



BIOLOGY

BOOKS - A2Z BIOLOGY (HINGLISH)

HUMAN REPRODUCTION

Section A Topicwise Questions Topic 1 The Male Reproductive System

1. Read the following statements and find out the incorrect statement(s).

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

A. a, c and d

B. b, c and e

C. b and d only

D. b only

Answer: C



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2. The male reproductive system includes

a. Primary sex organ

b. Accessory duct

c. Accessory glands

d. External genitalia

A. a, b and d

B. a, c and d

C. a and d only

D. a, b, c and d

Answer: D



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3. Number of testicular lobules in testes is

A. 250

B. 500

C. 750

D. 200-300

Answer: B



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4. Read the following statements and find out the incorrect statements.

a. Each testicular lobule contains one to three highly coiled seminiferous tubules in which sperm are produced.

b. Each seminiferous tubule is lined on its inside by two types of cells called Leydig cells and Sertoli cells.

c. The region outside the seminiferous tubules called interstitial space, contain small blood vessels and male germ cells (spermatogonia) which lead to sperm formation.

d. In testis immunologically component cells are also present.

e. The seminiferous tubules of the testis open into the rete testis through vasa efferentia.

A. b and c

B. b and d

C. d and e

D. b, c and e

Answer: D



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5. The male accessory duct includes.

A. Penis, testis and ureter

B. Rete testis, vasa efferentia, epididymis
and vas deferens

C. Ureter, urinary bladder and urethra

D. Ureter, urethra and penis

Answer: B



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

A. Rete testis, vasa efferentia, epididymis,

vas deferens

B. Rete testis, vasa efferentia, vas deferens,

epididymis

C. Rete testis, vas deferens, epididymis,

vasa efferentia

D. Rete testis, vas deferens, vasa efferentia,
epididymis

Answer: A



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

A. Rete testis

B. Vas deferens

C. Vasa efferentia

D. Seminal vesicle

Answer: C



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

A. Rete testis

B. Vasa efferentia

C. Epididymis

D. Vas deferens

Answer: D



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9. Ejaculatory duct is formed by the

A. Vas deferens along with a duct from seminal vesicle

B. Epididymis along with a duct from seminal vesicle

C. Epididymis along with the prostatic duct

D. Vas deferens along with the prostatic duct

Answer: A



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10. Ejaculatory duct open into

A. Ureter

B. Urethra

C. Urinary bladder

D. Testis

Answer: B



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11. The function of the male sex accessory duct is

- A. Storage of sperms
- B. Transport of sperms
- C. Formation of sperms
- D. Both A and B

Answer: D



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12. The urethra originates from the ... a ... and extends through the ... b... to its external opening calledc....

A. a-ureters, b-uninary bladder, c- urethral
sphincter

B. a- urinary bladder, b-testis, c-urethral
meatus

C. a-penis, b-urinary bladder, c-urethral
meatus

D. a-urinary bladder, b- penis , c- urethral
meatus

Answer: D



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

A. Testis and scrotum

B. Testis without scrotum

C. Penis

D. Prostate, seminal vesicle and
bulbourethral glands

Answer: C



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14. The enlarged end of penis is called

- A. Prepuce
- B. Glance penis
- C. Glanse penis
- D. Glans penis

Answer: D



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

A. Prepuce

B. Hindskin

C. Foreskin

D. Both A and C

Answer: D



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16. The male sex accessory glands include

- a. Prostate gland
- b. Bulbourethral gland
- c. Seminal vesicle
- d. Bartholin gland

A. a, c and d

B. b, c and d

C. a, b and c

D. a, b, c and d

Answer: C





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

- A. Prostate gland
- B. Bulbourethral gland
- C. Seminal vesicle
- D. All of the above

Answer: B



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18. The secretion of the male sex accessory glands constitute the

A. Seminal plasma

B. Serum

C. Semen

D. Urine

Answer: A



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19. Spermatozoa are nourished during their development by

A. Sertoli cells

B. Connective tissue cells

C. Interstitial cells

D. None of the above

Answer: A



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20. Epididymis lies between

- A. Rete testis and vasa efferentia
- B. Vas deferens and vasa efferentia
- C. Vas deferens and ejaculatory duct
- D. Seminal tubules and rete testis

Answer: B



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21. Sertoli cells secrete a hormone called

A. Gonadotropin

B. Testosterone

C. Relaxin

D. Inhibin

Answer: D



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22. In human the unpaired male reproductive structure is

A. Testis

B. Seminal vesicle

C. Bulbourethral gland

D. Prostate gland

Answer: D



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23. Scrotal sacs of man and rabbit are connected with the abdominal cavity by

A. Inguinal canal

B. Haversian canal

C. Vaginal cavity

D. Spermatic canal

Answer: A



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24. Cryptorchidism is a condition of testes

A. Unable to descend in scrotal sacs

B. Unable to produce sperms

C. Having been surgically removed

D. Having remained undeveloped

Answer: A



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25. Accessory genital gland found only in males is

A. Cowper's gland

B. Bartholin gland

C. Perineal gland

D. Prostate gland

Answer: D



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26. Corpus spongiosum occurs in

A. Ovary

B. Penis

C. Testis

D. Uterine wall

Answer: B



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27. Function of prostate gland is

A. Storage of semen

B. Provide motility to sperms

C. Formation of semen

D. Release of hormones

Answer: B



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28. Supporting cells found in between spermatogonia are

A. Germinal cells

B. Sertoli cells

C. Epithelial cells

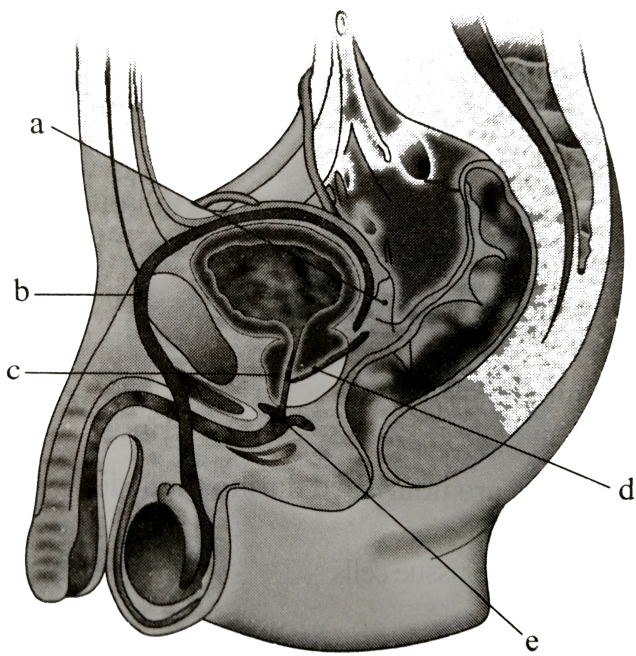
D. Lymph space

Answer: B



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



A. d-vas deferents, c-seminal vesicle, a-
ejaculatory duct, b -bulbourethral gland,
e-prostate gland

B. b-vas deferens, a-seminal vesicle, d-ejaculatory duct, c-bulbourethral gland, e-prostate gland

C. d-vas deferens, e-seminal vesicle, b-ejaculatory duct, a-bulbourethral gland, c-prostate gland

D. b-vas deferens, a-seminal vesicle, d-ejaculatory duct, e-bulbourethral gland, c-prostate gland

Answer: D



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30. Testes descend into scrotum in mammals for

- A. Spermatogenesis
- B. Fertilization
- C. Development of sex organs
- D. Development of visceral organs

Answer: A



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

- A. Presence of urinary bladder
- B. Presence of rectum
- C. Long vas deferens
- D. Requirement of low temperature for spermatogenesis

Answer: D



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32. Testosterone is produced by

- A. Acinar cells
- B. Graafian follicles
- C. Leydig cells
- D. Hepatic cells

Answer: C



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33. Seminal vesicles are located above

A. Caput epididymis

B. Uterus

C. Cowper's glands

D. Glans penis

Answer: C



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34. Prostate gland is present

A. On ureter

B. On kidney

C. On testis

D. Around urethra

Answer: D



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35. Which one is primary sex organ?

A. Scrotum

B. Penis

C. Testis

D. Prostate

Answer: C



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

- A. Sperms are non-nucleate
- B. Spermatogenesis does not occur
- C. Semen is without sperms
- D. Sperms are non- motile

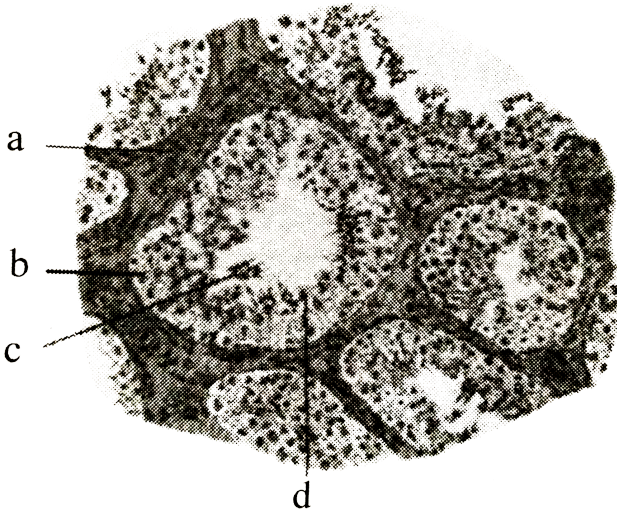
Answer: C



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Topic 1 The Male Reproductive System

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



A. d-Sertoli cells, c-spermatozoa, b-

spermatogonia, a-Interstitial cells

B. a-Sertoli cells, b-spermatozoa, c-spermatogonia, d-interstitial cells

C. c-Seroli cells, a-spermatozoa, d-spermatogonia, b-interstitial cells

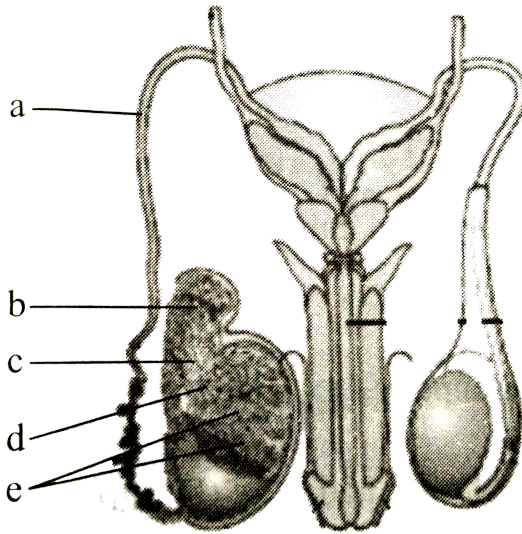
D. b-Sertoli cells, d-spermatozoa, a-spermatogonia, c-interstitial cells

Answer: A



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2. Recognise the figure and find out the correct matching



A. e-rete testis, d-testicular lobules, c-epididymis, b-vasa efferentia, a-vas deferens

B. d-rete testis , e-testicular lobules, b-epididymis, a-vasa efferentia , c-vas deferens

C. d-rete testis, e-testicular lobules, a-epididymis, c-vasa efferentia, b=bas deferens

D. d-rete testis, e-testicular lobules, b-epididymis, c-vasa efferentia, a-vas deferens

Answer: D



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Section A Topicwise Questions Topic 2 The Female Reproductive System

1. The female reproductive system includes

a. Primary sex organ.

b. Accessory duct

c. Accessory glands

d. External genitalia

A. a, b and d

B. a, c and d

C. a and d only

D. a, b, c and d

Answer: D



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2. The function of ovary is

a. To produce female gamete.

b. To provide the site for fertilisation

c. To provide the site for implantation

c. To produce several steroid hormones

A. a and b

B. a, b and d

C. a, b and c

D. a and d

Answer: D



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

A. Ligaments

B. Tendons

C. Loose connective tissue

D. Dense irregular connective tissue

Answer: A



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4. The female sex accessory ducts include

a. Fallopian tubes (oviducts)

b. Vagina

c. Hymen

d. Clitoris

e. Uterus

f. Mons pubis

A. a, b, c and d

B. a, b, c, and e

C. b, c, d and f

D. a, b, c and e

Answer: D



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

A. Infundibulum

B. Isthmus

C. Ampulla

D. Fimbriae

Answer: D



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

A. Infundibulum

B. Isthmus

C. Ampulla

D. Fimbriae

Answer: B



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7. Womb is the another name of

A. Vagina

B. Cervix

C. Oviduct

D. Uterus

Answer: D



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8. The uterus open into vagina through a narrow

A. Clitoris

B. Hymen

C. Cervix

D. Pelvis

Answer: C



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9. Birth canal is formed by

A. Uterus along with vagina

B. Uterus along with cervix

C. Cervical canal along with vagina

D. Uterus, cervix and vagina

Answer: C



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10. The female external genitalia includes

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

A. a, b and c

B. d, e and f

C. a, b, c and f

D. a, b, c, d and e

Answer: D



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11. Read the following statements and find out the incorrect statements.

a. Mons pubis is a cushion of fatty tissue

covered by skin and pubic hair.

b. The labia minora are fleshy folds of tissue, which extend down from the mons pubis and surround the vaginal opening.

c. The opening of the vagina is often covered partially by a membrane called hymen.

d. The clitoris lies at the upper junction of two labia majora above the urethral opening .

e. The presence or absence of hymen is a reliable indicator of virginity or sexual experience.

