D

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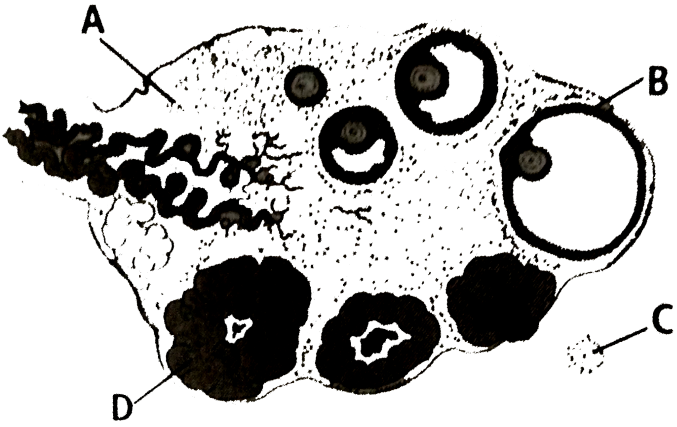
147. The given figure illustrates montly changes in the human ovary during the reproduction cycle.



Which of the following statements most accurately describes each structure?

A. Before puberty, the oocyte (A) does not start the process of meiosis.

B. The hormone produced by by structure (B) causes thinning of the uterine cervical mucus to allow passage of sperms.

C. During ovulation, structure (C) stays at the interphase between meiosis I and meiosis II.

D. The hormone produced by structure (D) stimulates the pituitary gland to secrete luteinising hormone.

Answer: B

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148. Level of follicle stimulating hormone (FSH) during infancy and adulthood is the same but spermatogenesis is seen only during adulthood. mRNA levels coding for FSH receptors are also found to be same in testis of both age groups. Which of the following investigations will clarify this paradox a little more?

A. Culture testicular cells and add LH to see testosterone production.

B. Culture testicular cells and add testosterone to see comparative rise in FSH mRNA from both age groups.

C. Culture testicular cells and FSH to see comparative rise in cAMP production by both age groups.

D. Add both LH and FSH to testicular cells and evaluate cAMP production.

Answer: A

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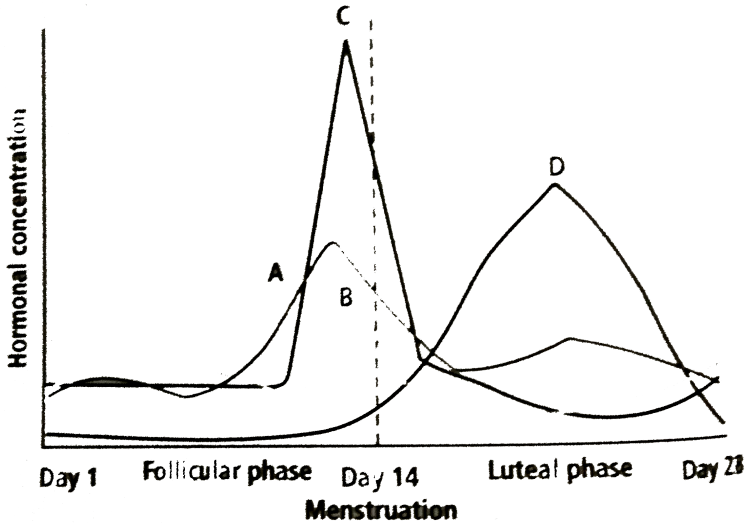
149. Refer to the given graph representing interplay of different hormones (A-D) during menstrual cycle in women and answer the question that follow.



Which hormone (A,B,C or D) is necessary for the final follicular grwoth and ovulation?

A. A

B. B

C. C

D. D

Answer: C

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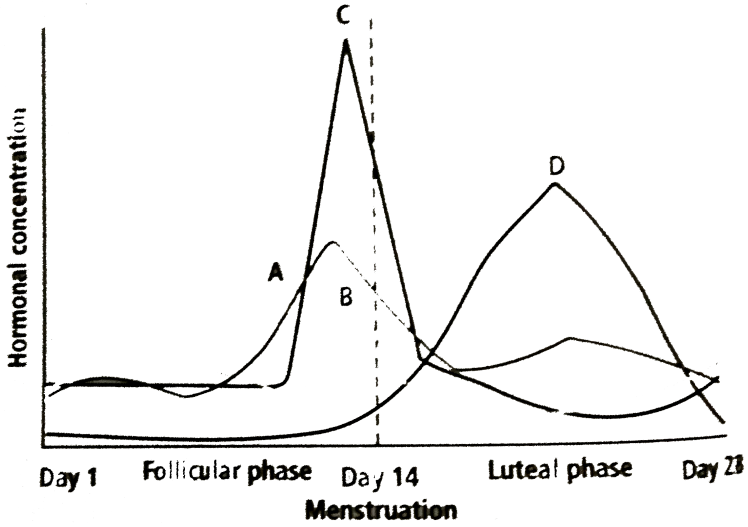
150. Refer to the given graph representing interplay of different hormones (A-D) during menstrual cycle in women and answer the question that follow.



Cessation of secretion of which of these hormones may lead to osteoporosis?

A. A

B. B

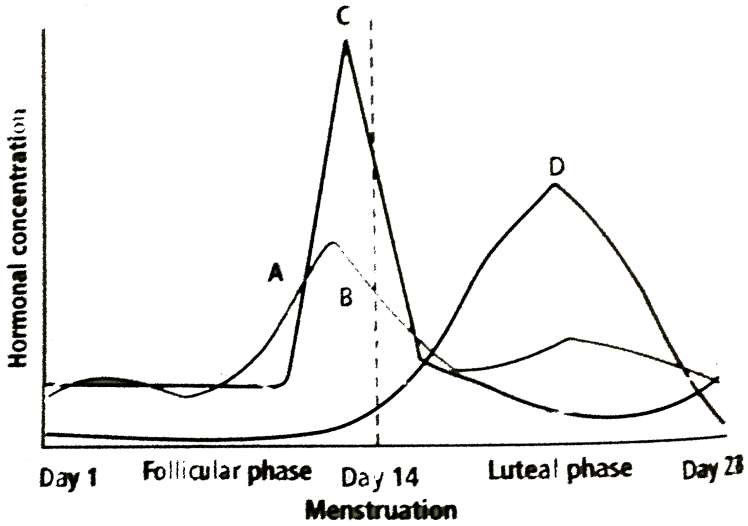
C. C

D. D

Answer: A

Watch Video Solution

151. Refer to the given graph representing interplay of different hormones (A-D) during menstrual cycle in women and answer the question that follow.



Which hormones are excreted in urine after menopause?

A. A

B. B

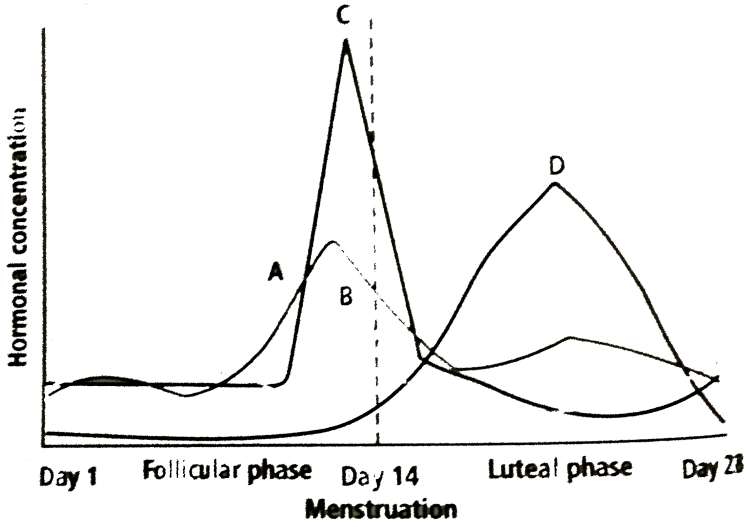
C. C

D. Both b and c

Answer: D

Watch Video Solution

152. Refer to the given graph representing interplay of different hormones (A-D) during menstrual cycle in women and answer the question that follow.



Which hormones is most effective in producing uterine changes during menstrual cycle?

A. A

B. B

C. C

D. D

Answer: D

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153. Choose the incorrect statement from the following

A. In birds and mammals internal fertilisation takes place.

B. Colostrum contains antibodies and nutrients.

C. Polyspermy in mammals is prevented by the chemical changes in the egg surface.

D. In the human female, implantation occurs almost seven days after fertilisation.

Answer: C

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154. Identify the correct statement from the following.

A. High levels of estrogen triggers the ovulatory surge.

B. Oogonial cells start to profiferate and give rise to functional ova in regular cycles from puberty onwards.

C. Sperms released from seminiferous tubules are highly motile.

D. Progesterone level is high during the post-ovulatory phase of menstrual cycle.

Answer: D

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155. Spot the odd one out from the following structures with reference to the male reproductive system.

A. Rete testis

B. Epididymis

C. Vasa efferentia

D. Isthmus

Answer: D

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156. Seminal plasma, the fluid part of semen, is contributed by

(i) seminal vesicle (ii) prostate

(iii) urethra (iv) bulbourethral gland

A. i and ii

B. i,ii and iv

C. ii,iii and iv

D. i and iv

Answer: B

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157. Spermiation is the process of the release of sperms from

A. seminiferous tubules

B. vas deferens

C. epididymis

D. prostate gland.

Answer: A

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158. Mature Graffian follicle is generally present in the ovary of a healthy human female around.

A. 5-8 day of menstrual cycle

B. 11-17 day of menstrual cycle

C. 18-23 day of menstrual cycle

D. 24-28 day of menstrual cycle.

Answer: B

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159. Acrosomal reaction of the sperm occurs due to

A. Its contact with zona pellucida of the ova

B. reactions within the uterine envioronment of the female

C. reactions within the epiddymal environment of the male

D. androgens produced in the uterus.

Answer: A

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160. Which one of the following is not a male accessory gland?