A. b, d and e

B. b, c and d

C. b, c and d

D. a, c and e

Answer: A



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12. the hymen can be torn by

a. First coitus (intercourse)

b. Sudden fall or jolt

c. Insertion of vaginal tampon

d. Active participation in cycling and horseback riding

A. a, b and c

B. b, c and d

C. a, b and d

D. a, b, c and d

Answer: D



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13. A functional mammary gland is characteristic of all

A. Female vertebrates

B. Female mammals

C. Female primates

D. Female animals

Answer: B



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

- A. 10-12 mammary lobes
- B. 12-16 mammary tubules
- C. 15-20 mammary alveoli
- D. 15-20 mammary lobes

Answer: D





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

- A. Alveoli
- B. Ampulla
- C. Neurons
- D. Nephrons

Answer: A



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

- A. Mammary duct
- B. Mammary tubule
- C. Mammary ampulla
- D. Lactiferous duct

Answer: D



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17. In breast, the mammary alveoli open into the

- A. Mammary duct
- B. Mammary tubule
- C. Mammary ampulla
- D. Lactiferous duct

Answer: B



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

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

A. $d - 1, a - 2, b - 3, c - 4$

B. $c - 1, b - 2, a - 3, d - 4$

C. $b - 1, c - 2, a - 3, d - 4$

D. $b - 1, a - 2, c - 3, d - 4$

Answer: C



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19. The tubules of each lobe join to form a

- A. Mammary duct
- B. Mammary tubule
- C. Mammary ampulla
- D. Lactiferous duct

Answer: A



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20. Bartholin's glands occur in

A. Females and help in vestibular lubrication

B. Females and produce estrogen for regulating secondary sexual characters

C. Males and form liquid part of spermatic fluid

D. Males and produce alkaline fluid for neutralising urethral acidity

Answer: A



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21. Cervix occurs in

A. Kidney

B. Fallopian tube

C. Between uterus and vagina

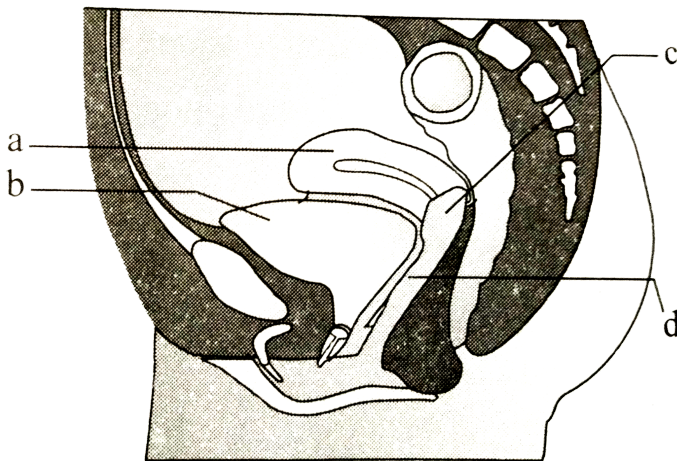
D. Epididymis

Answer: C



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



A. d-vagina, c-cervix, b-urinary bladder, a-uterus, e-urethra

B. c-vagina, d-cervix, a-urinary bladder, b-uterus, e-urethra

C. e-vagina, b-cervix, c-urinary bladder, d-uterus, a-urethra

D. d-vagina, c-cervix, a-urinary bladder, b-uterus, e-urethra

Answer: A



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23. Bartholin's glands are situated

- A. On the side of head of some amphibians
- B. At the reduced tail end of birds
- C. On either side of vagina in humans
- D. On either side of vas deferens in humans

Answer: C



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24. Mammary glands are modification of

- A. Sebaceous glands
- B. Sweat glands
- C. Meibomian glands
- D. None of the above

Answer: B



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25. Accessory glands associated with genital organs of female are

(a) Vestibular or Bartholin's

(b) Cowper's

(c) Ampullary

(d) Vesicular

A. a, b

B. a only

C. b, c

D. d only

Answer: B



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Topic 2 The Female Reproductive System

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

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

A. $a - 2, b - 5, c - 1, d - 3, e - 4$

B. $a - 1, b - 4, c - 5, d - 2, e - 3$

C. $a - 2, b - 4, c - 5, d - 3, e - 3$

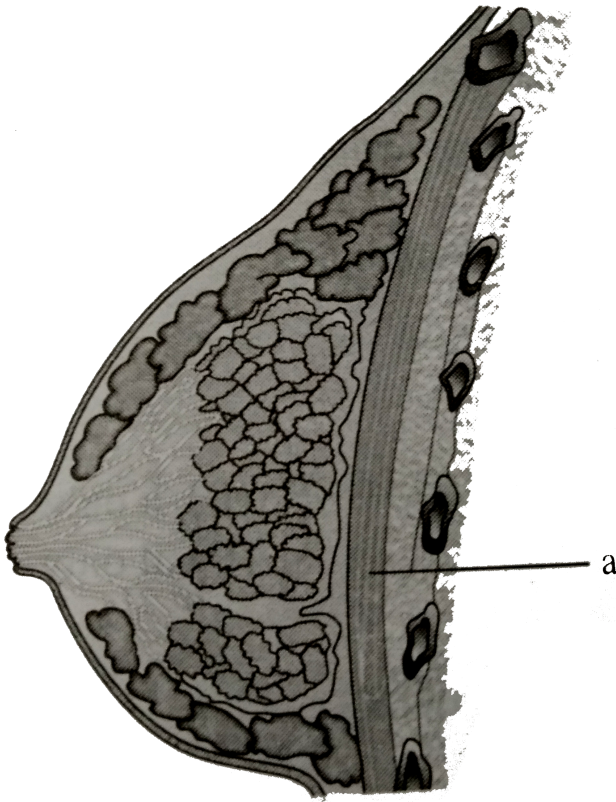
D. $a - 1, b - 4, c - 5, d - 3, e - 3$

Answer: C



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2. In the given figure, structure 'a' represents



A. External intercostal muscle

B. Internal intercostal muscle

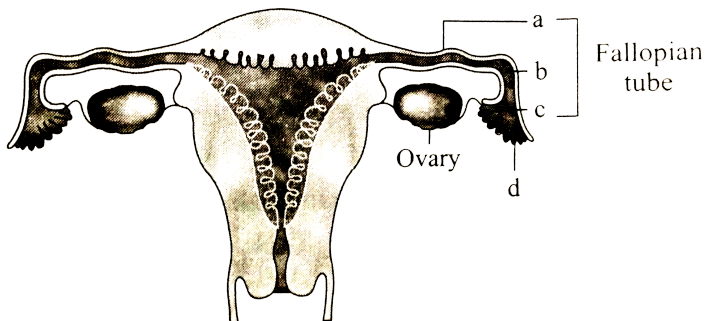
C. Pectoralis minor muscle

D. Pectoralis major muscle

Answer: D

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



A. c-infundibulum, b- ampulla, a-isthmus, d-
fimbriae

B. a-infundibulum, b- ampulla, c-isthmus, d-
fimbriae

C. b-infundibulum, a- ampulla, d-isthmus, c-
fimbriae

D. c-infundibulum, a- ampulla, b-isthmus, d-
fimbriae

Answer: A



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Section A Topicwise Questions Topic 3
Gametogenesis

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

- A. 1 million primary follicles
- B. A couple of million primary follicles
- C. 60,000 - 80,000 primary follicles

D. 1,20,000-1,60,000 primary follicles

Answer: C



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

A. Primary oocyte within primary follicle

B. Primary oocyte within secondary follicle

C. Primary oocyte within tertiary follicle

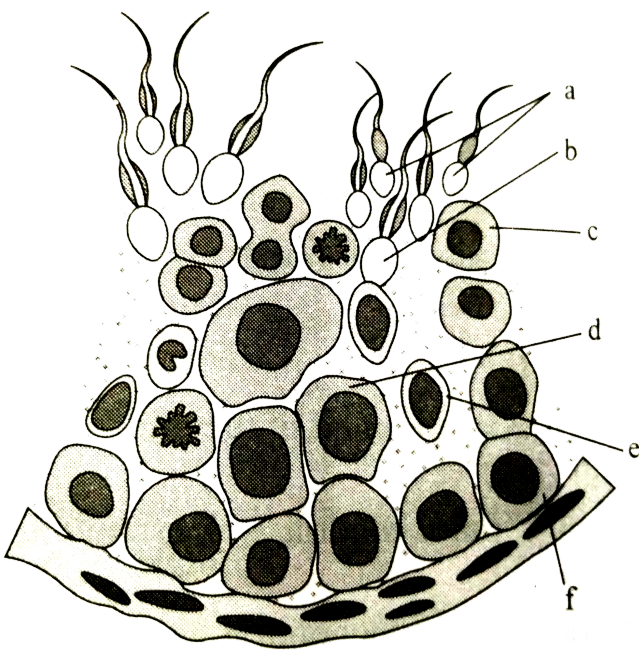
D. Secondary oocyte within tertiary follicle

Answer: C



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



A. a-spermatozoa, b-spermatid, c-primary
spermatocyte, d-secondary
spermatocyte, e-spermatogonia, f-Sertoli
cell

B. a-spermatozoa, b-spermatid, d-primary
spermatocyte, c-secondary
spermatocyte, f-spermatogonia, e-Sertoli
cell

C. b-spermatozoa, a-spermatid, c-primary
spermatocyte, d-secondary
spermatocyte, e-spermatogonia, f-Sertoli
cell

D. b-spermatozoa, a-spermatid, d-primary
spermatocyte, c-secondary

spermatocyte, f-spermatogonia, e-Sertoli
cell

Answer: B



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4. The primary sex organs in males and females, respectively, are

A. Testis and ovary

B. Penis and vagina

C. Scrotum and mammary gland

D. Testis and uterus

Answer: A



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

A. Puberty and puberty

B. Puberty and menopause

C. Embryonic stage and menarche

D. Puberty and embryonic stage

Answer: D



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

A. Somatostatin from hypothalamus

B. GnRH from hypothalamus

C. GnRH from anterior pituitary gland

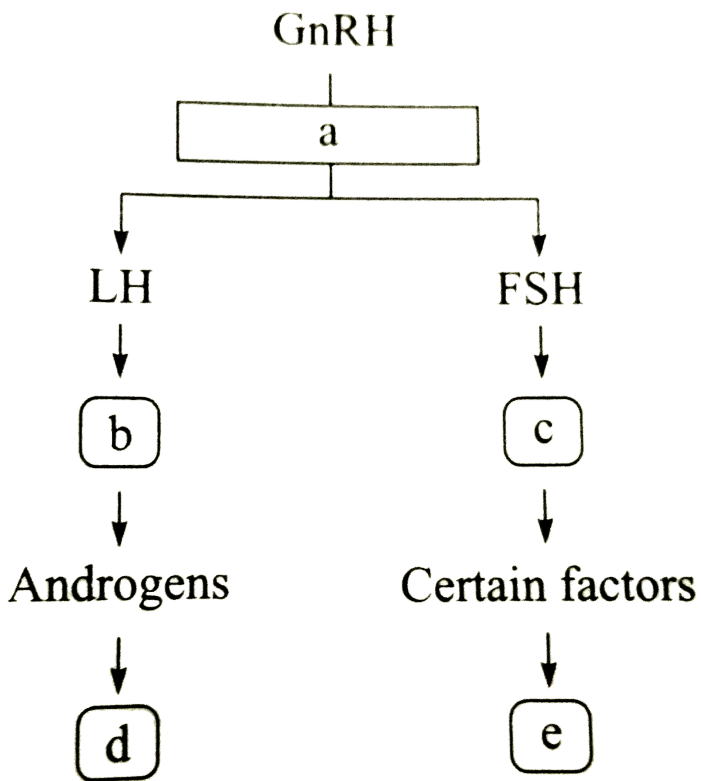
D. GnRH from posterior pituitary gland

Answer: B



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



A. a-anterior pituitary, b-Sertoli cell, c-Leydig cell, d-spermiogenesis, e-spermatogenesis

B. a-posterior pituitary, b- Leydig cell, c- Sertoli cell, d-spermiogenesis, e-spermatogenesis

C. a-anterior pituitary, b-Leydig cell, c-Sertoli cell, d-spermatogenesis, e-spermiogenesis

D. a-anterior pituitary, b-Leydig cell, c-Sertoli cell, d-spermiogenesis, e-spermatogenesis

Answer: C



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8. Which of the following produces energy for the movement of tail that facilitate sperm motility essential for fertilisation?

A. Acrosome

B. Mitochondria

C. Nucleus

D. Head

Answer: B



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9. During coitus, the human male ejaculates about

A. 200 to 400 milliion sperms

B. 100 to 200 million sperms

C. 200 to 300 million sperms

D. 200 to 300 billion sperms

Answer: C



10. Number of autosomes in human primary spermatocyte is

A. 22

B. 23

C. 44

D. 46

Answer: C



11. Primary spermatocyte differs from spermatogonium in

- A. Size and volume
- B. Size of chromosomes
- C. DNA content
- D. Number of chromosomes

Answer: A



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

A. Primary spermatocytes to secondary spermatocytes

B. Spermatogonia to primary spermatocytes

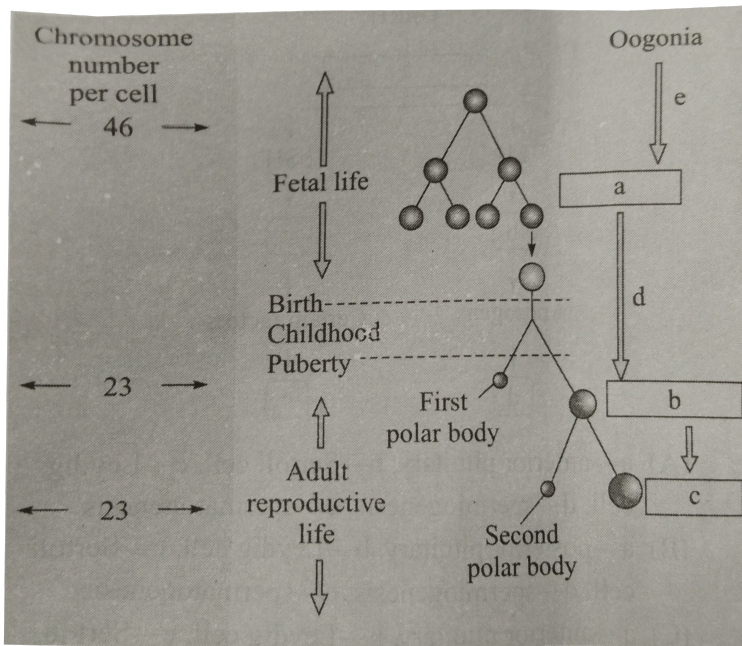
C. Spermatids to sperms

D. Secondary spermatocytes to spermatids

Answer: A



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



A. a-primary oocyte, b-secondary oocyte, c-ovum, d-second meiotic division, e-first meiotic division

B. a-primary oocyte, b-secondary oocyte, c-ovum, d-first meiotic division, e-mitosis differentiation

C. a-primary oocyte, b-secondary oocyte, c-polar body, d-second meiotic division, d-first meiotic division

D. a-first polar body, b-second polar body, c-ovum, d-first meiotic division, e-mitosis differentiation

Answer: B



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14. The cavity contained in Graafian follicle is

A. Antrum

B. Centrocoel

C. Blastocoel

D. Archenteron

Answer: A



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15. An egg is released and fertilised by sperm at which stage

A. Primary oocyte

B. Secondary oocyte

C. Oogonium

D. Ovum

Answer: B



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

A. 1:1

B. 1:2

C. 1:4

D. 2:1

Answer: C



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17. Movement of sperm is by

A. Head

B. Acrosome

C. Middle piece

D. Tail/flagellum

Answer: D



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18. Function of Sertoli cells is controlled by

A. Estrogen

B. FSH

C. Testosterone

D. ACTH

Answer: B



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19. Proximal centriole of sperm is found in

A. Head

B. Neck

C. Middle piece

D. Tail

Answer: B



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20. Release of second polar body from human egg occurs

A. After entry of sperm

B. After fertilization

C. Before sperm entry

D. With no relation to sperm entry

Answer: A



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21. Polar body is produced during the formation of

A. Sperm

B. Secondary oocyte

C. Oogonium

D. Spermatocytes

Answer: B



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22. Spermatogonia develop through division

A. Amitosis

B. Mitosis

C. Meiosis I

D. Melosis II

Answer: B



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

A. Centrole, mitochondria, 9+2
arrangement of microtubules

B. Centriole and mitochondria

C. Mitochondria and 9+2 arrangement of microtubules

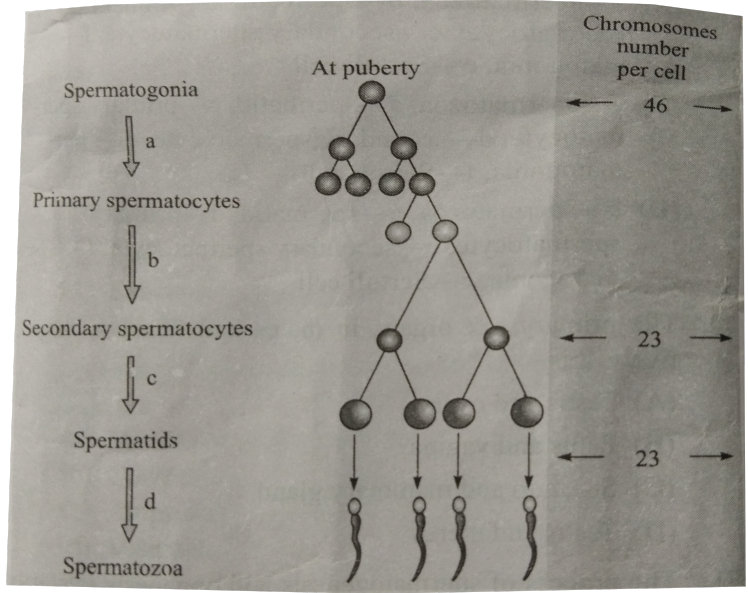
D. 9+2 arrangement of microtubules only

Answer: C



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



A. d-mitosis differentiation, a-first meiotic
 division,
 b-second meiotic division, c-
 differentiation

B. a-mitosis differentiation, b-first meiotic
division,

c-second meiotic division, d-
differentiation

C. c-mitosis differentiation, a-first meiotic
division,

b-second meiotic division, d-
differentiation

D. d-mitosis differentiation, c-first meiotic
division,

a-second meiotic division, b-
differentiation

Answer: B



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25. Spermiogenesis/spermateleosis is
formation of spermatozoa from

A. Primary spermatocyte

B. Secondary spermatocyte

C. Spermatids

D. Germinal cells of testes

Answer: C



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26. Gametes are formed in animals from

A. Muscular tissue

B. Nervous tissue

C. Connective tissue

D. Epithelial tissue

Answer: D



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27. Which is wrong about oogenesis?

- A. Unequal meiotic division
- B. Growth phase
- C. Formation of polar bodies
- D. Equal meiotic division

Answer: D



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28. In spermatogenesis, the phase of maturation involves

A. Growth of spermatogonia into spermatocytes

B. Formation of spermatogonia from gonocytes through mitosis

C. Formation of spermatogonia from primary spermatocytes through meiosis .

D. Formation of oogonia from spermatocytes through meiosis.

Answer: A



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29. Chromosome number is halved during

A. Formation of first polar body

B. Formation of second polar body

C. Meiosis II

D. Division of secondary oocyte

Answer: A



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30. Atretic follicles occur in

A. Ovary

B. Thymus

C. Testis

D. Liver

Answer: A



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

A. 23

B. 46

C. 18

D. 20

Answer: A



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32. Which is absent in human sperm?

A. Nucleus

B. Mitochondria

C. Centriole

D. Endoplasmic reticulum

Answer: D



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33. Graafian follicle contains

A. Many oocytes

B. Many sperms

C. A single oocyte

D. Site for egg fertilisation

Answer: C



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34. Estrogen is secreted by

A. Corpus luteum

B. Membranous granulosa of Graafian
follicle

C. Germinal epithelium of ovary

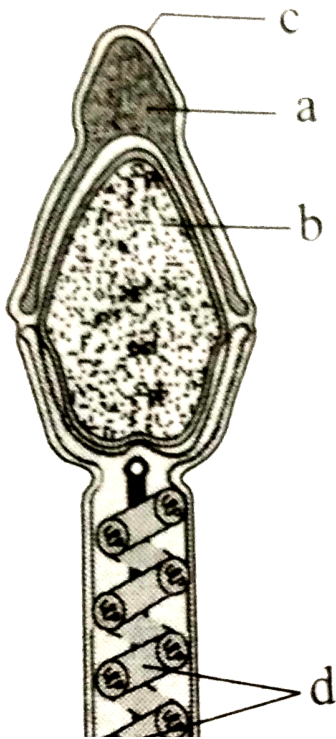
D. Pituitary

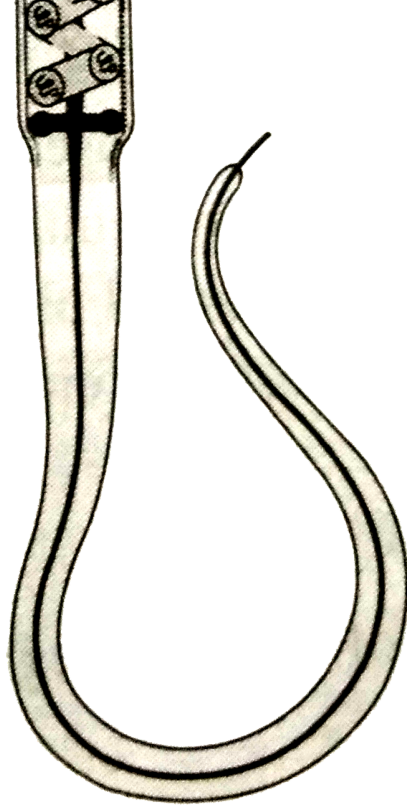
Answer: B



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





A. c-plasma membrane, b-acrosome, a-nucleus, d-mitochondria

B. a-plasma membrane, b-acrosome, d-nucleus, c-mitochondria

C. a-plasma membrane, d-acrosome, c-nucleus, b-mitochondria

D. c-plasma membrane, a-acrosome, b-nucleus, d-mitochondria

Answer: D



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36. 50 secondary oocytes in female and 50 secondary spermatocytes in male give rise to

- A. 50 ova and 100 sperms
- B. 100 ova and 200 sperms
- C. 200 ova and 50 sperms
- D. 100 ova and 100 sperms

Answer: A



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

A. Middle piece

B. Head

C. End piece of tail

D. Principal piece of tail

Answer: A



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38. The head of mature mammalian sperm is made of

A. An acrosome

B. Elongated nucleus covered by acrosome

C. Two centrioles and an axial filament

D. Nucleus, acrosome, cytoplasm and
mitochondrial

Answer: B



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39. Human sperm was discovered by

A. Leeuwenhoek

B. Aristole

C. Graaf

D. Pander

Answer: A



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

A. 4

B. 3

C. 1

D. 2

Answer: B



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**Section A Topicwise Questions Topic 4 Menstrual
Cycle**

1. Menstrual cycle is characteristic of all female

A. Man, apes and monkeys

B. Mammals

C. Primates

D. Both A and C

Answer: D



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

A. Pregnancy

B. Parturition

C. Implantation

D. Menstrual cycle

Answer: D



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3. Lack of menstruation may be due to the

A. Pregnancy

B. Stress

C. Poor health

D. All of the above

Answer: D



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

A. Menstrual phase, follicular phase and luteal phase

B. Menstrual phase, luteal phase and follicular phase

C. Menstrual phase, proliferative phase and secretory phase

D. Both A and C

Answer: C



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

A. LH surge

B. Degeneration of corpus luteum

C. Ovulation during mid-cycle

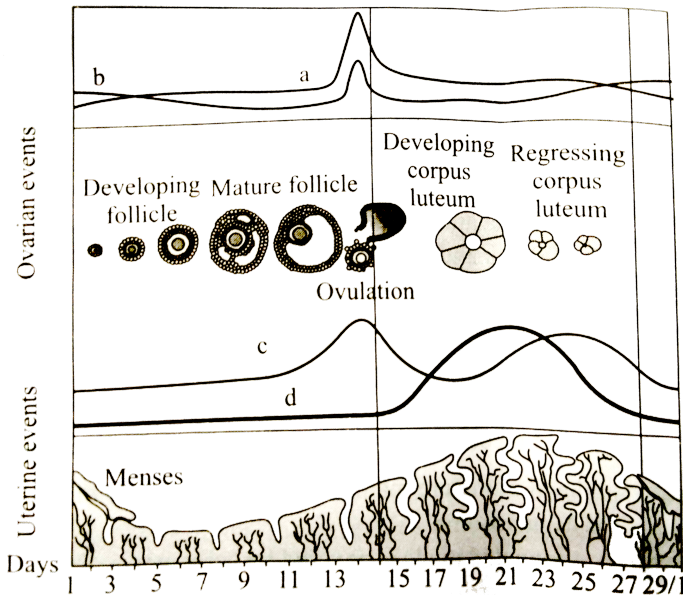
D. Implantation leads to pregnancy

Answer: B



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



A. a-LH, b-FSH, c-estrogen, d-progesterone

B. b-LH, a-FSH, c-estrogen, d-progesterone

C. c-LH, d-FSH, a-estrogen, b-progesterone

D. d-LH, c-FSH, b-estrogen, a-progesterone

Answer: A



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7. In mammals, the onset the onset of pregnancy causes

- A. Secretion of testosterone
- B. Degeneration of ovary
- C. Inhibition of further ovulation
- D. Inhibition of fertilization

Answer: C



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8. Which is correct ?

A. Menstrual cycle is present in all mammals

B. Menstrual cycle is present in all primates

C. Estrous cycle occurs in all mammals

D. Most mammals are oviparous

Answer: B



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9. Egg is liberated from ovary in

A. Secondary oocyte stage

B. Primary oocyte stage

C. Oogonial stage

D. Mature ovum stage

Answer: A



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10. In 28 days human ovarian cycle, ovulation occurs on

A. Day 1

B. Day 5

C. Day 14

D. Day 28

Answer:



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11. In case of non-fertilization, corpus luteum

A. Stops secreting progesterone

B. Changes to corpus albicans

C. Starts producing progesterone

D. None of the above

Answer: B



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

A. Chorion

B. Zona pellucida

C. Corona radiata

D. Vitelline membrane

Answer: B



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

A. 40

B. 400

C. 4000

D. 20000

Answer: B



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14. Secretion of progesterone by corpus luteum is initiated by

A. MSH

B. LH

C. Testosterone

D. Thyroxine

Answer: B



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15. Graafian follicle of ovary secretes

A. Estrogen

B. Relaxin

C. Progesterone

D. Cortisone

Answer: A



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16. Release of oocytes/ova from ovary is

A. Gestation

B. Ovulation

C. Parturition

D. Implantation

Answer: B



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17. The process of formation of ova is called

A. Ovulation

B. Oogenesis

C. Oviparity

D. Oviposition

Answer: B



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18. Human female reaches menopause at the age of about

A. 25 years

B. 35 years

C. 50 years

D. 70 years

Answer: C



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19. Phase of menstrual cycle when ovulation occurs is

A. Luteal

B. Menstrual

C. Proliferative

D. Secretary

Answer: C



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

A. Meiosis and before liberating polar bodies

B. Meiosis I and before liberating polar bodies

C. Meiosis I before completion of meiosis II

D. Meiosis I after release of polar body

Answer: D



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21. Corpus luteum occurs in

A. Uterus

B. Oviduct

C. Ovary

D. Vagina

Answer: C



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

A. FSH

B. LH

C. LTH

D. ICSH

Answer: B



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23. Hormone controlling human menstrual cycle is

A. Estrogen

B. FSH

C. LH

D. All of the above

Answer: D



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24. Which is incorrect for human female ?

A. Menstrual cycle takes 28 days

B. Menopause occurs at 45-55 years

C. Ovulated egg released during pregnancy

die

D. Menstruation takes 4 days

Answer: C



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25. Both corpus lutea and macula lutea are

A. Found in human ovaries

B. Source of hormones

C. Characterised by yellow colour

D. Contributory in maintaining pregnancy

Answer: C



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

A. Follicular phase

B. Ovulatory phase

C. Luteal phase

D. Menstruation

Answer: A



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27. Which of the following does not occur between 15-28 days fo menstrual cycle?