A. Seminal vesicle

B. Ampulla

C. Prostate

D. bulbourethral glands

Answer: B

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161. The immature male germ cells undergo division to produce sperms by the process of spermatogenesis. Choose the correct one with reference to above.

A. Spermatogonia have 46 chromosomes and always undergo meiotic cell division.

B. Primary spermatocytes divide by mitotic cell division.

C. Secondary spermatocytes have 23 chromosomes and undergo second meiotic division.

D. Spermatozoa are transformed into spermatids.

Answer: C

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162. Match between the following representing parts of the sperm and their functions and choose the correct option.

Column I	Column II
Head	(i) Enzymes
Middle piece	(ii) Sperm motility
Acrosome	(iii) Energy
Acrosome	(iv) Genetic material

A. ii,iv,i,iii

B. iv,iii,i,ii

C. iv,i,ii,iii

D. ii,i,iii,iv

Answer: B

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163. Which among the following has 23 chromosomes?

A. Spermatogonia

B. Zygote

C. Secondary oocyte

D. Oogonia

Answer: C

Watch Video Solution

164. Match between the following representing parts of the sperm and their functions and choose the correct option.

Column I	Column II
Head	(i) Enzymes
Middle piece	(ii) Sperm motility
Acrosome	(iii) Energy
Acrosome	(iv) Genetic material

A. ii,i,iii,iv

B. iii,iv,ii,i

C. iii,i,ii,iv

D. ii,iv,iii,i

Answer: B

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165. Which of the following hormones is not secreted by human placenta?

A. hCG

B. Estrogens

C. progesterone inhibits the release of LH from pututary causing regression of corpus luteum

D. LH

Answer: D

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166. The vas deferens receives duct from the seminal vesicle and opens into urethra as

A. epididymis

B. ejaculatory duct

C. efferent ductule

D. ureter.

Answer: B

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167. Urethral meatus refers to the

A. urinogential duct

B. opening of vas deferens into urethra

C. external opening of the uriogenital duct.

D. muscles surrounding the urinogenial duct.

Answer: C

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168. Mourla is a developmental stage

A. between the zygote and blastocyst

B. between the blastocyst and gastrula

C. after the implantation

D. between implantation and parturition.

Answer: A

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169. The membranous cover of the ovum at ovulation is

A. corona radiata, zona pellucida and vitelline membrane

B. zona radiata

C. zona pellucida

D. chorion.

Answer: A

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170. Identify the odd one from the following.

A. Labia minora

B. Fimbriae

C. infundibulum

D. Isthmus

Answer: A

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171. Assertion: A drop in temperature does not affect spermatogensis.

Reason: During temperature drop the smooth muscles contracts and bring the tests closer to the pelvic cavity.

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172. Assertion: The regions outside the seminiferous tubules are called interstitial spaces, which contain Leydig's cells.

Reason: Leydig's cells synthesise and secrete testicular hormones called androgens.

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173. Assertion: Each seminiferous tubule is lined on its inside by three types of cells.

Reason: These cells are male germ cells, Sertoli cells and Leydig's cells.

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174. Assertion: Infundibulum is a funnel shaped part closer to ovary.

Reason: The edges of infundibulum helps in collection of the after ovulation.

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175. Assertion: The shape of the uterus is like an inverted pear.

Reason: The inner glandular layer that lines the uterine cavity is called as myometrium.

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176. Assertion: The endometrium undergoes cyclical changes during menstrual cycle.

Reason: The myometrium exhibits strong contractions during delivery of the baby.

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177. Assertion: The female external genitalia includes mons pubis, labia majora and labia minora.

Reason: The glandular tissue of each breast is divided into 5-10 mammary lobes.

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178. Assertion: The type B spermatogonia are called primary spermatocytes.

Reason: Primary spermatocytes complete the first meiotic division leading to secondary spermatocytes.

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179. Assertion: The middle piece is called as power house of the sperm.

Reason: The numerous mitochondria coiling around axial filament produce energy for the movement of the tail.

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180. Assertion: Human male ejaculates about 5-100 million sperms during a coitus.

Reason: For normal fertillity at least 40 percent sperms must have normal shape and size.

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181. Assertion: All copulations do not lead to the fertilisation and pregnance.

Reason: Fertilisation can occur only if the ovum and sperms are transported simultaneously to the ampullary isthmic junction.

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182. Assertion: All embryo with 8 to 16 blastomeres is called a morula.

Reason: The morula containues to divide and transforms into trophoblast.

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183. Assertion: After implantation, finger-like projections appear on the trophoblast called chorionic villi.

Reason: Chorionic villi are surrounded by the uterine tissue and maternal blood.

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184. Assertion: During pregnancy the levels of hormones like estrogens and progetrogens are increased.

Reason: The increased production of these hormones is essential for fetal growth.

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185. Assertion: Vigorous contraction of the uterus at the end of pregnancy causes expulsion.

Reason: The stimulatory reflex between the uterine contraction and oxytocin secretion results in weakening contractions.

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