A. Premenstrual phase

B. Luteal phase

C. Secretory phase

D. Proliferative phase

Answer: D



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

A. FSH, progesterone, estrogen

B. Estrogen, FSH, progesterone

C. FSH, estrogen, progesterone

D. Estrogen, progesterone, FSH

Answer: C



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29. Match the column.

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

A. $(a) - 5, (b) - 4, (c) - 1, (d) - 2$

B. $(a) - 4, (b) - 5, (c) - 2, (d) - 1$

C. $(a) - 4, (b) - 3, (c) - 2, (d) - 5$

D. $(a) - 5, (b) - 1, (c) - 2, (d) - 4$

Answer: A



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30. In human female, ovulation occurs during menstrual cycle.

- A. At the end of proliferative phase
- B. In the middle of secretory phase
- C. Just before the end of secretory phase
- D. In the beginning of proliferative phase

Answer: A



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31. Which is correctly matched is a normal menstrual cycle ?

- A. Endometrium regenerates -5 to 10 days
- B. Release of egg 5th day
- C. Endometrium secretes nutrients for implantation -11 to 18 days
- D. Rise in progesterone level -1 to 15 days

Answer: A



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32. If mammalian ovum fails to get fertilized, which of the following is unlikely ?

A. Corpus luteum will disintegrate

B. Primary follicle starts developing

C. Progesterone secretion rapidly declines

D. Estrogen secretion further decreases

Answer: B



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33. At menopause there is rise in urinary excretion of

A. FSH

B. STH

C. MSH

D. LH

Answer: A



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

A. Estrogen

B. FSH

C. FSH-RH

D. Progesterone

Answer: D



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

A. Luteinising hormone

B. Progesterone

C. Follicle stimulating hormone.

D. Estrogen

Answer: B



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36. Disintegration of corpus luteum occurs due to inhibition of secretion of hormone?

A. LTH

B. FSH

C. Progesterone

D. LH

Answer: D



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

- A. Follicular phase
- B. Ovulation
- C. Secretory phase
- D. Onset of menstrual phase

Answer: D



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38. Arrange the events in human female menstrual cycle

a-Secretion of FSH, b-Growth of corpus luteum,

c-Growth of follicle and oogenesis, d-

Ovulation,

e-Sudden increase in level of LH

A. $a - c - e - d - b$

B. $c - a - d - b - e$

C. $a - d - c - e - b$

D. $b - a - c - d - e$

Answer: A



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39. What is false?

A. Menarche is beginning of menstruation

B. Menstruation is shedding of
endometrial lining

C. Menopause occurs in the beginning of
puberty

D. Ovulation occurs under high titre of LH

Answer: C



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Section A Topicwise Questions Topic 5
Fertilisation And Implantation

1. A temporary endocrine gland in humans is

A. Islets of Langerhans

B. Pineal body

C. Corpus luteum

D. Corpus allata

Answer: C



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2. Fertilization membrane is formed to

A. Facilitate entry of sperm into egg

B. Provide stability to egg

C. Prevent monospermy

D. Prevent polyspermy

Answer: D



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3. Fertilizin is

A. Phospholipid

B. Steroid

C. Carbohydrate

D. Glycoprotein

Answer: D



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4. Sperm of animal species *a* cannot fertilise ovum of species *b* because

A. Fertilizin of *a* and *b* are not compatible

B. Antifertilizin of *a* and *b* are not compatible

C. Fertilizin of a and Anti fertilizin of b are
not compatible

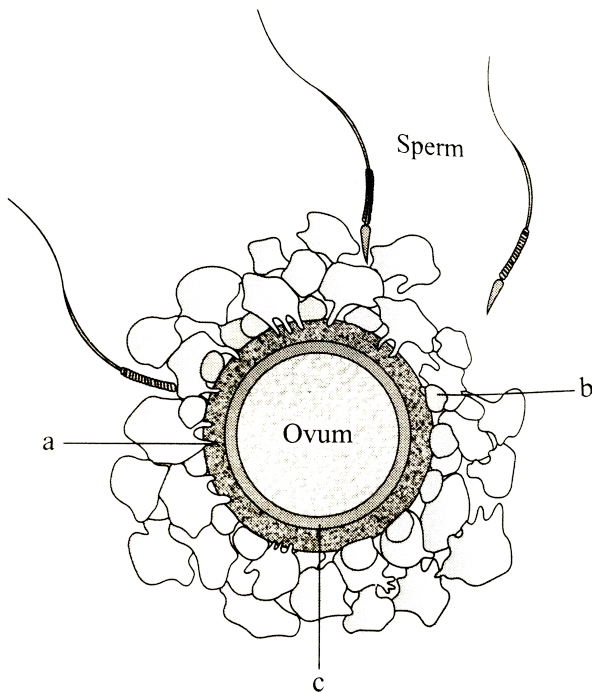
D. Anti fertilizin of a and fertilizin of b are
not compatible

Answer: D



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



A. a-cells of corona radiata, b-zona pellucida, c-perivitelline space

B. c-cells of corona radiata, a-zona pellucida, b-perivitelline space

C. b-cells of corona radiata, c-zona
pellucida, a-perivitelline space

D. b-cells of corona radiata, a-zona
pellucida, c-perivitelline space

Answer: D



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6. Animals with cleidoic eggs show

A. External fertilization, internal development

B. Internal fertilization, internal development

C. External fertilization, external development

D. Internal fertilization, external development

Answer: D



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

A. Morula

B. Zygote

C. Blastocyst

D. Neurula

Answer: C



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8. In the absence of acrosome the sperm

A. Cannot penetrate the egg

B. Cannot get food

C. Cannot get energy

D. Cannot swim

Answer: A



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9. Mammalian blastula is known as

A. Trophoderm

B. Blastocyst

C. Foetal blastula

D. Oedema

Answer: B



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10. Sperms produce an enzymatic substance or lysin for dissolving egg coverings. It is called

A. Hyaluronic acid

B. Hyaluronidase

C. Androgamone

D. Permease

Answer: B



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

- A. Corpus albicans
- B. Corpus luteum
- C. Graafian follicles
- D. Corpora cardiaca

Answer: B



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12. Capacitation of sperms occurs in

A. Female genital tract

B. Vagina

C. Vas efferens

D. Vas deferens

Answer: A



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13. Cytoplasm of ovum does not contain:

A. Golgi complex

B. Mitochondria

C. Centrosome

D. Ribosomes

Answer: C



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

- A. Fertilizin and spermysin
- B. Only spermysin
- C. Fertilizin and antifertilizin
- D. Antifertilizin and spermysin

Answer: D



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

A. Fertilizin

B. Antifertilizin

C. Agglutin

D. Antiagglutin

Answer: A



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16. Fertilization was discovered by

- A. Strasburger
- B. Robert Brown
- C. Lamarck
- D. Darwin

Answer: A



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17. Pregnancy begins with implantation of

A. Embryo

B. Fertilized ovum

C. Blastopore

D. Blastocyst

Answer: D



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18. Grey crescent is the area

A. At the point of entry of sperm into ovum

B. At the animal pole

C. Just opposite the site of entry of sperm

into ovum

D. At the vegetal pole

Answer: C



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19. Sperm enters the egg from

- A. Animal pole
- B. Vegetal pole
- C. Micropyle
- D. Megapyle

Answer: A



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20. A cell formed from cleavage is called

A. Blastomere

B. Blastopore

C. Blastula

D. Morula

Answer: A



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

A. Blastula

B. Morula

C. Gastrula

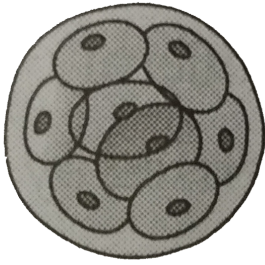
D. Neural plate

Answer: B

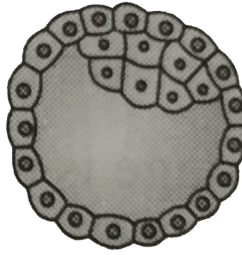


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22. Recognise the figure and find out the correct matching.



a



b

- A. a-morula, b-blastocyst
- B. a-blastocyst, b-morula
- C. a-blastocyst, b-gastrula
- D. a-morula, b-gastrula

Answer: A



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

- A. Zona pellucida
- B. Corona radiata
- C. Zona vesiculosa
- D. Membrana granulosa.

Answer: B



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24. Part of sperm that passes into ovum is

A. Tail

B. Acrosome

C. Head

D. Head, neck and middle piece

Answer: D



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

- A. Ejaculation
- B. Implantation
- C. Insemination
- D. Copulation

Answer: C



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26. Site of fertilization in a mammal is

A. Ovary

B. Uterus

C. Vagina

D. Fallopian tube

Answer: D



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27. Fertilised ovum is transplanted in uterus after

A. 1 day

B. 7 day

C. 8 day

D. 10 day

Answer: B



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28. Preparation of sperm before penetration of ovum is

- A. Spermiation
- B. Coition
- C. Insemination
- D. Capacitation

Answer: D



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29. Cleavage in the fertilised egg of humans

A. Starts in uterus

B. Is meroblastic

C. Starts when egg is in fallopian tube

D. Is discoidal

Answer: C



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30. A change in ovum after penetration of sperm is

A. Formation of first polar body

B. Second meiosis

C. First meiosis

D. Formation of pronuclei

Answer: B



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31. Fertilization is fusion of

A. Diploid spermatozoan with diploid ovum
to form diploid zygote

B. Haploid spermatozoan with diploid
ovum to form diploid zygote

C. Diploid spermatozoan with haploid
ovum to form diploid zygote

D. Haploid spermatozoan with haploid
ovum to form diploid zygote

Answer: D



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32. Type of cleavage in an egg is determined by

- A. Amount and distribution of yolk
- B. Number of egg membranes
- C. Size and location of nucleus
- D. Shape and size of sperm.

Answer: A



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33. Extrusion of second polar body from egg nucleus occurs

- A. After entry of sperm before completion of fertilization
- B. After completion of fertilization
- C. Before entry of sperm
- D. Without any relation of sperm entry

Answer: A



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34. Enzyme hyaluronidase is synthesised in

- A. Head of sperm
- B. Golgi bodies of acrosome
- C. Lysosome of acrosome
- D. Tail of sperm

Answer: B



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Section A Topicwise Questions Topic 6 Pregnancy And Embryonic Development

1. Human placenta is formed by

- A. Chorionic villi
- B. Umbilical cord
- C. Uterine tissue
- D. Both A and C

Answer: D



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

- A. Parturition
- B. Umbilical cord
- C. Placenta
- D. Chorionic villi

Answer: C



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3. The gestation period in human is about

A. 9 months

B. 365 days

C. 265 days

D. Both A and C

Answer: D



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4. Fill in the blanks:

1. By the end of the ...a... of pregnancy, the foetus develops limbs and digits.

2. By the end of ...b..., the body is covered with fine hair, eye-lids separate and eyelashes are formed.

3. After ...c... of pregnancy, the embryo's heart is formed.

A. a-first month, b-second month, c-first trimester

B. a-second month, b-first trimester, c-first month

C. a-second month, b-second trimester, c-first trimester

D. a-second month, b-second trimester , c-first month

Answer: D



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5. Fill in the blanks:

- a. Zygote divides to form ...1... which is implanted to uterus.
- b. The structure which provides vascular connection between foetus and uterus is called ...2...
- c. Inner cell mass contains certain cells called ...3... which have the potency to give rise to all the tissues and organs.
- d. By the end of ...4..., most of the major organ systems are formed, for example, the limbs

and external genital organs are well-developed.

e. Immediately after implantation, the ...5...differentiates into an outer layer called ectoderm and an inner layer called endoderm.

A. 1-morula, 2-umbilical cord, 3-trophoblast,
4-second trimester, 5-stem cells

B. 1-blastocyst, 2-placenta, 3-stem cells, 4-
first trimester, 5-trophoblast

C. 1-blastocyst, 2-umbilical cord, 3-stem
cells, 4-second trimesters, 5-inner cell

mass

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

Answer: D



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6. Which is urinary bladder of child in womb?

A. Uterus

B. Liver

C. Allantois

D. Amnion

Answer: C



View Text Solution

7. Vascular and excretory organs are formed from

A. Endoderm

B. Mesoderm

C. Ectoderm

D. Mesendoderm

Answer: B



View Text Solution

8. In development, eustachian tube is

A. Ectodermal

B. Mesodermal

C. Endodermal

D. Both mesodermal and endodermal

Answer: C



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9. Gonads/testes develop from embryonic

A. Ectoderm

B. Endoderm

C. Mesoderm

D. Both mesoderm and endoderm

Answer: C



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10. Gastrula end stage is characterised by

- A. End of Blastocoel
- B. Blastopore
- C. Formation of neural tube
- D. End of archonteron

Answer: C



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11. Termination of gastrulation is indicated by

- A. Obliteration of blastocoel
- B. Obliteration of archenteron
- C. Closure of blastopore
- D. Closure of neural tube

Answer: A



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12. In mammals, the archenteron/ primitive gut is lined with

A. Ectoderm

B. Mesoderm

C. Endoderm

D. Mesoderm and endoderm

Answer: C



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13. Connective tissue is derived from

A. Epithelium

B. Ectoderm

C. All germinal layers

D. Mesoderm

Answer: D



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14. Foetal membrane that provides the first blood corpuscle for circulation in embryo is

A. Trophoblast

B. Yolk sac

C. Amnion

D. Chorion

Answer: B



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15. Which one is not formed from ectoderm?

A. Notochord

B. Epidermis

C. Internal ear

D. Branchial arches

Answer: A



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16. When do the three germinal layers differentiate?

A. Blastula

B. Gastrula

C. Cleavage

D. Fertilization

Answer: B



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17. Villi of human placenta develop from

A. Chorion

B. Allantois

C. Yolk sac

D. Both A and B

Answer: A



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18. Correct sequence in development is

A. Fertilization → Zygote → Cleavage

→ Morula → Blastula → Gastrula

B. Fertilization → Zygote → Blastula

→ Morula → Cleavage → Gastrula

C. Fertilization → Cleavage → Morula

→ Zygote → Blastula → Gastrula

D. Cleavage → Zygote → Fertilization

→ Morula → Blastula → Gastrula

Answer: A



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19. Eye develops from

A. Ectoderm

B. Mesoderm

C. Endoderm

D. Both A and B

Answer: D



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

A. Mesoderm

B. Ectoderm

C. Endoderm

D. Both ectoderm and endoderm

Answer: B



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21. Amniotic fluid protects the foetus from

A. Shock

B. Encysment

C. Degeneration

D. Disease

Answer: A



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22. Intestine develops from

A. Ectoderm

B. Endoderm

C. Mesoderm

D. Pharyngeal pouch

Answer: B



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23. Germinal layer formed from trophoblast of mammalian blastocyst is

A. Ectoderm

B. Endoderm

C. Mesoderm

D. None of the above

Answer: D



Watch Video Solution

24. Which one develops from endoderm?

- A. Nervous system, urinary bladder and eye
- B. Liver, connective tissue and heart
- C. Thymus, spinal cord and brain
- D. Liver, pancreas and thymus/thyroid

Answer: D



Watch Video Solution

25. In higher animals blastopore generally forms

A. Anus

B. Mouth

C. Liver

D. Gut

Answer: A



Watch Video Solution

26. In deuterostomes second opening forms

A. Anus

B. Mouth

C. Nose

D. Both A and B

Answer: B



Watch Video Solution

27. Cavity of gastrula is

A. Coelom

B. Blastocoel

C. Archenteron

D. Chorion

Answer: C



Watch Video Solution

28. Gastrulation comprises

A. Morphogenetic movements

B. Differentiation of archenteron

C. Differentiation of three germ layers

D. All of the above

Answer: D



Watch Video Solution

29. Inhibin is produced by

A. Corpus luteum

B. Testis

C. Placenta

D. All of the above

Answer: D



Watch Video Solution

30. Ectoderm forms

A. Sweat glands

B. Nervous system

C. Cornea of eye

D. All of the above

Answer: D



Watch Video Solution

31. Extra structure that provides nutrition to embryo is

A. Umbilicus

B. Amnion

C. Chorion

D. Placenta

Answer: D



Watch Video Solution

32. Which are derivatives of endoderm?

A. Muscles and blood

B. Alimentary canal and respiratory organs

C. Excretory and reproductive organs

D. Skin and nerve cord

Answer: B



Watch Video Solution

33. Attachment of foetus to placenta occurs through

- A. Chorda mesoderm
- B. Spinal cord
- C. Umbilical cord
- D. Notochord

Answer: C



Watch Video Solution

34. Mesoderm is formed through invagination of
of

- A. Ectoderm
- B. Endoderm
- C. Inner mass of cells
- D. Primitive streak

Answer: D



Watch Video Solution

35. Which hormones is produced in women during pregnancy?

A. Human chorionic gonadotropin (hCG)

B. Relaxin

C. Human placental lactogen (hPL)

D. All of the above

Answer: D



Watch Video Solution

36. Correct sequence of human embryonic development is

A. Gastrocoel-Blastocoel-Neural Crest-
Notochord

B. Gastrocoel-Blastocoel-Notochord-Neural
Crest

C. Blastocoel-Neural

Crest-Gastrocoel-

Notochord

D. Blastocoel-Gastrocoel-Neural

Crest-

Notochord

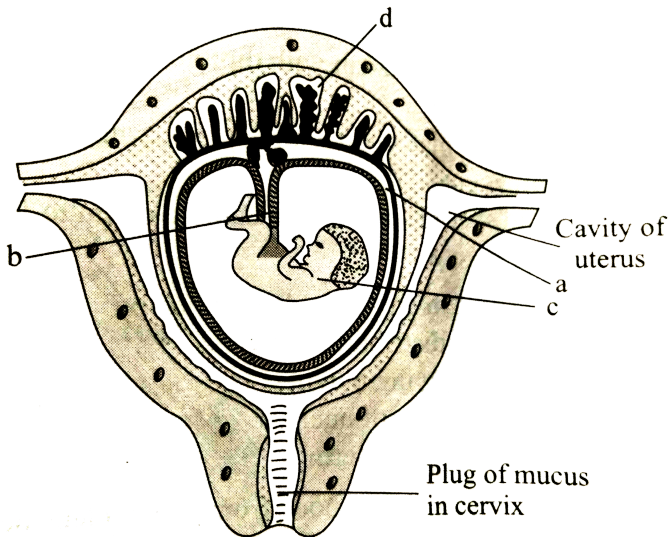
Answer: D



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Topic 6 Pregnancy And Embryonic Development

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



A. c-embryo, d-placental villi, a-yolk sac, b-umbilical cord

B. c-embryo, a-placental villi, b- yolk sac, d-
umbilical cord

C. b-embryo, d-placental villi, a-yolk sac, c-
umbilical cord

D. c-embryo, a-placental villi, d-yolk sac, b-
umbilical cord

Answer: A



View Text Solution

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

(a) Androgens are produced by Sertoli cells

(b) Spermatozoa get nutrition from Sertoli cells

(c) Leyding cells are found in ovary

(d) Leyding cells synthesise androgens

(e) Oogenesis takes place in corpus luteum

(f) Menstrual cycle ceases during pregnancy

(g) Presence or absence of hymen is not a reliable indicator of virginity of sexual experience

A. a, c and e

B. b, d, f and g

C. a, b, c and e

D. a, c, e and g

Answer: A



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2. Match the columns:

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

A. $a - q, b - s, c - p, d - t, e - r$

B. $a - r, b - r, c - p, d - t, e - q$

C. $a - r, b - s, c - q, d - p, e - t$

D. $a - r, b - s, c - q, d - p, e - t$

Answer: D



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

A. Parturition

B. Gestation

C. Lactation

D. Colostrum

Answer: C



Watch Video Solution

4. Match the columns:

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

A. $a - v, b - ii, c - iv, d - i, e - iii$

B. $a - i, b - iii, c - ii, d - v, e - iv$

C. $a - iii, b - ii, c - v, d - iv, e - i$

D. $a - iv, b - ii, c - v, d - iii, e - i$

Answer: B



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

A. Meconium

B. Hymen

C. Comulus oophorus

D. Colostrum

Answer: D



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6. Match the columns and find the correct combination:

	Column-I		Column-II
a.	Hypothalamus	1.	Sperm lysins
b.	Acrosome	2.	Estrogen

c.	Graafian follicle	3.	Relaxin
d.	Leydig cells	4.	GnRH
e.	Parturition	5.	Testosterone

A. $a - 2, b - 1, c - 4, d - 3, e - 5$

B. $a - 4, b - 1, c - 2, d - 5, e - 3$

C. $a - 2, b - 1, c - 5, d - 4, e - 3$

D. $a - 4, b - 1, c - 2, d - 3, e - 5$

Answer: B



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7. Delivery of developed foetus is

A. Ovulation

B. Oviposition

C. Parturition

D. Abortion

Answer: C



Watch Video Solution

8. Match the columns:

Column-I	Column-II
a. Oxytocin	p. Stimulates ovulation
b. Prolactin	q. Implantation and maintenance of pregnancy
c. Luteinising hormone	r. Lactation after child birth
e. Progesterone	s. Uterine contraction during labour
	t. Reabsorption of water by nephrons

A. $a - s, b - r, c - p, d - q$

B. $a - s, b - r, c - p, d - s$

C. $a - s, b - q, c - r, d - t$

D. $a - t, b - p, c - s, d - r$

Answer: A



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Section B Assertion Reasoning Questions

1. Assertion: In breast, several mammary ducts join to form a wider mammary ampulla.

Reason: Mammary ampulla is connected to lactiferous duct through which milk is sucked out.

A. If both assertion and reason are true and the reason is the correct

explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: B



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2. Assertion: After puberty, the increased levels of GnRH acts at the posterior pituitary and stimulates the secretion of two gonadotropins LH and FSH.

Reason: LH acts on the Sertoli cells and FSH acts on the Leyding cells.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: D



Watch Video Solution

3. Assertion: For normal fertility at least 40 per cent of ejaculated sperm must have normal shape and size and at least 60 per cent of them must show vigorous motility.

Reason: The semen along with the sperms called the seminal plasma.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: D



Watch Video Solution

4. Assertion: Sperms released from seminiferous tubules are transported by the accessory ducts.

Reasons: Secretion of epididymis, vas deferens seminal vesicle and prostate are essential for maturation and motility of sperms.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: B



Watch Video Solution

5. Assertion: Human sperm is a microscopic structure composed of a head, neck, a middle piece and a tail.

Reason: The functions of the male sex accessory ducts and glands are maintained by the testicular hormones (androgens).

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: B



Watch Video Solution

6. Assertion: The process of oogenesis is markedly different from spermatogenesis.

Reason: Oogenesis is initiated during the embryonic development stage when a couple of million gamete mother cells (oogonia) are found in both fetal ovary.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: C



Watch Video Solution

7. Assertion: The process of oogenesis is markedly different from spermatogenesis.

Reason: Oogenesis is initiated during the embryonic development stage when a couple of million gamete mother cells (oogonia) are found in both fetal ovary.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: D



Watch Video Solution

8. Assertion: The primary follicle get surrounded by many layers of granulosa cells.

Reason: The secondary follicle soon transform into a tertiary follicle which is characterised by an air filled cavity called antrum.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of

the assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: C



Watch Video Solution

9. Assertion: All copulations cannot lead to fertilisation and pregnancy.

Reason: Fertilisation can only occur if the

ovum and sperms are transported simultaneously to the ampullary region.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: A



Watch Video Solution

10. Assertion: Only one sperm can fertilise an ovum.

Reason: During fertilisation, a sperm comes in contact with zona pellucida layer of the ovum and induces changes in the membrane that blocks the entry of additional sperms.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: A



Watch Video Solution

11. Assertion: The sex of the baby is determined by the father and not by the mother.

50 per cent of sperms carry X chromosome and other 50 per cent carry the Y.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: A



View Text Solution

12. Assertion: The embryo with 8 to 16 blastomeres is called a morula.

Reason: The blastomeres in the morula are arranged into an outer layer called trophoblast and an inner group of cells attached to trophoblast called the inner cell mass.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: C



Watch Video Solution

13. Assertion: During implantation, the trophoblast layer gets attached to the endometrium.

Reason: The inner cell mass of the blastocyst gets differentiated as embryo.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of

the assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: B



Watch Video Solution

14. Assertion: During pregnancy, the levels of hormones like estrogens, progesterones, cortisol, prolactin, thyroxine. etc., are increased several folds in the maternal blood.

Reason: Increased production of these hormones is essential for supporting the fetal growth.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: A



Watch Video Solution

15. Assertion: The hormones hCG, hPL and relaxin are produced in women only during pregnancy.

Reason: The hCG, hPL and relaxin are secreted by placenta.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: C



Watch Video Solution

16. Assertion: Breast feeding during the initial period of infant growth is recommended by doctors for bringing up a healthy baby.

Reason: The milk produced during the initial few days of lactation is called colostrum which contains several antibodies absolutely essential to develop resistance for the new born babies.

A. If both assertion and reason are true and the reason is the correct

explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: A



Watch Video Solution

17. Assertion: The presence of X or Y chromosome in the sperm determine the sex of the embryo

Reason: All the eggs have one X chromosome.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: A



Watch Video Solution

Section D Chapter End Test

1. Formation of archenteron starts in

A. Morula

B. Blastula

C. Early gastrula

D. Early neurula

Answer: C



Watch Video Solution

2. In humans, the embryo is protected in

A. Peritoneal cavity

B. Amniotic cavity

C. Pleural cavity

D. Allantois

Answer: B



Watch Video Solution

3. Which gland secretes alkaline mucus in urethra to neutralise the acidity of urine?

A. Prostate gland

B. Cowper's gland

C. Seminal vesicles

D. Perpetual glands

Answer: B



Watch Video Solution

4. Sixty percent of semen is produced by

A. Bartholin's gland

B. Cowper's glands

C. Seminal vesicles

D. Prostate gland

Answer: C



Watch Video Solution

5. Identical twins are born when:

A. Monozygotic twins

B. Dizygotic twins

C. Fraternal twins

D. Both B and C

Answer: A



Watch Video Solution

6. Eggs produced in the year by an ovary of non-pregnant woman is

A. 12

B. 6

C. 24

D. 48

Answer: B



Watch Video Solution

7. Which one holds corona radiata?

A. Mucopolysaccharide

B. Oligosaccharide

C. Lipopolysaccharide

D. Lipoprotein

Answer: A



Watch Video Solution

8. Newly released mammalian egg is covered by

- A. Plasma membrane
- B. Vitelline membrane
- C. Zona pellucida
- D. All of the above

Answer: C



9. Egg of frog is

A. Centrolecithal

B. Macrolecithal

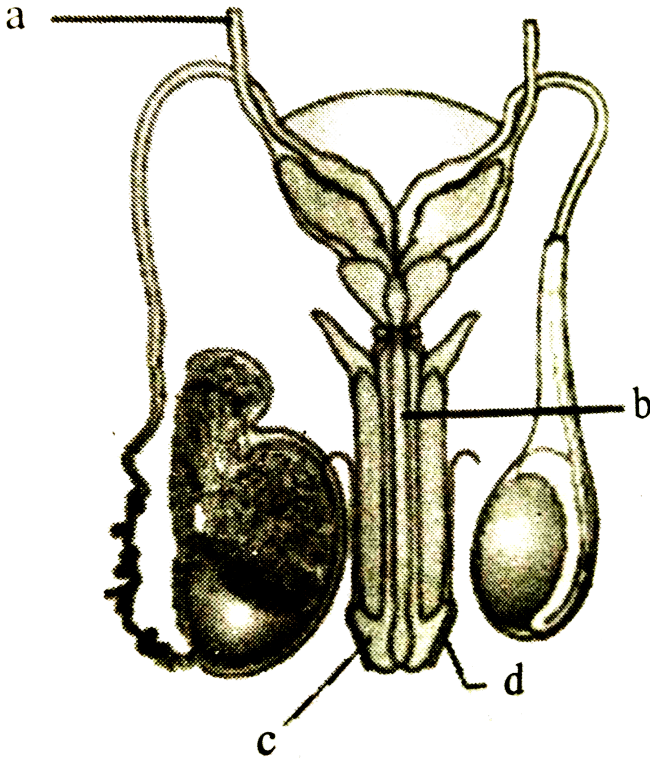
C. Telolecithal

D. Microlecithal

Answer: C



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



A. a-ureter, b-urethra, c-glans penis, d-foreskin

B. b-ureter, a-urethra, d-glans penis, c-foreskin

C. a-ureter, b-urethra, d-glans penis, c-foreskin

D. b-ureter, a-urethra, d-glans penis, c-foreskin

Answer: A



Watch Video Solution

11. Which represents a condition of higher reduced motility

A. Azospermia

B. Polyspermy

C. Oligospermia

D. Asthenospermia

Answer: D



Watch Video Solution

12. Umbilical cord contains

A. Umbilicus

B. Placenta

C. Discus proligerus

D. Allantoic artery and vein

Answer: D



Watch Video Solution

13. Pattern of cleavage in egg of Frog is

A. Meroblastic

B. Holoblastic unequal

C. Holoblastic equal

D. All of the above

Answer: B



Watch Video Solution

14. Establishment of polarity

(anterior/posterior, dorsal/ventral,

medial/lateral) is called

A. Anmorphosis

B. Organiser phenomenon

C. Pattern formation

D. Axis formation

Answer: C



Watch Video Solution

15. Which type of blastula occurs in Frog?

A. Stereoblastula

B. Coeloblastula

C. Holoblastula

D. Amphiblastula.

Answer: B



Watch Video Solution

16. Which of the following is immortal?

A. Somatic cell

B. Germ cell

C. Glomerular cell

D. Cell of pituitary

Answer: B



Watch Video Solution

17. The animal in which testes descent into scrotum only during breeding season

A. Frog

B. Kangaroo

C. Shrew

D. Bat

Answer: D



Watch Video Solution

18. Nebenkern is part of

A. Human ovum

B. Human sperm

C. Foetus

D. Graafian follicle

Answer: B



Watch Video Solution

19. Which of the cellular layers disintegrates and regenerates again and again in human?

A. Endometrium of uterus

B. Dermis of skin

C. Cornea of eye

D. Endothelium of blood vessels

Answer: A



Watch Video Solution

20. Structure absent in Frog's testis is

A. Seminiferous tubules

B. Seminal vesicle

C. Sertoli cells

D. interstitial cells

Answer: C



Watch Video Solution

21. Meroblastic cleavage is division

A. Total

B. Spiral

C. Incomplete

D. Horizontal

Answer: C



[Watch Video Solution](#)

22. Tunica albuginea is the covering around

A. Liver

B. Lung

C. Spleen

D. Testes

Answer: D



[Watch Video Solution](#)

23. Type of placenta present in humans/Rabbit is

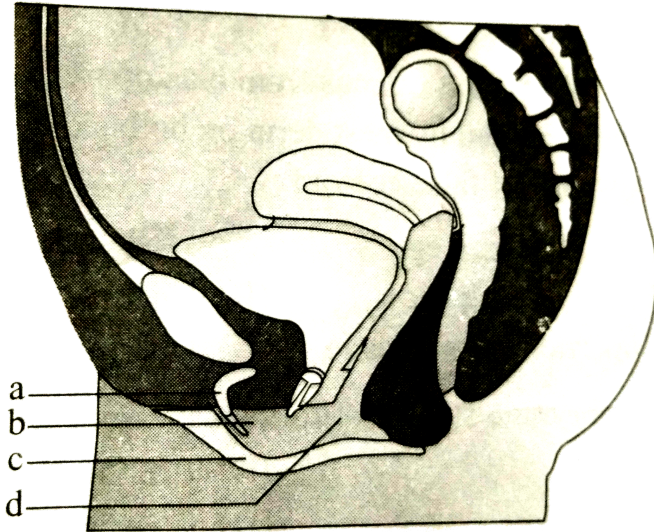
- A. Discoidal
- B. Zonary
- C. Diffuse
- D. Cotyledonary

Answer: A



Watch Video Solution

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



A. a-clitoris, b-labia majora, c-labia minora,
d-vaginal orifice

B. a-clitoris, c-labia majora, b-labia minora,

d-vaginal orifice

C. b-clitoris, a-labia majora, d-labia minora,

c-vaginal orifice

D. c-clitoris, d-labia majora, a-labia minora,

b-vaginal orifice

Answer: B



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25. Number of foetal membranes in humans is

A. 2

B. 3

C. 4

D. 1

Answer: B



Watch Video Solution

26. Placenta in human beings is formed by :

A. Amnion

B. Allantois

C. Chorion

D. All of the above

Answer: C



Watch Video Solution

27. Two offspring developed in the same uterus from fertilisation of two different ova are

A. Monozygotic twins

B. Dizygotic twins

C. Fraternal twins

D. Both B and C

Answer: D



Watch Video Solution

28. In insect egg, cleavage is

- A. Equal holoblastic
- B. Unequal holoblastic
- C. Meroblastic superficial
- D. Meroblastic discoidal

Answer: C



Watch Video Solution

29. In which mammals testes remain in abdomen

A. Human

B. Elephant

C. Rabbit

D. Ox

Answer: B



Watch Video Solution

30. Sertoli cells occur in

A. Human testis

B. Frog testis

C. Human ovary

D. Frog ovary

Answer: A



Watch Video Solution

31. Noncleioidic eggs occur in :

A. Birds

B. Fish

C. Reptiles

D. Platypus

Answer: B



Watch Video Solution

32. Development which freed land vertebrates from water was

- A. Four appendages
- B. Four chambered heart
- C. Cleidoic egg
- D. Lungs

Answer: C



Watch Video Solution

33. What is true of deuterostomes?

- A. Presence of schizocoel

B. Non-formation of anus from blastopore.

C. Coelom lined by mesoderm on both sides

D. Absence of false coelom

Answer: D



Watch Video Solution

34. Division of human egg is :

A. Equal holoblastic

B. Unequal holoblastic

C. Superficial meroblastic

D. Discoidal meroblastic

Answer: A



Watch Video Solution

35. Early embryonic stage that follows blastula

is

A. Morula

B. Amphiblastula

C. Radula

D. Gastrula

Answer: D



Watch Video Solution

36. Free martin is an example of :

A. Hormonal control of sex

B. Sex reversal

C. Transformer gene

D. Nutritional control of sex

Answer: A



Watch Video Solution

37. Human placenta is

A. Haemochorial

B. Syndesmochorial

C. Yolk sac

D. Haemo-endothelial

Answer: A



Watch Video Solution

38. Eggs of placental mammals are

A. Homolecithal

B. Alecithal

C. Microlecithal

D. Mesolecithal

Answer: B



Watch Video Solution

39. Allantois is embryonic membrane found in

A. Respiration

B. Excretion

C. Nutrition and excretion

D. Protection from shock

Answer: C



Watch Video Solution

40. The most primitive type of mammalian placenta is

- A. Syndesmochorial
- B. Endotheliochorial
- C. Haemochorial
- D. Epitheliochorial

Answer: D



41. In apomictic/parthenogenetic development the individuals are

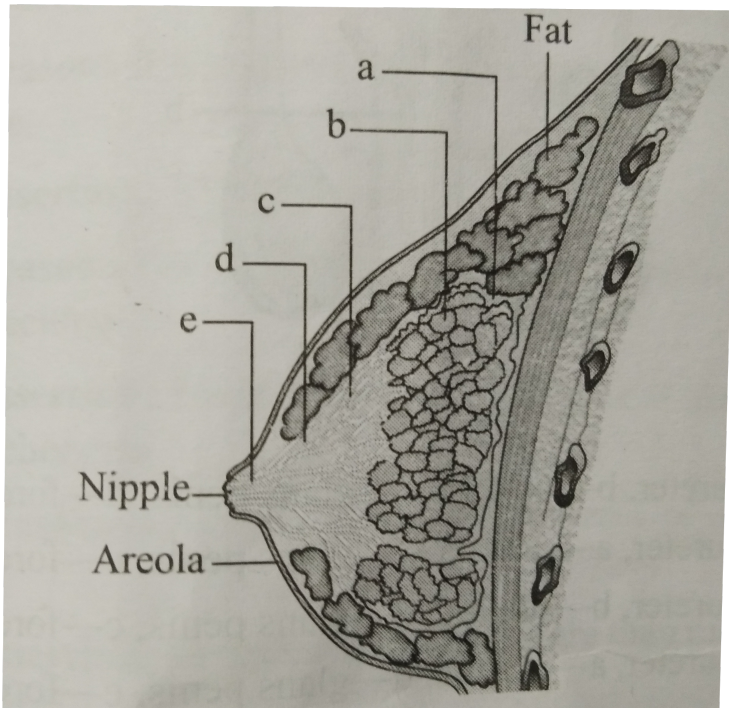
- A. Morphologically and genetically similar
- B. Morphologically and genetically different
- C. Morphologically different but genetically similar
- D. None of the above

Answer: A



Watch Video Solution

42. Recognise the figure and find out the correct matching



A. a-mammary alveolus, b-mammary lobe, c-mammary duct, d-ampulla, e-lactiferous duct

B. b-mammary alveolus, c-mammary lobe, d-mammary duct, e-ampulla, a-lactiferous duct

C. c-mammary alveolus, b-mammary lobe, a-mammary duct, d-ampulla, e-lactiferous duct

D. b-mammary alveolus, a-mammary lobe, c-mammary duct, d-ampulla, e-lactiferous duct

Answer: D



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43. Monozygotic twins are formed when:

A. Two ova are fertilized simultaneously

B. Incomplete cleavage of zygote

C. First cleavage of zygote is followed by separation into two

D. There is no cleavage

Answer: C



Watch Video Solution

44. Testes in Whale are

A. Extra - abdominal

B. Half external, half internal

C. Internal

D. None of the above

Answer: C



Watch Video Solution

45. Germinal epithelium of testis and ovary is made up of

A. Cuboidal cells

B. Columnar cells

C. Squamous cells

D. Stratified cells

Answer: A



Watch Video Solution

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

A. Corona radiata

B. Zona pellucida

C. Vitelline membrane

D. Chorion

Answer: C



Watch Video Solution

47. Breaking of acrosome membrane is:

A. Agglutination

B. Activation

C. Cavitation

D. Capacitation

Answer: A



Watch Video Solution

48. In telolecithal egg the yolk is found

A. All over the egg

B. On one side

C. Both the sides

D. Centre

Answer: B



Watch Video Solution

49. Meroblastic cleavage is division

A. Horizontal

B. Partial/parietal

C. Total

D. Spiral

Answer: B



Watch Video Solution

50. A morula can be differentiated from blastula in

- A. Presence of cavity
- B. Presence of more yolk
- C. Presence of yolk
- D. Absence of cavity

Answer: D



Watch Video Solution

Others

1. Layers of ovum from outside to inside are

**A. Corona radiata, zona pellucida, vitelline
membrane**

B. Zona pellucida, corona radiata, vitelline membrane

C. Vitelline membrane, zona pellucida, corona radiata

D. Zona pellucida, vitelline membrane, corona radiata

Answer: A



Watch Video Solution

2. Which one functions as endocrine gland after ovulation?

A. Stroma

B. Vitelline membrane

C. Germinal epithelium

D. Graafian follicles

Answer: D



Watch Video Solution

3. At the end of first meiotic division, male germ cell differentiates into

A. Secondary spermatocyte

B. Primary spermatocyte

C. Spermatogonium

D. Spermatid

Answer: A



Watch Video Solution

4. Embryo at 16-celled stage is called

A. Morula

B. Blastula

C. Blastomere

D. Gastrula

Answer: A



Watch Video Solution

5. Which is incorrect about menstruation?

A. At menopause, there is abrupt increase
gondotropic hormones

B. Beginning of cycle of menstruation is
called menarche

C. During normal menstruation about 40
ML of blood is lost

D. Menstrual fluid can easily clot.

Answer: D



Watch Video Solution

6. Which extra embryonic membrane in human prevents desiccation of embryo inside uterus ?

A. Yolk sac

B. Amnion

C. Chorion

D. Allantois.

Answer: B



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7. Which is the correct sequence in spermatogenesis?

A. Spermatogonia → Spermatids →
Secondary spermatocytes → Primary
spermatocyte → Sperm

B. Spermatogonia → Spermatids →
Primary spermatocytes → Secondary
spermatocytes → Sperms

C. Primary spermatocytes → Secondary

spermatocytes → Spermatids →

Spermatogonia → Sperms

D. Spermatogonia → Primary

spermatocytes → Secondary

spermatocytes → Spermatids →

Sperms

Answer: D



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8. Amount of yolk and its distribution are changed in the egg. Which one is affected ?

- A. Pattern of cleavage
- B. Formation of zygote
- C. Number of blastomeres
- D. Fertilization

Answer: A



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9. Reptile and bird eggs are

A. Macrolecithal

B. Oligolecithal

C. Mesolecithal

D. Alecithal

Answer: A



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10. Which layer of embryo is formed first ?

A. Ectoderm

B. Mesoderm

C. Endoderm

D. Both B and C

Answer: C



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11. Which is correctly matched?

A. Menstruation: Breakdown of

myometrium and ovum not fertilised

B. Ovulation: LH and FSH attain peak level,

sharp fall in secretion of progesterone

C. Development of Corpus luteum:

Secretory phase and increased secretion

of progesterone

D. Proliferative phase: Rapid regeneration

of myometrium and maturation of

Graafian follicle

Answer: C



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12. In a regularly cycling human female, which can be the root cause of menstrual failure?

A. Fertilisation of ovum

B. Maintenance of hypertrophical
endometrial lining

C. Maintenance of high titre of sex hormones

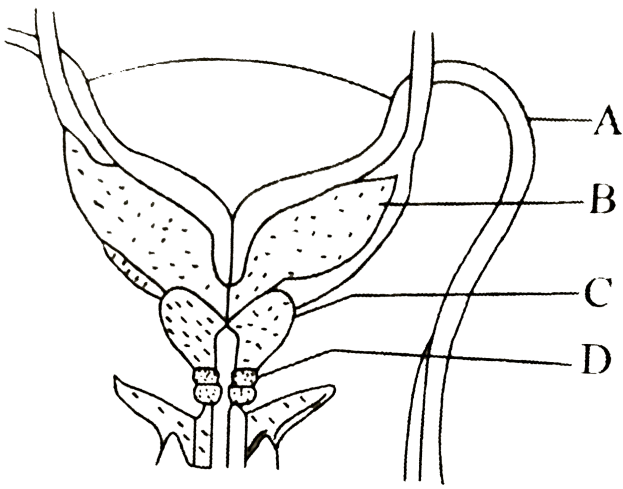
D. Retention of well-developed corpus luteum

Answer: A



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13. Select the correct set of names set of names for the parts A, B, C, D



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-Seminal vesicle, C-
Bulbourethral gland, D- Prostate

Answer: C



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14. 32-celled stage of human embryo is

- A. Smaller than fertilized egg
- B. Same size as fertilized egg
- C. Two times the size of fertilized egg

D. Four times the fertilized egg.

Answer: B



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15. In females, hormone inhibin is secreted by

A. Granulosa cells and corpus luteum

B. Granulosa and theca cells

C. Granulosa and cumulus oophorus cells

D. Granulosa cells and zona pellucida

Answer: A



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16. Signals from the fully developed foetus and placenta ultimately lead to parturition which requires the release of

- A. Estrogen from placenta
- B. Oxytocin from foetal pituitary
- C. Oxytocin from maternal pituitary
- D. Relaxin from placenta

Answer: C



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17. In human female the blastocyst

A. Gets implanted in endometrium by trophoblast cells

B. Forms placenta even before implantation

C. Gets implanted into uterus 3 days after ovulation

D. Gets nutrition from uterine endometrial secretion only after implantation

Answer: A



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18. Secretion from which one of the following is rich in fructose, calcium and some enzymes

A. Male accessory glands

B. Pancreas

C. Liver

D. Salivary glands

Answer: A



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19. Which is correct about morula ?

A. Less cytoplasm and less DNA than zygote

B. Same amount of cytoplasm and DNA as zygote

C. More cytoplasm and more DNA than zygote

D. Same amount of cytoplasm but much more DNA than zygote

Answer: D



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20. Foetal movements and appearance of hair on head occur in Month of pregnancy.

A. Fifth

B. Sixth

C. Third

D. Second

Answer: A



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21. Second maturation division of mammalian ovum occurs

- A. Until sperm has penetrated ovum
- B. Until nuclei of sperm and ovum fuse
- C. In Graafian follicle soon after first maturation division.
- D. Shortly after ovulation before entry into fallopian tube

Answer: A



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22. Vasa efferentia lead from

A. Rete testis to vas deferens

B. Vas deferens to epididymis

C. Epididymis to urethra

D. Testicular labules to rete testis

Answer: A



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23. Which is correct about human sperm?

A. Sperm lysins in acrosome dissolve egg envelope facilitating fertilization

B. Acrosome serves as sensory structure leading sperm towards ovum

C. Acrosome has no particular function

D. Acrosome has conical tip for piercing and penetrating egg for fertilization

Answer: A



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24. Part of fallopian tube closest to ovary is

A. Infundibulum

B. Cervix

C. Ampulla

D. Isthmus

Answer: A



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25. Foetal ejection reflex in human female is induced by

- A. Release of oxytocin from pituitary
- B. Pressure exerted by amniotic fluid
- C. Differentiation of mammary glands
- D. Fully developed foetus and placenta

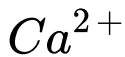
Answer: D



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26. Seminal plasma of humans is rich in

A. Fructose and certain enzymes, poor in



B. Fructose, Ca^{2+} and certain enzymes

C. Fructose, Ca^{2+} but no enzymes

D. Glucose, certain enzymes but no Ca^{2+}

Answer: B



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27. What happens during fertilization when many sperms reach close to ovum?

A. Cells of corona radiata trap all the sperms except one

B. Only two sperms nearest to ovum penetrate zona pellucida

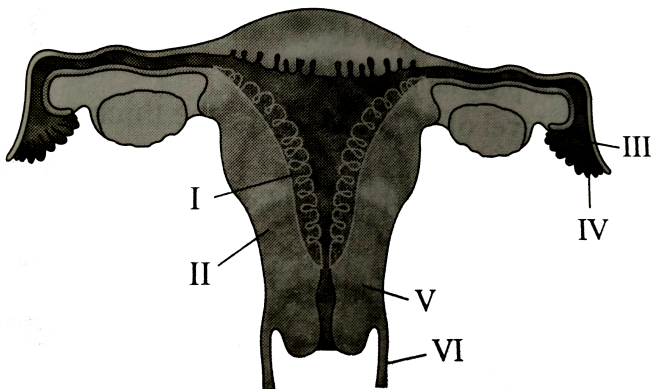
C. Secretion of acrosome helps one sperm enter cytoplasm of ovum through zona pellucida

D. All sperms except the one nearest to ovum lose their tails

Answer: C

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28. Identify the correct set of three parts.



A. IV-Oviducal funnel, V-Uterus, VI-Cervix

B. I-Perimetrium, II-Myometrium, III-
Fallopian tube

C. II-Endometrium, III-Infundibulum, IV-
Fimbriae

D. III-Infundibulum, IV-Fimbriae, V-Cervix

Answer: D



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29. Which is correct?

A. Humans show spontaneous ovulation

B. Several enzymes occur in bile juice

C. Monkeys, apes and humans have oestrus cycle

D. Urine is pale yellow and slightly alkaline.

Answer: A



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30. LH surge occurs during phase of menstrual cycle

A. Menstrual phase

B. Beginning of proliferative phase

C. Just before end of proliferation phase

D. At the middle of the cycle

Answer: D



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31. Which is false about viability of mammalian sperm?

A. Sperm is viable for only 24 hours

B. Sperm viability is determined by its motility

C. Sperm must be concentrated in thick suspension

D. It depends upon pH of medium as sperm is more active in alkaline medium

Answer: A



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32. Signals for parturition originate from

- A. Fully developed foetus only
- B. Placenta only
- C. Oxytocin released by maternal pituitary
- D. Both A and B

Answer: D



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33. Relaxin is produced by

A. Ovary

B. Testis

C. Adrenal

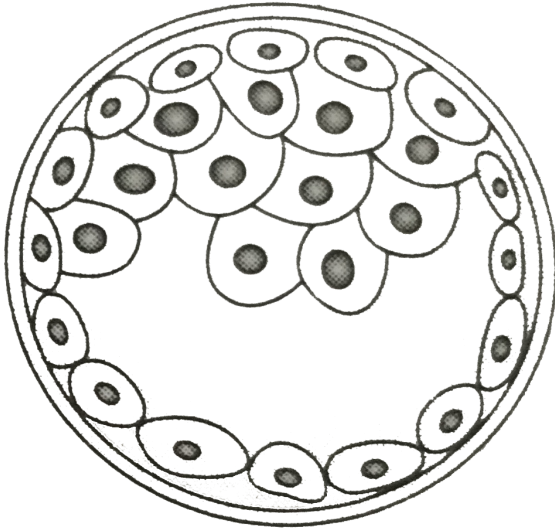
D. Pituitary gland

Answer: A



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34. Identify development stage and place of occurrence.



A. Blastocyst, uterine wall

B. 8-celled morula, starting point of fallopian tube

C. Late morula, middle part of fallopian tube

D. Blastula, end part of fallopaian tube

Answer: A



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35. Secretory phase of human menstrual cycle is also called

A. Luteal phase and lasts for 6 days

B. Luteal phase and lasts for 13 days

C. Follicular phase and lasts for 13 days

D. Follicular phase and lasts for 6 days

Answer: B



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36. Role of Leydig cells is

A. Nourishment of sperms

B. Provide motility to sperms

C. Bring about maturation of sperms

D. Synthesis of testosterone/Androgens

Answer: D



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37. Right ovary is rudimentary in

A. Sharks

B. Birds

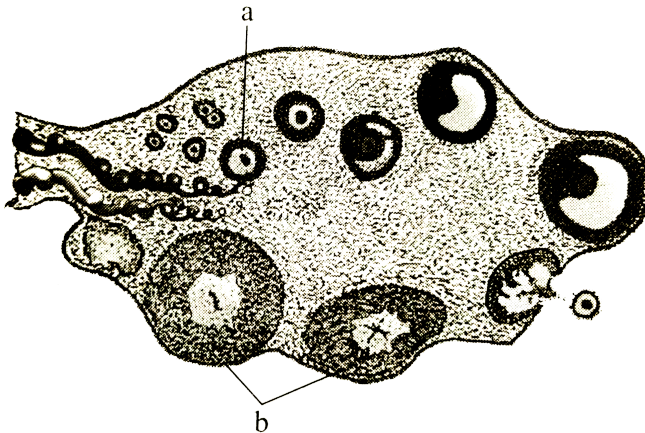
C. Sphenodon

D. Calotes

Answer: B

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38. Identify the option a or b correctly along with its function/characteristic.



- A. a-tertiary follicle, forms Graafian follicle
- B. b-corpora luteum, secretes estrogen
- C. a-primary oocyte, prophase I of meiotic division
- D. b-corpora luteum, secretes progesterone

Answer: D



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39. Component of seminal vesicles that provides a forensic test for rape is

- A. Acetic acid
- B. Prostaglandin
- C. Fructose
- D. Citric acid

Answer: C



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40. How many sphincters are present in male urethra?

A. 4

B. 3

C. 2

D. 1

Answer: C



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41. Secondary spermatocytes undergo second meiotic division during spermatogenesis to produce

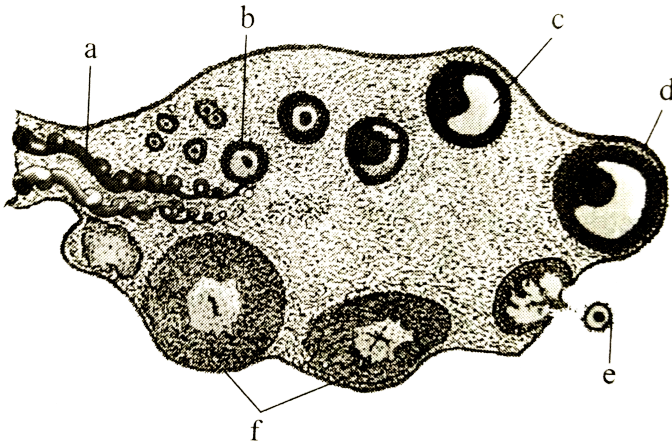
- A. Spermatozoa
- B. Diploid spermatids
- C. Primary spermatocytes
- D. Haploid spermatids

Answer:



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42. Identify the correct labellings in the diagram.



A. a-blood vessel, b-primary follicle, c- tertiary follicle, d-Graafian follicle, e- ovum, f-corpora luteum

B. a-primary follicle, b-blood vessel, c-tertiary follicle, d-Graafian follicle, e-ovum, f-corpora lutea

C. a-blood vessel, b-primary follicle, c-tertiary follicle, d-ovum, e-Graafian follicles, f-corpora lutea

D. a-ovum, b-Graafian follicle, c-corpora lutea, d-blood vessel, e-primary follicle, f-tertiary follicle

Answer: A



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43. What is the correct sequence of sperm formation?

A. Spermatogonia, Spermatozoa,

Spermatocytes, Spermatids

B. Spermatogonia, Spermatocytes,

Spermatids, Spermatozoa

C. Spermatids, Spermatocytes,

Spermatogonia, Spermatozoa

D. Spermatogonia,

Spermatocytes,

Spermatozoa supermatids

Answer: B



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44. Which one of the following is not the function of placenta?

A. Facilitates removal of carbon dioxide and waste material from embryo.

B. Secretes oxytocin during parturition.

C. Facilitates supply of oxygen and nutrients to embryo.

D. Secretes estrogen.

Answer: B



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45. Menstrual flow occurs due to lack of

A. Oxytocin

B. Vasopressin

C. Progesterone

D. FSH

Answer: C



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46. The main function of mammalian corpus luteum is to produce

A. Relaxin only

B. Estrogen only

C. Progesterone

D. Human chorionic gonadotropin

Answer: C



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47. The shared terminal duct of the reproductive and urinary system in the human male is

A. Vasa efferentia

B. Urethra

C. Ureter

D. Vas deferens

Answer: B



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48. Select the correct option describing gonadotropin activity in a normal pregnant female.

A. High level of hCG stimulates the thickening of endometrium

B. High level of FSH and LH stimulates the thickening of endometrium

C. High level of FSH and LH facilitate implantation of the embryo

D. High level of hCG stimulates the synthesis of estrogen and progesterone

Answer: D



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49. The first sign of growing human foetus in uterus may be noticed by

- A. Listening heart sound
- B. Movement of foetus
- C. Development of limbs and digits
- D. None of the above

Answer: A



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50. Testes are extra-abdominal in position.

"Which of the following is the most appropriate reason?"

A. Narrow pelvis in males

B. Special protection for testes

C. Prostate gland and seminal vesicles

occupy maximum space

D. $2.0 - 2.5^{\circ}C$ lower than the normal

body temperature

Answer: D



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51. Release of sperms from seminiferous tubules is called

- A. Spermiogenesis
- B. Spermiation
- C. Spermatogenesis
- D. Fertilization

Answer: B



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52. Entire process of spermatogenesis in man is approximately in

A. 2 days

B. 16 days

C. 32 days

D. 64 days

Answer: D



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53. The persistence of corpus luteum during pregnancy is due to the presence of hormone

A. LH

B. Chorionic Gonadotropin

C. FSH

D. Testosterone

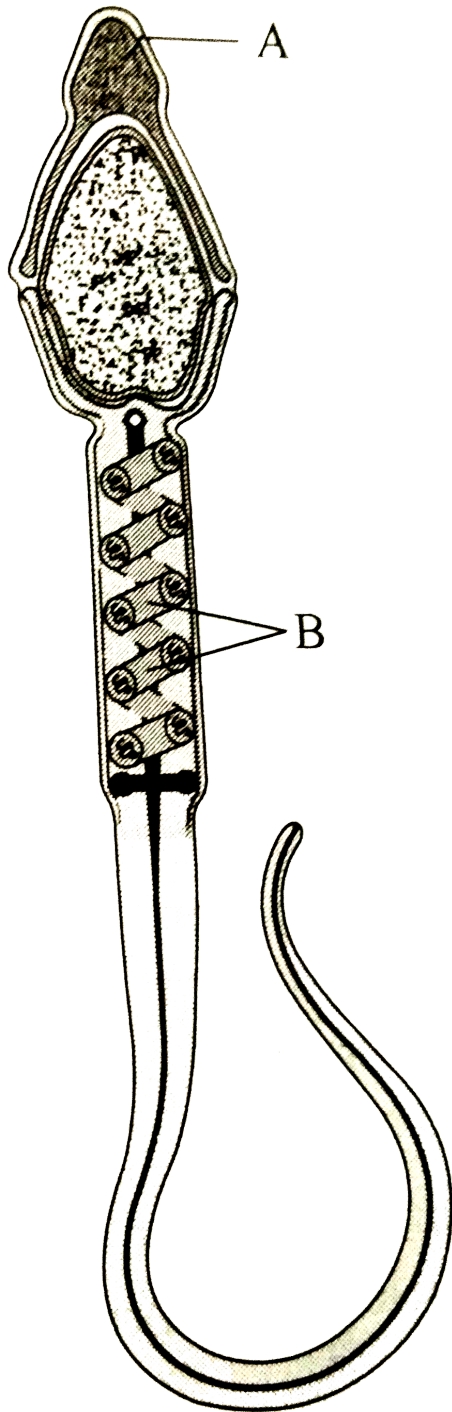
Answer: B



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54. Structure of a human sperm sperm is shown in the figure with labels A and B.

Identify these and give their characteristics.



A. A-Acrosome- its enzymes helps in fertilisation

B. B-Mitochondria-provides energy for fusion of sperm with ovum

C. A-Plasma membrane-envelops whole sperm

D. B-polysomes-synthesize enzymes to facilitate fertilisation

Answer: A



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55. Shortly before menstruation the blood levels of

- A. Estrogen and progesterone decrease
- B. Estrogen and progesterone increase
- C. FSH stabilize
- D. Only progesterone increases

Answer: A



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56. Which of the following layers in an antral follicle is acellular?

A. Theca interna

B. Stroma

C. Zona pellucida

D. Granulosa

Answer: C



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57. In human females, meiosis-II is not completed until

- A. Fertilization
- B. Uterine implantation
- C. Birth
- D. Puberty

Answer: A



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58. Which of the following events is not associated with ovulation in human female?

A. Full development fo Graafian follicle

B. Release of secondary oocyte

C. LH surge

D. Decrease in estradiol

Answer: D



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59. Hysterectomy is surgical removal of:

- A. vas deferens
- B. Mammary glands
- C. Uterus
- D. Prostate gland

Answer: C



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60. Which of these is not an important component of initiation of parturition in humans?

A. Release of oxytocin

B. Release of prolactin

C. Increase in estrogen and progesterone ratio

D. Synthesis of prostaglandins

Answer: B





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61. Capacitation refers to changes in the

A. Ovum after fertilization

B. Sperm after fertilization

C. Sperm before fertilization

D. Ovum before fertilization

Answer: C



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62. Which of the following cells during gametogenesis is normally diploid?

- A. Spermatogonia
- B. Secondary polar body
- C. Primary polar body
- D. Spermatid

Answer: A



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63. Cowper's glands are found in

A. Female amphibians

B. Male mammals

C. Female mammals

D. Male amphibians

Answer: B



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64. Fertilization in humans is practically feasible only if

A. The ovum and sperms are transported simultaneously to ampullary region of the cervix.

B. The sperms are transported into cervix within 48 hours of release of ovum in uterus.

C. The sperms are transported into vagina just after the release of ovum in fallopian tube.

D. The ovum and sperms are transported simultaneously to ampullary region of the fallopian tube.

Answer: D



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65. Select the incorrect statement.

A. LH and FSH decrease gradually during the follicular phase.

B. LH triggers secretion of androgens from the Leydig cells.

C. FSH stimulates the sertoli cells which help in spermiogenesis.

D. LH triggers ovulation in ovary.

Answer: A



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66. Which of the following is incorrect regarding vasectomy?

- A. Vasa deferentia is cut and tied
- B. Irreversible sterility
- C. No sperm occurs in seminal fluid
- D. No sperm occurs in epididymis.

Answer: D



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67. Embryo with more than 16 blastomeres formed due to invitro fertilization is transferred into

A. Fimbriae

B. Cervix

C. Uterus

D. Fallopian tube

Answer: C



68. Which of the following depicts the correct pathway of transport of sperms?

A. Rete testis → Vas deferens →

Efferent ductules → Epididymis

B. Efferent ductules → Rete testis →

Van deferens → Epididymis

C. Rete testis → Efferent ductules →

Epididymis → Vas deferens

D. Rete testis → Epididymis → Efferent
ductules → Vas deferens

Answer: C



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69. Match Column I with Column II and select the correct option using the codes given

below

Column I		Column II	
a.	Mons pubis	(i)	Embryo formation
b.	Antrum	(ii)	Sperm
c.	Trophectoderm	(iii)	Female external genitalia
d.	Nebenkern	(iv)	Graafian follicle

A. $a - iii, b - i, c - iv, d - ii$

B. $a - i, b - iv, c - iii, d - ii$

C. $a - iii, b - iv, c - ii, d - i$

D. $a - iii, b - iv, c - i, d - ii$

Answer: D



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70. Several hormones like hCG, hPL, estrogen, progesterone are produced by

A. Fallopian tube

B. Pituitary

C. Ovary

D. Placenta

Answer: D



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71. Capacitation occurs in

A. Epididymis

B. Vas deferens

C. Female reproductive tract

D. Rete testis

Answer: C



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72. A temporary endocrine gland in the human body is

A. Corpus cardiacum

B. Corpus luteum

C. Corpus allatum

D. Pineal gland

Answer: B



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73. GnRH, a hypothalamic hormone, needed in reproduction acts on

A. anterior pituitary gland and stimulates secretion of LH and FSH.

B. Posterior pituitary gland and stimulates secretion of oxytocin and FSH.

C. posterior pituitary gland and stimulates secretion of LH and relaxin.

D. anterior pituitary gland and stimulates secretion of LH and oxytocin.

Answer: A



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74. Double fertilization is exhibited by

A. Algae

B. Fungi

C. Angiosperms

D. Gymnosperms

Answer: C



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75. Hormones secreted by the placenta to maintain pregnancy are

- A. hCG, hPL, progestogens, prolactin
- B. hCG, hPL, estrogens, relaxin, oxytocin
- C. hCG, hPL, progestogens, estrogens
- D. hCG, progestogens, estrogens, glucocorticoids

Answer: C



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76. The difference between spermiogenesis and spermiation is

A. In spermiogenesis spermatids are formed while in spermiation spermatozoa are formed.

B. In spermiogenesis spermatozoa are formed while in spermiation spermatids are formed.

C. In spermiogenesis spermatozoa from sertoli cells are released into the cavity of seminiferous tubules, while in spermiation spermatozoa are formed.

D. In spermiogenesis spermatozoa are formed while in spermiation

spermatozoa are released from sertoli cells into cavity of seminiferous tubules.

Answer: D



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77. The amnion of mammalian embryo is derived from

A. ectoderm and mesoderm

B. endoderm and mesoderm

C. mesoderm and trophoblast

D. ectoderm and endoderm

Answer: A



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78. Match the items given in Column I with those in Column II, and select the correct option given below.

Column I

- a. Proliferative Phase
- b. Secretory Phase
- c. Menstruation

Column II

- i. Breakdown of endometrial lining
- ii. Follicular Phase
- iii. Luteal Phase

A. $a \quad b \quad c$
 $iii \quad ii \quad i$

B. $a \quad b \quad c$
 $i \quad iii \quad ii$

C. $a \quad b \quad c$
 $ii \quad iii \quad i$

D. $a \quad b \quad c$
 $iii \quad i \quad ii$

Answer: C



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79. Cessation of menstrual cycle in women is called

A. menopause

B. lactation

C. ovulation

D. parturition

Answer: A



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80. Meroblastic cleavage refers to which types of division of egg?

A. Complete

B. Spiral

C. Incomplete

D. Horizontal

Answer: C



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81. The early human embryo distinctly possesses

A. gills

B. gill slits

C. external ear (pinna)

D. eyebrows

Answer: B



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82. 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

Answer: B



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83. 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.

Answer: D



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84. Women who consumed the drug thalidomide for relief from vomiting during early months of pregnancy gave birth to children with

A. no spleen

B. harelip

C. extra fingers and toes

D. under developed limbs

Answer: D



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85. 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 to 18 days

D. Rise in progesterone level -1 to 15 days

Answer: B



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86. Which of the following is true regarding sperm?

A. Fertilizin: For penetrating egg membrane

B. Hyalurodinase: For penetrating egg membrane

C. Acrosin: Dissolves corona radiata

D. Capacitation: Takes place in penis

Answer: B



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87. In humans, what is the ratio of the number of gametes produced from one male primary sex cell to the number of gametes produced from one female primary sex cell?

A. 1 : 3

B. 1 : 4

C. 3 : 1

D. 4 : 1

Answer: D



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88. Corpus luteum is a mass of cells found in

A. brain

B. ovary

C. pancreas

D. spleen

Answer: B



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89. Cells of leydig are found in

- A. Testes of frog
- B. Testes of rabbit
- C. Kidney of frog
- D. Kidney of rabbit

Answer: B



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90. Which of the following organ is differentiated first during development ?

A. Heart

B. Skin

C. Brain

D. Neural tube

Answer: A



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

A. spermatogonia-spermatid-spermatocyte-sperms

B. spermatocyte-spermatogonia-spermatid-sperms

C. spermatogonia-spermatocyte-spermatid-sperms

D. spermatid-spermatocyte-spermatogonia-
sperms

Answer: C



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92. Select the correct option describing gonadotropin activity in a normal pregnant female.

A. High level of FSH and LH stimulates the thickening of endometrium.

B. High level of FSH and LH facilitate implantation of the embryo.

C. High level of hCG stimulates the synthesis of estrogen and progesterone.

D. High level of hCG stimulates the thickening of endometrium.

Answer: C



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93. Hormones for the menstrual cycle are produced by

A. ovaries only

B. uterus only

C. ovaries and uterus

D. ovaries and anterior pituitary.

Answer: D



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94. Select the correct explanation for the labels

A, B, C and D

A. A represents the fertilised zygote.

B. B represents the stage of morula formation.

C. C represents the blastocyst.

D. D represents the blastocyst implantation.

Answer: D



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95. Spermatogenesis is under the regulatory influence of

A. ADH

B. FSH

C. TSH

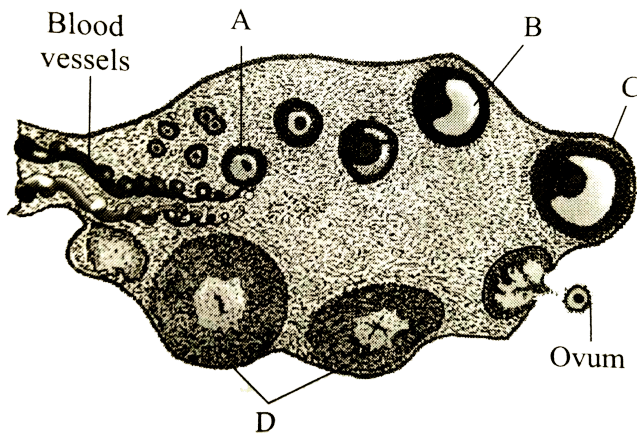
D. STH

Answer: B



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96. The figure given shows the sectional view of ovary. Select the option which gives correct identification of marked structure (A to D) and its feature.



A. A: Primary follicle, it is also called gamete

B. B: Corpus luteum, it cannot be formed and added after birth

C. C: Graafian follicle, mature follicle which ruptures to release secondary follicle.

D. D: Tertiary follicle, a large number of this mother cell degenerates during the phase from birth to puberty

Answer: C



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97. Assertion : Corpus luteum degenerates in the absence of fertilization.

Reason: Progesterone level decrease.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If the assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: B



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98. Assertion: Clitoris is not remnant of penis in females.

Reason: It also have high blood supply and erectile tissue.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If the assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: C



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99. Assertion: Mammalian ova produces hyaluronidase.

Reason: The eggs of mammal are microlecithal and telolecithal.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If the assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: D



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100. Assertion: Head of sperm consists of acrosome and mitochondria.

Reason: Acrosome contains spiral row of mitochondria.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If the assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: C



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101. Assertion: Females have less stature than males after puberty.

Reason: This happens because of the presence of hCG in the blood of females.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If the assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: C



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102. Assertion: Parturition is induced by neural signal in maternal pituitary.

Reason: At the end of gestation period, the maternal pituitary releases prolactin which causes uterine contractions.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of the assertion.

C. If the assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: D



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103. Assertion: Interstitial cell is present in the region outside the seminiferous tubule called interstitial spaces.

Reason: Interstitial cells provide nutrition to the sertoli cells.

A. If both assertion and reason are true and the reason is the correct explanation of the assertion.

B. If both assertion and reason are true but reason is not the correct explanation of

the assertion.

C. If the assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: C



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